THE WASHREG APPROACH

ACTION SHEETS

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For further information, suggestions, and feedback, please contact the Stockholm International Water Institute (SIWI) www.siwi.org and UNICEF New York headquarters www.unicef.org.

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INTRODUCTION

The Sustainable Development Goal (SDG) 6 Global Acceleration Framework calls for a dramatic acceleration to meet off-track SDG6 targets. The SDG targets for water, sanitation, and hygiene (WASH) go further than just the provision of facilities. They target safely managed water and sanitation services, which requires sustainable local service models operating under a robust regulatory framework.

Estimates indicate that, despite progress made in the preceding decades, in 2020 around 1 in 4 people lacked safely managed drinking water in their homes, and nearly half the world's population lacked safely managed sanitation (UNICEF & WHO, 2021). Lack of safe water, and poor sanitation and wastewater practices, have serious impacts on people's health and the environment.

The recognition of the human rights to water and sanitation, and the international commitment towards sustainable water and sanitation services for all, expressed through the SDGs, demand a stronger focus on both expanding the coverage of facilities and services, and ensuring the quality of services delivered. Regulation of water and sanitation services in the economic, social, public health, and environmental dimensions, is an essential governance function, which ensures better service outcomes in terms of affordability, consumer protection, quality of service, public health, and environmental protection.

The WASHREG approach is a multi-stakeholder diagnosis used to identify national regulation gaps and challenges in water and sanitation services provision. The methodology facilitates the development of a set of actions and practical solutions for initiating a process of developing, strengthening, or aligning regulatory roles and responsibilities.

The WASHREG approach is explained through three key documents: '**The WASHREG Approach: An Overview**', the accompanying '**The WASHREG Approach: Methodology**' and these '**The WASHREG Approach: Action Sheets**'.

These Action Sheets, organized around different areas of regulation, offer a rich practical guidance with multiple examples to describe how regulation can be put into practice. With over 50 Action sheets included here, including almost 100 examples from all regions of the world, the Action Sheets will continue to evolve and capture emerging experience about the regulation of water and sanitation services.

In most jurisdictions, regulation of water supply is significantly more established and well-defined than for sanitation, especially for on-site sanitation facilities and faecal sludge management. Regulation of sanitation is in a period of rapid evolution and effective approaches are beginning to emerge. As such, guidance within **The WASHREG approach** will evolve as new experiences emerge.

This product is part of the set of guidance documents produced under the '**Accountability for Sustainability**' partnership, between **UNICEF**, **SIWI** and the **UNDP-SIWI Water Governance Facility** – which aims at increasing sustainability of WASH interventions through the improvement of governance in the service delivery framework. **The World Health Organization** (WHO) and the **Inter American Development Bank** (IADB) have provided substantial inputs to the development of '**The WASHREG Approach: An Overview**', the accompanying '**The WASHREG Approach: Methodology**' and these '**The WASHREG Approach: Action Sheets**'.

We believe that by strengthening regulatory activity, countries can improve the performance and sustainability of water and sanitation service delivery and achieve the SDG targets on universal access to realize the human rights to water and sanitation for all.

1. SERVICE QUALITY REGULATION

OBJECTIVE	ACTION	CODE
1. Define service requirements to be met by operators	A. Define service quality standards and indicators for operators	**SQ1A**
	B. Establish policies and procedures for the provision of good quality services	**SQ1B**
2. Establish mechanisms for monitoring adherence to service requirements	A. Establish protocols for periodic data collection on service quality	**SQ2A**
	B. Produce and publish analytic reports to track progress on service quality	**SQ2B**
	C. Conduct regular audits to check service quality indicators	**SQ2C**
	D. Establish processes to validate the data provided by operators	**SQ2D**
3. Facilitate adherence to service requirements, and continuous improvement in service provision	A. Establish systems of incentives and rewards for operators' performance by regulators	**SQ3A**
	B. Establish systems of sanctions for non-adherence of operators to service norms and regulations	**SQ3B**

SQ1A: Define service quality standards and indicators for operators

REGULATORY AREA: **SERVICE QUALITY REGULATION** | **SQ1A**

OBJECTIVE SQ1

Define service requirements to be met by operators

ACTION CARD SQ1A

DEFINE SERVICE QUALITY STANDARDS AND INDICATORS FOR OPERATORS

COST: Low **FREQUENCY:** Regular

TARGET GROUPS: Regulators, service operators, consumer associations

DESCRIPTION

Regulating service quality entails the establishment of criteria that services should meet to adequately reflect consumer needs, and this requires the operators' full comprehension and acknowledgement. Some of these measures may include, for instance, reliability of services, quality of water delivered, interruption frequency and its duration, average time to restore the service, or the number of consumer complaints. This non-exhaustive list, open to be customized in different circumstances, becomes an essential tool for achieving the quality of service objectives and results associated with them. Each regulator, therefore, defines and calculates a set of performance indicators, which are then published, with results being compared in the sector annual assessment report.

EXPECTED OUTCOMES

- Clear and transparent sanitation and water service quality standards are measured on all service operators.
- Different performance trends are compared.
- Consumer associations actively participate and can access the established norms at any time.

EXAMPLE 1: ZAMBIA

In line with its mandate to inform the public on water supply and sanitation issues, the Zambian regulator NWASCO publishes an annual sector report on the performance and status of the sector. This sector report also highlights the performance of providers against set sector benchmarks derived from the Minimum Service Levels guidelines. Benchmarking induces competition among commercial units by motivating them to improve their own previous performance and to outperform others. Eight benchmarks have been set for major indicators, as follows.

Performance indicators and benchmarks

	Indicator	Benchmark
1	Water supply and sanitation coverage	80%
2	Unaccounted for water(UfW)	25%
3	Metering ratio	100%
4	Hours of supply	18
5	Water quality	98%
6	Staff per 1,000 connections	8
7	Collection efficiency	85%
8	Cost coverage by collections	100%

EXAMPLE 2: AUSTRALIA

In **Australia**, the Essential Services Commission (ESC), which is the multisector regulator in Victoria state, has adopted the following service quality indicators.

SERVICE QUALITY INDICATORS	
Domestic customers with instalment plans (100 customers)	Average customer interruption frequency (interruptions per customer) (number per customer)
Non-domestic customers with instalment plans (100 customers)	Planned water supply customer interruption frequency during peak hours (interruptions per customer)
Domestic restrictions for non-payment of bills (100 customers)	Average duration of planned interruptions (minutes)
Non-domestic restrictions for non-payment of bills (100 customers)	Average duration of unplanned interruptions (minutes)
Restrictions restored within three days (percent, domestic only)	Average customer minutes off supply (minutes)
Restrictions over 14 days (per cent, domestic only)	Bursts and leaks (per 100 km of water mains)
Domestic legal actions (per 100 customers)	Average response times to bursts and leaks – priority 1
Non-domestic legal actions (per 100 customers)	Average response times to bursts and leaks – priority 2
Average debt level – restrictions (€)	Average time to rectify bursts and leaks – priority 1 (minutes)
Average debt level – legal actions (€)	Average time to rectify bursts and leaks – priority 2 (minutes)
Hardship grants and applications (per cent)	Planned customer interruptions not restored within 5 hours (percent)
Average value of hardship grants (€)	Unplanned customer interruptions not restored within 5 hours (percent)
Customer responsiveness and service	Water losses
Average time taken to connect to an operator (seconds)	Wastewater service
Calls answered within 30 seconds (percent)	Sewer blockages (per 100 km of sewer main)
Complaints received by water businesses (percent)	Customers experiencing a single sewer blockage
Water quality complaints (percent)	Sewer spills from reticulation and branch sewers (per 100 km)
Information statements processed within 5 days (percent)	Containment of sewer spills within 5 hours (percent)

EXAMPLE 3: URUGUAY

The Energy and Water Services Regulator of Uruguay (URSEA) has the legal authority to request that service providers submit the information required for the performance of their functions. Accordingly, URSEA issued Resolution No. 83 of 2009 regulating the delivery of accounting information for regulatory purposes in the drinking water and sanitation sector. The information to be provided, in addition to accounting information, defines the basic statistical information to be reported by providers, including 54 indicators that are divided into the following categories: Coverage, Physical Assets, Water Production, Company Staff and Environment.

For each of the indicators, the following references are to be established: category, information or name, unit of measurement and definition, as shown in the following example:

Num	Type	Sub-type	Data	Unit	Definition
5	Coverage	Water coverage	Population served with household drinking water connection	Inhabitants	Number of inhabitants with access to network drinking water through household connection, at the end of the period
6	Coverage	Water coverage	Duration of supply services	Hours/Day	Weighted average of service hours between continuous and discontinuous service connections (e.g, 2 24-hours connections and 2 18-hours connections = 21 hours)

Among the indicators defined by the regulator, some of the most important are those associated with network coverage, metering coverage, water losses, drinking water quality and wastewater treatment level.

EXAMPLE 4: PANAMA

The National Public Utilities Authority (ASEP), Panama's regulator, has the power to establish norms of efficiency, quality and other aspects of service provision that providers must comply with. Accordingly, the regulator has defined service quality goals establishing optimum quality levels for drinking water and sanitary sewerage service providers within the systems they operate in.

The service quality goals set forth by ASEP correspond to the following aspects: drinking water quality, network water pressure, continuity of supply, wastewater treatment, wastewater quality, sanitary sewerage overflows and response to queries and customers. For this purpose, the regulator sets forth seven (7) general indicators for the aqueduct service, five (5) for the sewerage service, three (3) for customer service and four (4) for measuring individual goals of each provider in relation to other aspects.

For each indicator, the regulator details elements such as: goal to be reached, measuring system, information delivery period, assessment period and compensation for non-compliance.

LINKS

Zambia's regulator (NAWASCO) web page: http://www.nwasco.org.zm/index.php/regulatory-tools/monitoring-performance-reporting

Australia's Essential Services Commission (ESC) web page: https://www.esc.vic.gov.au/water/sector-performance-and-reporting/water-performance-reports

Uruguay. Resolution No. 83 of 2009:

http://www.ursea.gub.uy/web/eresolucionv21.nsf/A19F70CF1E6E52868325796400457E7C/$file/RE%2083-009.pdf?OpenElement

Panama. Resolution No. JD-2914 of 2001: https://www.asep.gob.pa/?p=41398

INTERNAL CAPACITIES NEEDED AND THE ROLE OF PARTNERS

As much as some of these norms and standards could be universally applied, tailoring them to specific contexts or shaping new ones will require internal regulatory capacities, ranging from technical water engineering skills and financial capacity for monetization of these measures, to customer relations abilities. Whereas to a certain extent some of them could be supported by related ministries and service operators, much required capacity building and multi-stakeholder consultation around applicable standards could be supported by development partners and consumer associations. Regulators' staff must also be trained on basic service quality performance standards, and how to apply them in their own context.

SQ1B: Establish policies and procedures for the provision of good quality services

REGULATORY AREA: **SERVICE QUALITY REGULATION**	**SQ1B**
OBJECTIVE SQ1 Define service requirements to be met by operators	**ACTION CARD SQ1B** **ESTABLISH POLICIES AND PROCEDURES FOR THE PROVISION OF GOOD QUALITY SERVICES**

COST: Low **FREQUENCY:** One time

TARGET GROUPS: Regulators, service operators, consumer associations

DESCRIPTION

The definition of service quality requires appropriate communication through transparent mechanisms. It is important that service quality procedures are comprehensible and accessible to service operators and consumers at all times. Regulators should therefore develop sets of policy and procedure guidelines aimed at setting common rules for service quality provision. In accordance, in most cases, these procedures are outlined through or built upon consumer charts. Outlined often with some incentives, these guidelines motivate operators to share accurate information. In turn, this helps regulators in the long term to reduce overall auditing costs.

EXPECTED OUTCOMES

- Transparent service quality guidelines and policies are accessible to all interested parties.
- There is an independent and impartial supervision of service operators.
- Consumer associations are actively engaged.

EXAMPLE 1: AUSTRALIA

In Australia, the regulator in Victoria state establishes that operators must issue and comply with a customer charter that meets the procedural and substantive requirements of the relevant code, and sets out the water business's approved service standards. In addition to complying with applicable requirements of public health and environmental regulations, a water business must provide a service in accordance with any commitments in the water business's approved service standards. Each water business is therefore required to adhere to the following.

a) Meet the customer-related standards, procedures and practices set out in this code.
b) Develop, issue and comply with a customer charter which meets the procedural and substantive requirements of the water code, and sets out the water business's approved service standards.

EXAMPLE 2: ZAMBIA

Zambia introduced through its national regulator NWASCO the following Consumer Charter.

You have the right to:

- The minimum level of service as guaranteed by your provider
- Regular supply
- Good quality water
- A satisfactory response to your complaints
- Be invoiced every month
- Demand better services

You have the responsibility to:

- Give feedback on the quality and quantity of services received
- Keep water infrastructure/fittings in good condition
- Pay bills on time

- Report any illegal activities around water infrastructure
- Allow water providers access to infrastructure and water points
- Pay for repairs and maintenance of distribution pipes
- Conserve water

EXAMPLE 3: COSTA RICA

The Public Utilities Regulatory Authority (ARESEP), through the Costa Rican Institute of Aqueducts and Sewerage (AyA), has a national REGULATION ON AQUEDUCT AND SEWERAGE PROVISION SERVICES (Agreement No. 2020-442), which regulates the relationship, rights and obligations between service providers (including the AyA itself) and their users with regard to the availability and effective provision of the utilities in question. The regulation establishes the following guiding principles:

- "Water service provision in the existing coverage area shall follow the principle that human consumption is prioritary."
- "Sanitation service provision in the coverage area shall follow the principle of protecting public health and the environment."

Furthermore, the regulation lays out policies and procedures for public utilities provision, stating that "(…) The drinking water and sanitation service provider is obliged to provide such services in accordance with optimum provision parameters in terms of quality, quantity, continuity, reliability, equality, universal access, efficiency, opportunity, sustainability and a human rights focus, except in cases of force majeure, acts of God or duly announced maintenance periods affecting the coverage area on which the property is located (…)." On this basis, the agency establishes general guidelines and procedures on aspects such as:

- Service provision conditions.
- Service connection and metering.
- Services provided over easements and drinking water pipes and/or sanitary sewerage.
- Construction and reception of primary aqueduct and/or sewerage sites needed to enable service provision.
- Billing and collections guidelines.
- User rights and obligations.
- Suspension and reconnection of water services.

EXAMPLE 4: BOLIVIA

The Authority for the Auditing and Social Supervision of Drinking Water and Basic Sanitation (AAPS) sets forth a NATIONAL REGULATION ON DRINKING WATER AND SEWERAGE SERVICES FOR URBAN CENTERS (Ministerial Resolution 510-92) containing the provisions regulating relationships between providers and users. The regulation establishes the following general principles, among others:

- *"The Company is to guarantee the drinkability of the water it provides, which shall be fit for human consumption.* In the event that this is not the case, the principle of Water Quality shall become the Company's priority in pursuit of this aim."
- *"The Company shall be responsible for providing its services in a continuous and efficient manner, except in cases of force majeure or emergencies."*
- *"The Company shall guarantee the adequate quality of materials used in domestic connections and the proper execution of works under normal conditions of use."*

Furthermore, the regulation lays out guidelines for the provision of public utilities, establishing general criteria and procedures in aspects such as:

- Service requests.
- Domestic drinking water and sewerage connections.
- Discharge of industrial wastewater in water sources, drinking water courses and/or sanitary sewerage.
- Tariffs and billing.
- Suspension of water supply.
- Rules for urban developers.
- Prohibitions.
- User rights and obligations.

Claims and sanctions.

LINKS

Australia: Australia Customer Service Code: https://www.esc.vic.gov.au/sites/default/files/documents/customer-service-codes-customer- service-code-urban-water-businesses-august-2018-20180801.pdf

Zambia: Zambia Consumer Charter: http://www.nwasco.org.zm/index.php/consumer-service/consumer-rights-obligations

Costa Rica: AyA Service Provision Regulation. Board of Directors' Agreement No. 2020-442: https://www.aya.go.cr/transparenciaInst/acceso_informacion/SitePages/Marco-Normativo.aspx

Bolivia: National Regulation on Drinking Water and Sewerage Services for Urban Centers: http://www.aaps.gob.bo/images/MarcoLegal/ResolucionesMinisteriales/RM-510-92.pdf

INTERNAL CAPACITIES NEEDED AND THE ROLE OF PARTNERS

Strong administrative, procedural and communication capacities must be embodied within a regulator to conduct this action. It is common however, that regulators' staff will require additional support from development partners when drafting the guidelines and conducting multi-stakeholder consultations. Substantive inputs by relevant ministries will help to match these guidelines with other sector policies. Feedback from consumers, operators and civil society is necessary to ensure a common understanding through the use of understandable terminology.

SQ2A: Establish protocols for periodic data collection on service quality

REGULATORY FUNCTION: **SERVICE QUALITY REGULATION** | **SQ2A**

OBJECTIVE SQ2

Establish mechanisms for monitoring adherence to service requirements

ACTION CARD SQ2A

ESTABLISH PROTOCOLS FOR PERIODIC DATA COLLECTION ON SERVICE QUALITY

COST: Low **FREQUENCY:** One time

TARGET GROUPS: Regulators, service operators, consumer associations, civil society

DESCRIPTION

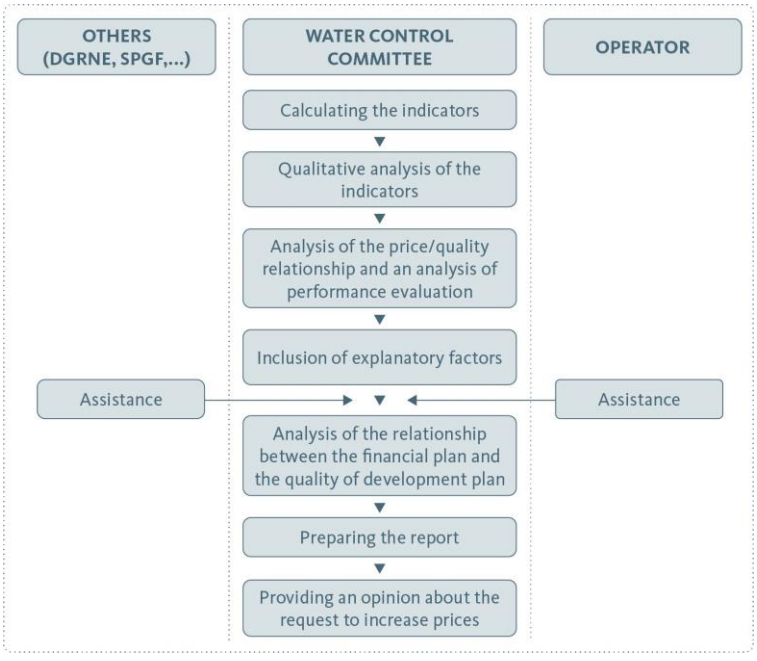
Whether the provided services correspond to defined quality standards will only be evident to regulators after being compared with data and information received from operators. Since the information must be timely and provided on a regular basis, its systematic collection is essential for regulators to be able to perform this action. To facilitate such a process for service operators, regulators establish sequenced protocols for data collection, analysis and respective reporting duties. In turn, the protocols allow service operators to better organize their analytical and reporting facilities and adequately respond to regulatory requirements. Open access to these protocols and information ensures appropriate consumer awareness about the services provided.

EXPECTED OUTCOMES

- There is a clear procedure with templates that is easy to follow by operators.
- Operators' costs for information provision is reduced.
- Monitoring by consumer associations is facilitated.

EXAMPLE 1: BELGIUM

In Belgium, operators in Wallonia region implement a management system based on objectives while regulators indicate the values deemed to be suitable for the indicators, alongside factors that could influence performance. The figure illustrates the process for collecting information and for calculating indicators for the quality of service regulation.



EXAMPLE 2: ECUADOR

The Water Regulation and Monitoring Agency (ARCA) defines technical standards for the assessment and diagnosis of public drinking water and/or sanitation utilities in urban and rural areas on Ecuadorian territory, which regulate parameters and indicators for such assessments and diagnoses. For this purpose, it has implemented the following tools used by public drinking water and/or sanitation utilities for collecting and reporting information:

1. The National System of Municipal Information (SNIM), through which public utilities submit their reports.
2. The Administrative System for Water Regulation and Control (SARA), through which community service providers submit their reports.

A user guide was issued for each information system so as to obtain real and accurate information on the provision of drinking water and/or sanitation services and their improvement plans. It is an online consultation tool that can access annual report forms.

Furthermore, the ARCA regulation establishes procedures, parameters and indicators that contemplate the specific characteristics of public and community providers respectively.

EXAMPLE 3: PARAGUAY

The General Law on the Regulatory and Tariff Framework for the Provision of Drinking Water and Sewerage Services in the Republic of Paraguay stipulates that the Sanitary Services Regulator (ERSSAN) shall ensure compliance with the aforementioned law and the obligations of providers on the basis of the information collected by the latter as well as that which is collected through general and special inspections conducted in the service provision area or in infringement areas.

Accordingly, ERSSAN issued the Regulation for the Provision of Drinking Water and Sanitary Sewerage Services which defines the rules and guidelines for the periodic submission of information by providers. This regulation stipulates that ERSSAN is to receive monthly reports of the results obtained from quality sampling for basic parameters established for drinking water and discharges to the sanitary sewerage system and receiving water bodies. By the tenth (10^{th}) of each month, providers must also report information related to commercial, technical, operational, administrative and financial aspects.

Lastly, the quality regulation includes technical appendices with specific forms for reporting information.

LINKS

Belgium: Wallonia Water Society web page: https://www.swde.be/en/tap-water-consume-confidence

Ecuador: Regulatory Reporting Framework: http://www.regulacionagua.gob.ec/manual-del-usuario-

Paraguay: Regulation for the Provision of Drinking Water and Sanitary Sewerage Services: https://erssan.gov.py/application/files/8815/8896/1341/Reglamento_de_Calidad_para_Concesionarios.pdf

INTERNAL CAPACITIES NEEDED AND THE ROLE OF PARTNERS

Due to high volumes of information, this task is now digitalized, therefore requiring adequate IT capacity of regulators, sustained by appropriate monitoring, analytical and statistical abilities. The role of anticipated partners would be to share their related capacities, notably national statistical institutions, with capacity building being sustained by development partners, the private sector, and research institutions. Regulators' staff must be trained in how to manage the online protocol and information supplied through it, as well as the ability to train operators' staff on how to use the protocol.

SQ2B: Produce and publish analytic reports to track progress on service quality

REGULATORY FUNCTION: **SERVICE QUALITY REGULATION** | **SQ2B**

OBJECTIVE SQ2

Establish mechanisms for monitoring adherence to service requirements

ACTION CARD SQ2B

PRODUCE AND PUBLISH ANALYTIC REPORTS TO TRACK PROGRESS ON SERVICE QUALITY

COST: Medium **FREQUENCY:** Regular

TARGET GROUPS: Regulators, service operators, consumer associations, civil society

DESCRIPTION

Information and data about service quality becomes relevant when it is accessible to the wider public. Open access to it enables the public to be informed, while creating a competitive environment for operators. Regulators must therefore promote best practices through service quality reports, which include recommendations based on evidence and service performance. These reports often include the definition of performance indicators, offered as steering tools and targeting results. Irrespective of its actual format, annual service quality reports, being comparative in their structure, motivate operators to achieve a higher quality of service and to improve consumer satisfaction.

EXPECTED OUTCOMES

- Service operators are motivated to improve performance.
- Regulators have an overview of quality service trends.
- Consumers have appropriate access to information.

EXAMPLE 1: FRANCE

In **France**, all water and sanitation services are publicly owned and fall within the responsibility of municipal authorities. Municipal authorities are free to choose their own method for managing the service, either by direct management or delegated management. Whatever is chosen, the public authority remains responsible for the quality, smooth operation, and sustainability of its service. Much of this relies on regulation, through the promotion of service performance and best practices that enable operators to achieve a certain quality of service and to guarantee consumer satisfaction. A list of 29 statutory performance indicators is to be calculated annually by each collective or non-collective sanitation and water service, with this data then collated by the observatory on public water and sanitation services. Initiated in November 2009 by the French National Agency for Water and Aquatic Environments (Onema), the observatory on public water and sanitation services is a tool for local authorities and service operators to help them assess general performance, improve their services, and monitor changes annually.

EXAMPLE 2: PERU

The National Superintendency of Sanitation Services (SUNASS) is the country's public regulator, which publishes quarterly bulletins on its website with important information on the drinking water and basic sanitation sector. Although these reports do not follow a pre-established structure, they generally include information on provider performance in areas such as aqueduct service interruptions, sewage network blockages, number of complaints, number of appeals, sanctioned companies and SUNASS management of user queries, among other issues.

On its website, SUNASS also publishes results on the achievement of management goals by each provider on Excel-type formats displaying each indicator. These reports show the annual goals for each five-year period as defined by each company, the executed values as well as individual and global compliance rates.

EXAMPLE 3: HONDURAS

The Drinking Water and Sanitation Services Regulator (ERSAPS) is responsible for regulating and monitoring the provision of drinking water and sanitation services on all of the national territory. As part of its functions, the agency implemented the Drinking Water and Sanitation Regulatory Information System (SIRAPS), which contains a database of technical, economic and operational aspects related to service provision.

Using the information on SIRAPS, the regulator generates management indicators for specific aspects of operator management and general service aspects such as coverage, water quality, continuity and water availability, among others. The result of all these analyses is reflected in annual reports published on the regulator's website called 'Drinking Water and Sanitation in Honduras. Urban and Rural Indicators,' which detail information on water and sanitation service management by the 28 urban providers and over 500 Water Administration Boards operating in rural and peri-urban areas throughout the country.

LINKS

France: Observatory on public water and sanitation services at: https://www.services.eaufrance.fr

Peru: Quarterly Reports and Goal Assessments:

https://www.sunass.gob.pe/sunass-te-informa/publicaciones/boletines-sunass-cifras/ and https://www.sunass.gob.pe/nuestras-funciones/fiscalizar/metas-de-gestion-de-las-empresas-prestadoras-ep/

Honduras: Document on Drinking Water and Sanitation in Honduras. 2020 Urban and Rural Indicators: https://drive.google.com/file/d/1nLZfPgU9nMe2SlrJUFmhQRewZmeaj0ce/view

INTERNAL CAPACITIES NEEDED AND THE ROLE OF PARTNERS

Converting collected data into annual reports usually requires a high level of communication and public relation skills along with a solid internal regulatory understanding of the evidence. With the latter often being present, the lack of communication capacities is usually compensated by support from external partners. These include national institutions and private sector companies that are familiar with public reporting and working with development partners. In some cases, associations may support this task. Once a template is established, such reports will be then repeated annually by regulators.

SQ2C: Conduct regular audits to check service quality indicators

REGULATORY FUNCTION: **SERVICE QUALITY REGULATION** | **SQ2C**

OBJECTIVE SQ2

Establish mechanisms for monitoring adherence to service requirements

ACTION CARD SQ2C

CONDUCT REGULAR AUDITS TO CHECK SERVICE QUALITY INDICATORS

COST: High **FREQUENCY:** Regular

TARGET GROUPS: Regulators, service operators, consumer associations

DESCRIPTION

It is very important to verify that collected data about service quality is accurate. Even more important is to ensure the impartiality of auditors or controllers assigned to perform such a delicate job. Regulators, therefore, develop sets of policies, procedures and guidelines on how to approve, conduct, and report audits, that aim to meet the stated objectives. Guidelines ensure the regular, transparent and independent auditing of service operators. Audit guidelines must clearly outline respective obligations and rights on both sides, both of regulators and operators. When setting the ground for transparent control, these guidelines can also incentivize operators to detect and declare any service quality non-compliance. Digitalization of information offers opportunities to improve the efficiency of this task.

EXPECTED OUTCOMES

- There is a reliable and transparent auditing process.
- Service operators' internal structure is aligned with the audits.
- Consumers' interests are adequately protected.

EXAMPLE 1: AUSTRALIA

In **Australia**, the Essential Services Commission in Victoria, an independent regulator that promotes the long term interests of consumers with respect to the price, quality and reliability of energy, water and transport services, established a framework for its audit functions related to the respective regulated industry obligations. The framework includes guideline to meet the following:

- Ensure that audits are conducted in an independent, rigorous and comparable manner by establishing minimum requirements for the independence and expertise of auditors, and the conduct and reporting of audits.
- Provide incentives for businesses to achieve compliance by minimizing the probability that significant non-compliance will go undetected, providing regulated water businesses with an opportunity to rectify non-compliance, and taking any further action required to achieve compliance.
- Maximize the cost-effectiveness of the audits by taking a risk-based approach to defining the scope and frequency of the audits to be undertaken.
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EXAMPLE 2: BOLIVIA

The Authority for the Auditing and Social Supervision of Drinking Water and Basic Sanitation (AAPS) is the Bolivian regulator, whose functions include monitoring compliance with the commitments undertaken by providers in relation to drinking water and sewerage service provision quality, with the aim of ensuring the achievement of management indicators in the areas of coverage, continuity, quality, quantity and sustainability.

In the context of its SUPERVISORY duties, providers submit periodic information to the AAPS and the latter supervises them **from its headquarters** and **on the field**, for which it deploys a series of actions for verification, analysis, assessment and monitoring of compliance with the regulation as well as with technical, economic, commercial and legal obligations, with the aim of making observations and recommendations and requesting corrective measures.

Additionally, and in the context of its AUDITING functions, the AAPS applies a series of technical, economic and legal procedures with the aim of **VERIFYING** compliance with regulations in force and regulatory provisions through information reported by providers.

EXAMPLE 3: ECUADOR

The Water Regulation and Monitoring Agency (ARCA) defines technical standards for the assessment and diagnosis of public drinking water and/or sanitation utilities in urban and rural areas on Ecuadorian territory, which regulate parameters and indicators for such assessments and diagnoses.

These regulations specifically establish that after providers submit reports for their assessment, ARCA may carry out monitoring visits to provider facilities, whether directly or through its hired agents, with the aim of ratifying the results of management and system infrastructure assessments that are used to elaborate provider improvement plans.

LINKS

Australia: Guideline for Approving, Conducting and Reporting Audits for Victorian Water Businesses: https://www.esc.vic.gov.au/sites/default/files/documents/regulatory-auditing-framework-to-apply-for-victorian-water-businesses-guideline.pdf

Bolivia: Regulation and General Assessment of Results 2020: http://www.aaps.gob.bo/images/DER/Indicadores_Desempeo_2020_1era_parte.pdf

Ecuador: Regulation for the assessment of public drinking water services: http://www.regulacionagua.gob.ec/wp-content/uploads/downloads/2018/11/NORMATIVA-PARA-EVALUACION-DE-LOS-SERVICIOS-P%C3%9ABLICOS-DE-AGUA-POTABLE....pdf

INTERNAL CAPACITIES NEEDED AND THE ROLE OF PARTNERS

A range of administrative, legal and inspection skills necessary to complete this action obliges regulators to build their internal capacity through training, often seeking support from other national institutions or development partners. Judiciary institutions can, for instance, extend their expertise when outlining the content of guidelines. Development partners could also build on this through training on how to establish implementation procedures.

SQ2D: Establish processes to validate the data provided by operators

REGULATORY FUNCTION: **SERVICE QUALITY REGULATION** | **SQ2D**

OBJECTIVE SQ2

Establish mechanisms for monitoring adherence to service requirements

ACTION CARD SQ2D

ESTABLISH PROCESSES TO VALIDATE THE DATA PROVIDED BY OPERATORS

COST: Medium **FREQUENCY:** One time

TARGET GROUPS: Regulators, service operators, consumer associations

DESCRIPTION

In addition to audit verification of collected data, regulators validate the data through comparative exercises. Since this action puts additional burdens on the monitoring process, establishing protocols regarding their sequence within the process can spare time and financial resources. In accordance, regulators usually conduct annual benchmarking exercises in which they validate operators' performance by comparing and analysing data collected through audits. This exercise could be structured around different categories of performance indicators, such as indicators aimed at protecting consumers interests, the sustainability of operators, and environmental sustainability.

EXPECTED OUTCOMES

- There is a reliable and transparent data validation process.
- Service operators' internal structure is aligned with the data validation process.
- Consumers' interests are adequately protected.

EXAMPLE 1: PORTUGAL

In Portugal, the Water and Wastewater Regulation Authority (ERSAR) has established a methodology in the service quality assessment process that involves a sequence of stages to create a clear, rational, and transparent system. The procedures include a process in which information is first provided by the operators, then validated and audited to verify data reliability by a regulator. The extensive and complex procedure can be found in the link below.

EXAMPLE 2: ECUADOR

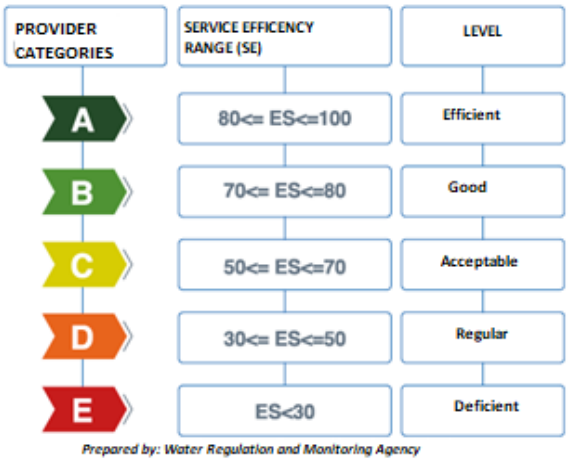
The Water Regulation and Monitoring Agency (ARCA) defines technical standards for the assessment and diagnosis of public drinking water and/or sanitation utilities in urban and rural areas on Ecuadorian territory, which regulate parameters and indicators for such assessments and diagnoses.

Using the information reported by providers, ARCA provides benchmarking for water forecasting and planning studies in the specific area in which the public utilities are provided, so that the municipalities in charge of such provision can ensure adequate company management upholding the principles of service transparency, efficiency, sustainability and quality improvement.

For this exercise, ARCA established 31 indicators classified into 7 categories, namely:

1. Access to the service
2. Cost efficiency
3. Financial balance
4. Commercial efficiency
5. Compliance
6. Corporate responsibility
7. General state of infrastructure

The results of indicators and their categories are then weighted to establish the DRINKING WATER AND SANITATION EFFICIENCY LEVEL RATE (INES), with a value between 0% and 100%. Lastly, benchmarking results are used to categorize providers as follows:



EXAMPLE 3: COLOMBIA

The Regulatory Committee on Drinking Water and Basic Sanitation (CRA), Colombia's regulator, is in charge of defining mandatory criteria, methodologies, indicators, parameters and models for assessing the management and results of legal entities that provide public aqueduct and sewerage services for households, as well as establishing the methodology for their classification according to risk level, characteristics and conditions, with the aim of determining which providers require an inspection and special or detailed supervision by the Superintendency of Public Services, the body responsible for supervision and monitoring.

Based on the information reported by providers, the CRA defines a benchmarking methodology for assessing management and determining service provision risk levels for each provider.

For this methodology, the CRA established a series of indicators classified into 8 dimensions:

1. Service quality
2. Efficiency of investment planning and management
3. Operational efficiency
4. Corporate management efficiency
5. Financial sustainability
6. Governance and transparency
7. Environmental sustainability
8. Tariff management

The results of the indicators and their dimensions are weighted to establish the UNIQUE SECTOR INDICATOR (IUS) with a value between 0 and 100. Benchmarking results are used to categorize providers as follows:

IUS Result	Risk Level Classification
0 ≤ IUS ≤ 30	High Risk
30 < IUS ≤ 60	Medium-High Risk
60 < IUS ≤ 80	Medium Risk
80 < IUS ≤ 90	Medium-Low Risk
90 < IUS ≤ 100	Low Risk

LINKS

Portugal: Portugal regulator ERSAR Water and Wastewater Services Quality Assessment Guide: http://www.ersar.pt/en/site-communication/site-news/Documents/Guia_Tecnico_19_2aEdi%C3%A7%C3%A3o_2013_EN.pdf

Ecuador: BENCHMARKING OF DRINKING WATER AND SANITATION SERVICE PROVIDERS IN ECUADOR. Statistics Bulletin 2020:

http://www.regulacionagua.gob.ec/wp-content/uploads/downloads/2021/12/Boletin-Estadistico-APS_dic21_v02.pdf

Colombia: CRA Resolution 943 of 2021. Article 1.6.5.1.2: https://normas.cra.gov.co/gestor/docs/resolucion_cra_0943_2021.htm#1.6.5.1

INTERNAL CAPACITIES NEEDED AND THE ROLE OF PARTNERS

Abilities required to conduct this action include statistical, hydrological, and administrative skills. Validation exercises, being an internal regulatory process, would benefit from the experience of other regulators. To that end, technical regional exchanges could be valuable to aid improvement. Options for other partners who could be involved include national statistical institutions, the private sector, and research institutions. Regulators' staff must also be trained on how to benchmark and how to regulate service quality.

SQ3A: Establish systems of incentives and rewards for operators' performance by regulators

REGULATORY FUNCTION: **SERVICE QUALITY REGULATION** | **SQ3A**

OBJECTIVE SQ3

Facilitate adherence to service requirements, and continuous improvement in service provision

ACTION CARD SQ3A

ESTABLISH SYSTEMS OF INCENTIVES AND REWARDS FOR OPERATORS' PERFORMANCE BY REGULATORS

COST: Low **FREQUENCY:** Regular

TARGET GROUPS: Regulators, service operators, consumer associations, media agencies, civil society

DESCRIPTION

As much as the verification and sanctioning of non-compliant operators to service quality norms and standards could be efficient in protecting consumers interest, it only works as an action when poor performance has already occurred and consumer interests have already been damaged. It is therefore advised to apply, alongside sanctions, a range of regulatory incentives and rewards to motivate operators' compliance to existing standards. In accordance, regulators should establish systems of incentives or rewards for the improvement of services over time. Such mechanisms, commonly shared through media, allow regulators to identify annual sectoral champions.

EXPECTED OUTCOMES

- Service operators are motivated to comply with the policy.
- A regulator service quality function is facilitated.
- Consumer associations are more engaged in the process.

EXAMPLE 1: BRAZIL

In **Brazil**, the water sector does not have a compulsory federal quality of service assessment, except on the water quality. The National Water and Wastewater Information System (Sistema Nacional de Informações sobre Saneamento, SNIS), has played a significant role in this area. The activities of SNIS are developed by means of gathering information provided on a voluntary basis by operators that are given incentives to join this programme. If operators intend to be funded by public capital, they are compelled to supply data to SNIS. In accordance with the fundamental principles for the provision of public services, Law N. 11445 seeks to ensure the transparency of actions, based on information systems and institutionalized decision-making processes.

EXAMPLE 2: PORTUGAL

In **Portugal,** until 2014, the regulator ERSAR, in partnership with the newspaper Água&Ambiente, annually rewarded the most distinguished Portuguese operators with the Water and Waste Service Quality Awards. The goal of this initiative was to identify, reward, and publicly disclose the operators that excelled in the service provision. See the regulator's communication video below.

EXAMPLE 3: COLOMBIA

The Regulatory Committee on Drinking Water and Basic Sanitation (CRA) establishes a tariff framework that offers incentives to larger companies (over 5000 users or subscribers) for complying with service and efficiency standards in relation to coverage, continuity, quality, commercial complaints and water losses, among other aspects.

The incentive is associated with the value of the investment projects carried out over a five-year tariff period, considering that the tariff value is calculated on the basis of the projected value of these investments, but that final values differ from those initially projected.

The CRA has therefore determined that in the cases in which the final value of investment plan projects is higher than the initially planned value, the higher value shall be recognized in the tariff as long as the provider has achieved the established goals in terms of service and efficiency standards.

This regulatory opportunity aims to incentivize compliance, not only with the investment plan but especially with the service indicators.

EXAMPLE 4: MEXICO

The National Water Commission of Mexico (Conagua) is an administrative, regulatory, technical and consulting body that aims to preserve national water bodies and their inherent public assets for their administration, and to guarantee water security in Mexico. To carry out this mission, the agency works with federal, state and municipal governments, as well as with user associations, companies and institutions in the private and public sectors.

Conagua is in charge of the Drinking Water, Drainage and Treatment Program (PROAGUA), which finances actions for the provision of drinking water, sanitary drainage, rainwater drainage and sanitation services, as well as the comprehensive strengthening of operators. The percentage of financing for projects presented for Conagua's assessment may vary according to whether operators achieve certain performance criteria. Some of the performance criteria used as incentives for obtaining a higher level of financing include the following conditions:

- That at least 5% of staff has taken training courses over the last year on matters of water service administration and management, gender equality and non-discrimination criteria, transparency and monitoring for corruption.
- That the company has reviewed and updated its tariff structures in the past two years.
- That the company submit a letter of intent in which it commits to improving commercial efficiency when it drops below 80%, during the period from January to June of the same year, or that it express its commitment to maintaining or surpassing a percentage above 80%.

In the case of wastewater treatment plants, financing percentages could increase when at least 30% of the wastewater is treated for direct reuse.

LINKS

Brazil: Brazil SNIS web page: http://app4.mdr.gov.br/serieHistorica/

Portugal : ERSAR video clip: https://www.youtube.com/watch?time_continue=8&v=S93ZOfRIQfw

Colombia: CRA Resolution 938 of 2020.

https://www.cra.gov.co/transparencia/normatividad/normatividad-entidad-autoridad/resolucion-cra-938-2020

Mexico: Rules of procedure for the Drinking Water, Drainage and Treatment Program managed by the National Water Committee, applicable as of 2022: https://www.gob.mx/cms/uploads/attachment/file/690380/Reglas_de_Operaci_n_PROAGUA_2022.pdf

INTERNAL CAPACITIES NEEDED AND THE ROLE OF PARTNERS

Creating a competitive environment through rewards and incentives requires certain regulatory capacities such as creating incentives within the available regulations, communication, and public relations. Commonly, different regulators perform these on their own with support from marketing and media agencies, consumer associations, and civil society, to make the exercise publicly available and its content more attractive to a broader audience. External partners could further support the structuring and dissemination of awards and incentives.

SQ3B: Establish systems of sanctions for non-adherence of operators to service norms and regulations

REGULATORY FUNCTION: **SERVICE QUALITY REGULATION**	**SQ3B**

OBJECTIVE SQ3

Facilitate adherence to service requirements, and continuous improvement in service provision

ACTION CARD SQ3B

ESTABLISH SYSTEMS OF SANCTIONS FOR NON-ADHERENCE OF OPERATORS TO SERVICE NORMS AND REGULATIONS

COST: Low **FREQUENCY:** Regular

TARGET GROUPS: Regulators, service operators, consumer associations,

DESCRIPTION

Regulators can initiate administrative infringement proceedings against operators under terms set out in legislation. Reasons can include if information has not been reported, operators have intentionally not provided accurate information, or if service standards do not match the minimum requirements. However, prior to applying any sanctions, they must be transparently outlined through mechanisms that specify a time sequence, with sanctions commonly being the last resort. Predefined penalty systems allow for the imposition of adequate penalties on utilities for acts or omissions that infringe legal provisions in terms of the quality of service. Transparently sanction mechanisms also ensure the integrity of regulatory infringement actions.

EXPECTED OUTCOMES

- Service operators are prevented from further misconduct.
- A regulator receives appropriate information on time.
- Consumers are protected from further damage and are adequately reimbursed.

EXAMPLE 1: AUSTRALIA

In **Australia**, states and territories have a well-conceived, modern, and very robust regulatory model that is able to all possible issues. Regulation is essentially focused on consumers, but without disregarding the sustainability of operators. Different regulators have successfully developed ways of supervising and controlling the quality of service, as seen in the scheme of compensation to consumers in case of failures to comply with agreed service standards (see below).

LEVEL OF SERVICE	AMOUNT PAYABLE FOR FAILURES (EUROS)				
	CityWest	Southeast	Yarra Valley	Barwon	Central Highlands
Water					
Unplanned interruptions not restored in a specific time	15	15	15	–	15
More than five unplanned interruptions in any 12 months	15	15	15	30	15
Failure to notify a planned interruption	–	–	15	–	–
Planned interruptions during peak hours (5 a.m. to 9 a.m., and 5 p.m. to 11 p.m.)	–	–	15	–	–
Planned interruptions longer than advised	–	–	15	–	–
Planned interruptions longer than 5 hours	–	–	15	–	–
Repair of leaking service pipes within 5 days	–	–	–	–	15
Wastewater					
More than three interruptions in 12 months	15	15	15	30	15
Interruptions not restored in a specified time	15	15	15	–	15
Spills not contained in a specified time of notification	300	300	300	–	–
Spills not contained in a house in one hour of notification	300	300	300	–	–

EXAMPLE 2: COSTA RICA

The Public Utilities Regulatory Authority of Costa Rica (ARESEP) is legally empowered to sanction operators pursuant to the administrative procedure set forth in the General Public Administration Law (Law No. 6227 of 1968), with fines for five times the value of the damages caused when the operator fails to comply with service norms and regulations such as:

- Inadequate maintenance of infrastructure and work-related equipment pertaining to the regulated public utility, thereby posing a risk to persons and property.
- Failure to comply with the binding obligations applied to the public utility by tariff resolutions.
- Failure to comply with quality norms and principles in providing public utilities, insofar as such failure to comply is not attributable to an act of God or a case of force majeure.

EXAMPLE 3: HONDURAS

The Drinking Water and Sanitation Services Regulator (ERSAPS) is responsible for regulating and monitoring the provision of drinking water and sanitation services on all of the national territory. Its responsibilities include applying sanctions to providers for non-compliance or breaches. Pursuant to its powers, the ERSAPS Board of Directors adopted the Infringements and Sanctions Regulation which defines three (3) categories of violations as follows:

- Minor Violations: Those that do not pose irreversible damage to people's health in connection with a failure to comply with the treatment conditions set forth for wastewater, drinking water continuity and quality, and other duties.
- Severe Violations: This category includes the refusal to provide information to the regulator and users, obstructing or impeding verifications by ERSAPS, the failure to comply with the tariff system, or repeated minor violations.
- Major Violations: Acts or omissions regarded as minor or severe that become repeated offenses by the service provider.

Pursuant to the foregoing, the regulation establishes fixed financial penalties based on a percentage of the average turnover during the three months prior to the date of the infringement. In this sense, minor violations carry 2% fine, severe violations carry 3.5% fine, and major violations carry a 5% fine in relation to the average turnover during the three months prior to the date of the infringement.

LINKS

Australia: https://www.esc.vic.gov.au/water/codes-and-guidelines/customer-service-codes

Costa Rica: Public Utilities Regulatory Authority Law: https://aresep.go.cr/transparencia/rendicion-cuentas/planes-cumplimientos/160-marco-legal1/leyes-y-reglamentos-generales/2414-leyes-reglamentos-y-decretos

Honduras: Infringements and Sanctions Regulation:

https://www.ersaps.hn/normativa-u.html

INTERNAL CAPACITIES NEEDED AND THE ROLE OF PARTNERS

Setting sanctions require regulators to have certain judiciary and administrative skills. These could be sustained and supported by best practices from other regulators. Potential partners include national judiciary and disciplinary institutions along with development partners. Regulators' staff must be trained on how to apply and manage disciplinary measures within their regulatory mandate.

2. CONSUMER PROTECTION

OBJECTIVE	ACTION	CODE
1. There are clear rules regarding the interface between consumers and operators	A. Define and establish consumer protection policies	**CP1A**
	B. Develop procedures to establish water consumer spaces at utility level	**CP1B**
	C. Develop consumer chart guidelines that establish clear rights and duties for consumers	**CP1C**
2. There are mechanisms to monitor and review information received about consumer protection rights	A. Conduct regular household surveys or similar instruments to assess consumer satisfaction	**CP2A**
	B. Sensitize and educate consumers about their rights and obligations	**CP2B**
	C. Develop accessible communication channels to receive consumers complaints	**CP2C**
	D. Review and monitor existing contracts between service operators and consumers	**CP2D**
	E. Mediate and reconcile conflicts involving service operators and consumers	**CP2E**
3. Consumer protection is reinforced through rewards and sanctions	A. Establish reward systems through benchmarking for operators with higher consumer satisfaction	**CP3A**
	B. Establish penalty systems for infringing contractual provisions regarding consumer protection	**CP3B**

CP1A: Define and establish consumer protection policies

REGULATORY FUNCTION: **CONSUMER PROTECTION REGULATION** | **CP1A**

OBJECTIVE CP1

There are clear rules regarding the interface between consumers and operators

ACTION CARD CP1A

DEFINE AND ESTABLISH CONSUMER PROTECTION POLICIES

COST: Low **FREQUENCY:** One time

TARGET GROUPS: Regulators, consumers, service operators, consumer associations

DESCRIPTION

Regulators establish consumer protection policies containing information such as the prohibition of charging prices that do not match the costs, obligations to give prior notice of suspension due to non-payment, frequency of billing, minimum payment times or especially short times for expiry of debts, consumer charts, and associations rights. Publicly outlined, consumer policies are also an opportunity for regulators to include essential regulatory principles they adhere to, such as universality or equity. Protecting consumers always requires the establishment of clear measures that adequately reflect their interests and ensure the full comprehension and acknowledgement of operators. The non-exhaustive list of policy information, open to be adapted to different circumstances, becomes an essential regulatory tool for achieving consumer protection objectives.

EXPECTED OUTCOMES

- There are clear and transparent policies in place that are accessible to all parties.
- Service operators are contracted in accordance to consumer protection policies.
- Consumer associations are actively engaged in shaping policies.

EXAMPLE 1: ZAMBIA

In **Zambia**, the creation of a vertical regulatory agency, the National Water Supply and Sanitation Council (NWASCO), led to the establishment of principles that were not explicitly present in the water sector until then, namely universality, accessibility, the quality of service, and equity. The 1994, the National Water Policy created the legal framework for implementing the decentralization of responsibility for the sector. NWASCO requires water and sewerage service providers to guarantee their customers a certain and defined level of service for a specified price in a Service Level Guarantee (SLG). Customers may use these SLGs as a basis for airing their complaints. Areas guaranteed are drinking water quality, billing for services, client contracts, interruptions of water supply, blockages of sewers, and pressure in the network.

EXAMPLE 2: PARAGUAY

The Sanitary Services Regulator (ERSSAN) is legally empowered to establish a user regulation containing regulatory norms on the rights and obligations of consumers, as well as on claims procedures, in accordance with the principles of speed, affordability, simplicity and efficiency in administrative procedures.

This regulation sets forth a consumer protection policy containing principles that govern the relationship between users and providers. Such principles are in line with user satisfaction and service efficiency, and exist to guide the activities of all service providers.

The user satisfaction principle means that the user is to receive accessible, efficient and equitable treatment, without discrimination against individuals or groups/categories of users. To this end, the regulator states that, pursuant to this principle, providers must establish quick and efficient information and assistance services so that users may obtain fair and adequate responses, including the timely resolution of any requests or claims submitted in connection with their rights.

With regard to the principle of efficiency, the policy defined in the user regulation defines it as compliance with the obligations assumed in the respective concession contract and/or permit, as well as those deriving from the General Law on the Regulatory and Tariff Framework for Drinking Water and Sanitary Sewerage Provision in the Republic of Paraguay, and the Consumer and User Protection Law.

EXAMPLE 3: PERU

The National Superintendency of Sanitation Services (SUNASS) is the public regulator for water and sanitation in Peru and is empowered to issue regulations, general and special norms to regulate the procedures it oversees, as well as any norms connected with interests, rights and obligations of supervised entities or activities, or users.

Accordingly, SUNASS issues the User Guide for drinking water and sewerage services, which provides users with information on their rights and obligations as well as those of the companies. It also includes advice on reducing monthly service fees and information on the claims procedure in the event that they should have complaints about billing or services.

This guide provides clear and transparent information, for both users and public utilities companies alike, on consumer protection guidelines related to aspects such as service conditions, billing, connections, response to requests, etc., with the following guiding principles:

- The provision of drinking water and sanitary sewerage services of adequate quality and quantity.
- The furnishing of clear and accurate information on the service and billing
- User compensation in the event of negligence, lack of expertise or carelessness in the company's provision of the service.

User service that is courteous, respectful and efficient, provided by trained personnel with a proactive and positive mindset.

LINKS

Zambia: Zambia National Water Policy: http://www.nwasco.org.zm/index.php/policy/send/4-policy-and-legislation/56-national-water- policy-1994-zambia

Zambia Service Level Guarantee (SLG): http://www.nwasco.org.zm/index.php/regulatory-tools/service-level-agreements-and-guarantees

Paraguay: User Regulation: https://erssan.gov.py/application/files/2015/8896/1701/Reglamento_del_Usuario.pdf

Peru: User Guide:

https://www.sunass.gob.pe/wp-content/uploads/2020/09/Gu%C3%ADa-del-Usuario.pdf

INTERNAL CAPACITIES NEEDED AND THE ROLE OF PARTNERS

Identifying consumer interests lies primarily in working with consumers and their respective associations. Capacities required including engineering or customer relations abilities that could be supported by related ministries or service operators, while much required facilitation of multi-stakeholder consultations remain with civil society and development partners. Regulators' staff must be trained on basic consumer policies and concepts, and how to apply them in their specific context.

CP1B: Develop procedures to establish water consumer spaces at utility level

REGULATORY FUNCTION: **CONSUMER PROTECTION REGULATION** | **CP1B**

OBJECTIVE CP1

There are clear rules regarding the interface between consumers and operators

ACTION CARD CP1B

DEVELOP PROCEDURES TO ESTABLISH CONSUMER SPACES AT UTILITY LEVEL

COST: Low **FREQUENCY:** One time

TARGET GROUPS: Regulators, consumers, service operators, civil society

DESCRIPTION

An important modality for protecting consumer interests is setting the stage where their voices can be heard and they can discuss their rights openly and directly with operators. In accordance, regulators provide rules and guidelines to promote such consumer participation at utility level. Regulated modalities and mechanisms determine how consumers can contribute to the timely supply of drinking water and sanitation services, build confidence among the public, and raise awareness about the effective use of drinking water and sanitation. With the primary aim of protecting their rights and interests, consumer platforms are often encouraged to become involved in decision-making processes, and sometimes have representatives on operators' management boards.

EXPECTED OUTCOMES

- Service operators ensure the functioning of participatory mechanisms.
- Consumers actively participate and share their feedback.
- Regulators have a clearer picture of service performance.

EXAMPLE 1: TAJIKISTAN

In **Tajikistan**, Public Advisory Councils (PACs) have been established in water supply companies to protect the rights and interests of consumers. In many places they are very active, with consumers making inquiries and complaints that companies must respond to. The aim of these advisor councils is to protect the rights and interests of consumers and encourage their participation in decision-making processes.

EXAMPLE 2: KENYA

In **Kenya**, the Water Services Regulatory Board (WASREB) acknowledges the need to involve consumers as participants in decisions that affect the way they receive water services. The empowerment of consumers is in line with Kenya's constitution, which recognizes access to water services as a human right. Section 72 of the Water Act 2016 requires WASREB to establish a mechanism for handing complaints from consumers regarding the quality or nature of water services, and to develop guidelines on the establishment of consumer groups and facilitate their establishment. A consumer engagement guideline was developed to facilitate the engagement process between consumers and sector institutions. It defines the roles and responsibilities of various players in consumer engagement and the handling of complaints.

EXAMPLE 3: PANAMA

The legislation of Panama stipulates that State institutions are obliged to allow citizen participation in all public administration proceedings related to tariff and rate-setting for services that may affect the interests and rights of citizen groups. Legally established citizen participation mechanisms include Public Consultations, Public Hearings, Forums and Workshops, and direct participation in institutional agencies.

Pursuant to its legal powers, the National Public Utilities Authority issues resolutions for each citizen participation process to establish the rules for public consultations procedures. These resolutions define aspects such as the purpose of the public consultation, start and end dates and times for each process, online and in-person channels through which documents may be obtained, persons qualified to provide comments, place of delivery and comment format.

EXAMPLE 4: COLOMBIA

In Colombia, the President of the Republic issued a decree establishing the guidelines ensuring user participation in the preparation of regulatory projects set forth by the Regulatory Committee on Drinking water and Basic Sanitation (CRA), including both projects that impact tariffs and projects that are directly related to the tariffs to be collected.

Some of the guidelines include the following:

- The CRA must publish all preliminary draft resolutions of a general nature on its web page, with specific periods established for its availability prior to issuance.
- The information to be published includes the draft text, technical support, an explicit invitation for interested parties (including users) to submit observations and suggestions regarding the published proposal, and the identification of the administrative agency and persons providing information on the project and receiving observations, objections or suggestions (indicating a regular address and phone number as well as a fax number and e-mail address).

The CRA must prepare a document containing the reasons for which proposals are accepted or rejected, and these are to be published along with the issued resolution.

LINKS

Tajikistan: https://siwi.org/latest/tajikistan-water-supply-companies-raise-transparency-and-improve-cooperation-with-consumers/

Kenya: https://wasreb.go.ke/downloads/Consumer%20Engagement%20Guideline%20Revised%202018.pdf

Panama: Transparency Law and Citizen Participation Resolution:

http://www.antai.gob.pa/wp-content/uploads/2015/04/Ley-6-de-22-enero-2002.pdf ; https://www.asep.gob.pa/?p=196596

Colombia: Decree No. 1077 of 2015. Articles 2.3.6.3.3.9 and 2.3.6.3.3.10:
https://minvivienda.gov.co/sites/default/files/normativa/1077%20-%202015.pdf

INTERNAL CAPACITIES NEEDED AND THE ROLE OF PARTNERS

This action requires regulators to have improved public relations abilities in order to be able to establish and facilitate space between consumers and operators. Consumers and their associations, civil society, and development partners, take an active part in supporting this regulatory action. The staff of both regulators and operators must be trained on how to manage their operations in an inclusive manner, and how to systematically allow consumer participation in their executive decisions.

CP1C: Develop consumer chart guidelines that establish clear rights and duties

REGULATORY FUNCTION: **CONSUMER PROTECTION REGULATION** | **CP1C**

OBJECTIVE CP1

There are clear rules regarding the interface between consumers and operators

ACTION CARD CP1C

DEVELOP CONSUMER CHART GUIDELINES THAT ESTABLISH CLEAR RIGHTS AND DUTIES

COST: Low **FREQUENCY:** One time

TARGET GROUPS: Regulators, consumers, service providers

DESCRIPTION

Another important tool available to consumers and operators are consumer charts. These are usually conceived as notification portals where both parties can quickly exchange on a range of issues predefined by regulators. These issues to a large extent encompass contractual rights and duties. Regulators also have a duty to provide guidelines for operators to promote the development of consumer service charts, and to declare a commitment to provide the best possible service to customers. Established to serve as a notification platform, consumer charts have also proved to be a valuable source of information for regulators.

EXPECTED OUTCOMES

- Service operators receive feedback from consumers through an interactive and templated mechanism.
- Consumers are aware of their rights and duties.
- Regulator can access information from consumers at all times.

EXAMPLE 1: SOUTH AFRICA

In **South Africa**, the Johannesburg Water customer care programme operates two 24-hour call centres, one for revenue-related complaints and the other for technical issues, and two walk-in contact centres, while also offering customers contact by post and email. It also maintains an open and transparent relationship with its customers and publishes a customer service charter that declares the utility's commitment to provide the best possible service to its customers. Johannesburg Water has benefited enormously from maintaining good customer care and relations. By responding quickly and providing feedback, customers are more likely to inform the utility of service failures that can then be rectified quickly. In response, customers are satisfied and more willing to pay for services.

EXAMPLE 2: PANAMA

The National Public Utilities Authority (ASEP) issued a resolution establishing the User Rights and Duties Regulation, which includes 26 rights encompassing aspects such as service quality levels, equal treatment among users, response to requests in adequate time frames, transparency in the information furnished by providers, the definition of easily-accessed customer service channels, the obtention of a correct measurement of consumption, billing and payment periods, service interruptions, compensations for damages caused by service deficiencies, the processing of personal information, claims notifications, and other aspects.

Likewise, the regulation establishes 10 general duties of users related to issues such as responsibility in managing service facilities inside buildings and metering equipment, the prompt payment of bills, granting access to provider personnel for the purposes of consumption metering and maintenance tasks, the prohibition to resell the service, the prohibition to manipulate the public utility's external networks, the obligation to inform the provider of anomalies in the facilities, and the respect for procedures established for submitting requests and claims.

Accordingly, ASEP ordered all service providers to provide users with a free copy of the User Rights and Duties Regulation within a period of 45 days as from its publication. ASEP also has departments that provide in-person training and legal assistance to users (offices throughout the national territory, toll-free customer service lines, e-mail and customer service centers in the provinces).

EXAMPLE 3: HONDURAS

The Drinking Water and Sanitation Services Regulator (ERSAPS) is responsible for regulating and monitoring the provision of drinking water and sanitation services on all of the national territory. Its powers include preparing the model format for service regulations encompassing providers and users.

Agreement No. 001 of 2006 by ERSAPS establishes the service regulation model for drinking water and basic sanitation, which includes a specific chapter on user rights and duties that defines 14 rights on matters such as access to a service connection, contract subscription, contract modifications, petitions, claims, access to service information, service interruptions with prior notice, service reconnection, advice by the provider on the use and maintenance of household networks, among others.

Likewise, the model establishes 16 user obligations in aspects such as connecting to the service when it is available, adequate use, connection charges, responsibility over household facilities, prompt payment of bills, consumption metering, change in meters due to malfunction, etc.

Additionally, ERSAPS's special regulation on the response to user requests and claims determines that user rights and duties should be broadly divulged through posters, internet portals, media, notices at provider company headquarters and at customer service offices. The regulation also obliges municipalities to issue and have the provider inform its users of the Drinking Water and Sanitation Services Regulation based on the model adopted by the regulator.

LINKS

South Africa: Johannesburg Water web page: https://www.johannesburgwater.co.za/notify-me/

Panama: Public Utility Users' Rights and Duties Regulation: http://www.asep.gob.pa/openpdf.php?idresol=JD-101

Honduras: Service Regulation Model and Special Regulation on the Response to User Requests and Claims: https://www.ersaps.hn/normativa-u.html

INTERNAL CAPACITIES NEEDED AND THE ROLE OF PARTNERS

When drafting consumer chart guidelines, regulators can rely on many good examples currently in use. The main capacities needed, include IT, communication, and legal abilities to appropriately convert contractual rights and duties into an interactive platform. Possible actors to seek capacity support from include consumer associations, operators, and civil society. Development partners could help with regional technical exchanges with other regulators. Regulators' staff must be trained on how consumer charts are applied by other regulators, and how to build on their lessons learned.

CP2A: Conduct regular households surveys or similar instruments to assess consumer satisfaction

REGULATORY FUNCTION: **CONSUMER PROTECTION REGULATION** | **CP2A**

OBJECTIVE CP2

There are mechanisms to monitor and review information received about consumer protection rights

ACTION CARD CP2A

CONDUCT REGULAR SURVEYS OR SIMILAR INSTRUMENTS TO ASSESS CONSUMER SATISFACTION

COST: Medium **FREQUENCY:** Regular

TARGET GROUPS: Regulators, consumers, civil society

DESCRIPTION

Information can reach regulators through various sources, but a primary goal is to establish direct communication with consumers. To help to protect consumer interests, regulators must employ mechanisms and tools where consumers' views can be shared. To that end, regulators should undertake surveys, forums, or use other means to gather relevant information from consumers or their respective associations on their satisfaction with service provision. Surveys are increasingly conducted online and are also made available to operators.

EXPECTED OUTCOMES

- Consumers have an opportunity to provide feedback directly to regulators.
- Regulators collect essential information regarding operators' performance.
- Service operators can access feedback from surveys.

EXAMPLE 1: ZAMBIA

In **Zambia**, to strengthen consumer participation in the water and sanitation sector, the National Water Supply and Sanitation Council (NWASCO) instituted a consumer forum in each province. The purpose is to sensitize the public about their rights and obligations with regards to water supply and sanitation provision, and service level guarantees. These forums also act a survey platforms to enable consumers to give feedback on the quality of services, as well as to present complaints. To date, consumer forums have been held in Kabweand Solwezi, the capital cities of Central Province and North-Western Province, respectively, and are to be repeated and scaled out as part of a developing regulatory survey mechanism.

EXAMPLE 2: DOMINICAN REPUBLIC

The President of the Republic issued a national decree on the Regulation of the National Public Utilities Quality Monitoring System, thereby creating the National Observatory on Public Utilities Quality (ONACSEP) as an integrated platform for research, participation and accountability.

As one of ONACSEP's tools, it also created the Public Utility Quality Satisfaction Barometer with the aim of attaining greater knowledge on citizen opinion trends regarding the quality improvement of these services. The barometer therefore seeks to promote continuous service improvement through elements such as the national user satisfaction survey, which must be elaborated by institutions that provide public utilities, the results of which are to be published annually in accordance with models and dates defined by the public administration.

In a complementary fashion, the Public Utility Quality Satisfaction Barometer includes quarterly publications based on complaints and suggestions submitted directly by consumers, the results of which are used in service planning and improvement.

EXAMPLE 3: URUGUAY

In 2015, the Energy and Water Services Regulator (URSEA) carried out its first user satisfaction surveys (of both residential and non-residential users) with companies providing electricity, drinking water, Liquified Petroleum Gas (LPG) and fuel services.

These surveys measure, on the one hand, user satisfaction with each of the services, and, on the other, satisfaction with regard to specific aspects such as supply quality, billing information, customer service, service value for money and information and communication from companies to their users.

The survey was applied randomly and an agreement was signed with the National Statistics Institute (INE) declaring them “Official Statistics,” making survey response mandatory for users.

On the basis of the results obtained, possibilities for improvement were identified, as well as the most important aspects according to users. This information is considered useful to both the providers and URSEA when it comes to defining action plans for service improvement.

LINKS

Zambia: NWASCO web page: http://www.nwasco.org.zm/index.php/consumer-service/consumer-events

Dominican Republic: Regulation of the National Public Utilities Quality Monitoring System:

https://observatorioserviciospublicos.gob.do/publicaciones/reglamentos/decreto_111-15.pdf

Uruguay: User satisfaction survey:

https://www.gub.uy/unidad-reguladora-servicios-energia-agua/comunicacion/noticias/encuestas-satisfaccion-usuarios

INTERNAL CAPACITIES NEEDED AND THE ROLE OF PARTNERS

Regulators require public relations and communication skills when conducting this action. Primary partners include media and marketing agencies, civil society, research institutions, and consumer associations that can help to facilitate and communicate consumer feedback to the wider public. Regulators’ staff must be trained by development partners on how to gather the necessary information using different observation tools and mechanisms.

REGULATORY FUNCTION: **CONSUMER PROTECTION REGULATION** | **CP2B**

OBJECTIVE CP2

There are mechanisms to monitor and review information received about consumer protection rights

ACTION CARD CP2B

SENSITIZE AND EDUCATE CONSUMERS ABOUT THEIR RIGHTS AND OBLIGATIONS

COST: Medium **FREQUENCY:** Regular

TARGET GROUPS: Regulators, consumers, civil society

DESCRIPTION

Equally important to collecting information from consumers is to provide them with important global and regional sectoral messages. Turning World Water Day or World Toilet Day into public events, for example, could be used to raise public awareness about consumer rights. Celebrating human rights to water and sanitation through webinars or fairs could be another way of equipping consumers with the necessary tools to understand their duties as well as to defend their rights. Most importantly, regulators should create spaces and enabling environments for consumer awareness about their rights. Other regulatory possibilities are public meetings, conferences, or seminars.

EXPECTED OUTCOMES

- There is awareness among the public about their rights and obligations.
- There is enhanced public engagement in the sector.
- There is feedback to a regulator about its potential actions regarding consumer protection.

EXAMPLE 1: ZAMBIA

In **Zambia**, the National Water Supply and Sanitation Council (NWASCO) joins other stakeholders in observing World Water Daysince 1993 when the United Nations General Assembly declared 22 March as the World Day for Water. The UN and member nations devote this day to implementing UN recommendations and promoting concrete activities regarding the world's water resources.

In 2001, the World Toilet Organization declared its founding day, 19 November, as World Toilet Day. Since then, this has been observed globally by its member organizations. In September 2009, a new website was launched, dedicated to the celebration of World Toilet Day. NWASCO joins other stakeholders in organizing events.

Consumers are welcome to participate in activities on both days, that typically include exhibitions, drama, and various entertainment and awareness programmes.

EXAMPLE 2: CHILE

The Superintendency of Sanitary Services (SISS) provides a link on its website at which training days may be requested for users of drinking water and sewerage service providers in urban areas. These training sessions provide the community with guidance on the work carried out by the SISS, rights and duties, and aspects like the reasonable consumption of drinking water. The training days can be requested year-round and they are offered according regulator availability.

These training days are aimed at social or community organizations and subscribers or users of service providers, and require a minimum enrollment of 15 people. It should be noted that these types of trainings are free of cost and response times may be a maximum of 10 working days.

EXAMPLE 3: PERU

The National Superintendency of Sanitation Services (SUNASS) is the public regulator of Peru, which has implemented an initiative called "*¡Participa, vecino!*" ("Participate, neighbor!). The policy offers the citizenry spaces for sharing information, dialogue, proposal creation and representation on the various aspects related to aqueduct and sewerage service provision.

This space serves to educate and sensitize users on the questions they may have regarding rights and duties, service information and claims procedures, among other aspects, and seeks to contribute to the improvement of services, the population's assessment of such services, and the recognition of the regulator's role.

Some of the specific spaces for dialogue offered by the initiative include informative talks on how to assess the service and workshops on rights and duties, as well as training on how to implement water conservation best practices, and the updating of standards, among other matters.

Lastly, in order to access and request these training days, SUNASS provides online channels (website, e-mail) and phone numbers.

LINKS:

Zambia: NWASCO web page: http://www.nwasco.org.zm/index.php/consumer-service/consumer-events

Chile: User training days:

https://www.chileatiende.gob.cl/fichas/3274-jornadas-de-capacitacion-para-clientes-de-empresas-deservicios-de-agua-potable-y-alcantarillado

Peru: "*¡Participa, vecino!*" Program:

https://www.sunass.gob.pe/usuarios/participacion-ciudadana/participa-vecino/

INTERNAL CAPACITIES NEEDED AND THE ROLE OF PARTNERS

Public relations and communication skills are very helpful to regulators when conducting these kinds of actions. To that end, working with media agencies, consumer associations, and other related public services enhances success. Development partners could support by bringing global events to local level, and by helping sector voices to reach international level. Regulators' staff must be trained on public relations, event organization, and on issues related to the international WASH agenda.

CP2C: Develop accessible communication channels to receive consumer complaints

REGULATORY FUNCTION: **CONSUMER PROTECTION REGULATION** | **CP2C**

OBJECTIVE CP2

There are mechanisms to monitor and review information received about consumer protection rights

ACTION CARD CP2C

DEVELOP ACCESIBLE COMMUNICATION CHANNELS TO RECEIVE CONSUMER COMPLAINTS

COST: Medium **FREQUENCY:** One time

TARGET GROUPS: Regulators, service operators, consumers

DESCRIPTION

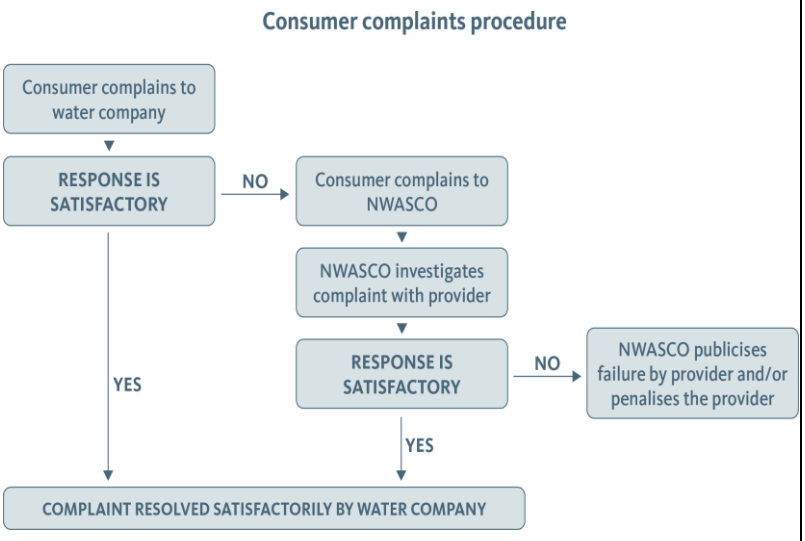
Collecting consumer feedback and relevant data about service provision usually requires appropriate mechanisms to receive complaints. Since the resolution of potential conflicts between consumers and operators lies primarily with regulators, such mechanisms become their most important tool when protecting consumer interests. Generally conceived as online platforms, this process allows regulators to conduct an initial analysis of submitted complaints, and where it is considered necessary, request clarification from operators or from claimants to better understand the situation. Regulators should also establish clear and transparent procedures to deal with complaints, including later analysis.

EXPECTED OUTCOMES

- There is a clear and transparent procedure for consumer complaints.
- There is a database for regulators that is easy to manage and administer.
- There is a knowledge base for policy decisions.

EXAMPLE 1: TANZANIA

In **Tanzania**, the regulator ZURA (Zanzibar Utilities Regulatory Authority) established an online mechanism to receive complaints, which must be submitted with a specified time limit to enable service providers to be accountable. The main reason for setting a time limit is to enable the authority to collect evidence which will help in resolving the matter with integrity. The authority issues guidelines to consumers on how to initiate a complaint, the rights, obligations of consumers, and how to complete a complaint form. The authority also maintains a complaints register for all regulated sectors. A similar model is used nationally in Zambia by its regulator NWASCO (see figure).



EXAMPLE 2: HONDURAS

The Drinking Water and Sanitation Services Regulator (ERSAPS) is responsible for regulating and monitoring the provision of drinking water and sanitation services on all of the national territory. Pursuant to its powers, the ERSAPS Board of Directors adopted the Special Regulation on the Response to User Requests and Claims, which defines the concept of the Local Supervision and Monitoring Unit (USCL) as a unit that is affiliated with the municipality and represents ERSAPS before it, with participation from civil society and the duty to oversee compliance with service provision conditions, including the resolution of user requests and claims that are not addressed by the providers.

The Regulation therefore establishes the user claims procedure, which includes the obligation of providers to have accessible user service offices which are independent from the commercial department and receives, records, processes and responds to oral or written petitions or claims, functioning as the sole channel for receiving such claims, requests or complaints.

Likewise, the Regulation establishes that when the complaint is not resolved by the provider, it may be presented before the USCL, which shall intervene in accordance with its competence in the matter. To this end, providers must provide the USCL with all the information corresponding to each claim (reason, date of presentation, channel used, time taken to reach a resolution and the response given to the user), with the aim of preventing the user from having to present all the documentation again, this time before the USCL.

EXAMPLE 3: ECUADOR

The Government of Ecuador issued an executive order establishing the function of the Water Regulation and Monitoring Agency (ARCA): to process, investigate and resolve complaints and conflicts arising between sector actors, including the users.

Accordingly, ARCA offers a service addressing petitions, complaints, conflicts and reports pertaining to regulated public utilities in matters such as water quality and/or quantity issues, oversight of drinking water and sanitation service provision (when the provider has not resolved the user's requirements), tariff-related issues, compliance with improvement plans, requests for technical information, technical assistance, and other matters.

In order to access this service, the interested parties may submit their request on the ARCA website, which contains online forms for the respective petitions, complaints, conflicts or reports. In any event, these may also be sent by e-mail or submitted in person, as long as the regulator's information requirements are met.

LINKS

Tanzania : ZURA web page: http://www.zura.go.tz/complaints-register/
NWASCO web page: http://www.nwasco.org.zm/index.php/consumer-service/water-watch-groups

Honduras: Special Regulation on the Response to User Requests and Claims: https://www.ersaps.hn/normativa-u.html

Ecuador: Decree 310 of 2014 and Online Customer Service Channel: http://www.regulacionagua.gob.ec/atencion-a-peticiones-quejas-controversias-y-denuncias-pqcd-servicios-que-ofrece-la-arca/ and http://www.regulacionagua.gob.ec/wp-content/uploads/downloads/2015/05/Decreto-310.pdf

INTERNAL CAPACITIES NEEDED AND THE ROLE OF PARTNERS

The establishment of consumer complaints mechanisms require regulators to have solid IT, administrative, and procurement abilities. Whereas consumer associations, research institutions, operators and national ombudsmen could play roles in supporting this action, the required capacity building training could be sustained by development actors. Regulators' staff must be trained on how to manage an online platform, how to inquire about complaints, and how to proceed with regulatory steps.

CP2D: Review and monitor existing contracts between service operators and consumers

REGULATORY FUNCTION: **CONSUMER PROTECTION REGULATION** | **CP2D**

OBJECTIVE CP2

There are mechanisms to monitor and review information received about consumer protection rights

ACTION CARD CP2D

REVIEW AND MONITOR EXISTING CONTRACTS BETWEEN SERVICE OPERATORS AND CONSUMERS

COST: Medium **FREQUENCY:** One time

TARGET GROUPS: Regulators, consumers, service operators

DESCRIPTION

As much as information collected from consumers is important to regulators, its accuracy must be reviewed and monitored. This process is usually performed through regular or random annual audits, aimed to assess operators' compliance with ongoing service contracts. Following predefine inspection procedures, regulators approve, conduct, and report audits, aimed at meeting the above objectives. Regulators inspect operators' accounts and operations against their contractual rights and obligations.

EXPECTED OUTCOMES

- Service operators are regularly audited.
- Consumers rights and duties are secured as stipulated in their contract.
- Regulator alerts either side in case of irregularity.

EXAMPLE 1: PORTUGAL

Public water supply, urban wastewater management, and municipal waste management are public services essential to public health and well-being, the collective security of people and economic activities, and environment protection.

In **Portugal**, these services must respect the principles of universal access, uninterrupted and high quality of service, and efficient and affordable prices as stipulated in consumer contracts. In turn, the Portuguese Water and Waste Services Regulation Authority (ERSAR) is mandated to undertake the following.

- Monitor the protection of water and waste sector users, always trying to avoid abuses resulting from exclusive rights, focusing on the control of the quality of services provided, and supervising the tariffs charged to the end-users.
- Monitor equal and clear conditions in access to water and waste services, and the operation of these services. This principle also applies to all signed contracts.
- Monitor the right to general information about the sector and about each operator.

ERSAR conducts a range of audits around the above objectives between April and June each year.

EXAMPLE 2: PARAGUAY

The General Law on the Regulatory and Tariff Framework for the Provision of Drinking Water and Sewerage Services in the Republic of Paraguay stipulates that the Sanitary Services Regulator (ERSSAN) shall ensure compliance with the aforementioned law and the obligations of providers on the basis of the information collected by the latter as well as that which is collected through general and special inspections conducted in the service provision area or in infringement areas. Such inspections may be performed by decision of ERSSAN or due to reports received from users, subscribers, providers or any third party.

In a complementary fashion, the Infringements and Sanctions Regulation, which ERSSAN is in charge of regulating and enforcing, establishes the guidelines for inspections of providers which include the following:

- Objective. To verify, with particular attention to records and facilities, compliance with respective obligations and corroborate reports and indications of deviations or transgressions in which the provider may have incurred.
- Opportunity. General inspections are scheduled and the provider is given thirty (30) days' advance notice. Special inspections are to be performed within ten (10) days of authorization by ERSSAN, and the provider is given no less than forty-eight (48) hours' notice. Exceptionally, special inspections may be performed without notice when the verification is deemed urgent by ERSSAN.

- Scope. Inspections may cover the following aspects:

    1. Execution of the Investment Plan
    2. Maintenance of affected assets
    3. Technical operation of the service
    4. Service quality according to various parameters
    5. Application of the tariff regulation
    6. Administrative and accounting management by the provider
    7. Work areas, so as to corroborate technical information on quality
    8. State of property and responsiveness
    9. Administrative practices and user service means
    10. Any other aspect that ERSSAN may consider justified

EXAMPLE 3: PERU

The National Superintendency of Sanitation Services (SUNASS), the public regulator of Peru, has a general regulation on supervision, auditing and sanctions of service providers. The scope of its audits includes the following aspects:

- The provision of sanitation services and the monitoring and management of underground water bodies.
- The administration and use of resources from reserves and funds established by SUNASS.
- The governability and governance of providers.

With the aim of complying with this function, SUNASS establishes a specific procedure for conducting field audits of providers, which may include quality control tests or other actions to verify compliance with the obligations assumed by the providers. Such audits may be scheduled or performed without notice.

Once the field audit is complete, SUNASS prepares a report within a maximum of ninety business days, on the basis of which decisions are made depending on whether provider obligations are being complied with.

LINKS

Portugal: ERSAR website: https://www.ersar.pt/en/site-about-us/Pages/mission.aspx

Paraguay: General Law and Infringements and Sanctions Regulation https://erssan.gov.py/index.php/noticias-1/marco-legal

Peru: Auditing and Sanctions General Regulation:

https://www.sunass.gob.pe/wp-content/uploads/2021/12/Resol-067-2021-SUNASS-CD.pdf

INTERNAL CAPACITIES NEEDED AND THE ROLE OF PARTNERS

A range of administrative, legal and inspection skills are necessary to complete this action, which obliges regulators to build their internal capacity through training, often seeking support from other national institutions or development partners. Judicial institutions can for example, extend their expertise when developing monitoring guidelines. Development partners can also undertake training on how to establish implementation procedures. Regulators' staff must be trained on when to proceed with audits, what and how to inspect and analyse, and how to manage relationships with audited parties.

CP2E: Mediate and reconcile conflicts involving service operators and consumers

REGULATORY FUNCTION: **CONSUMER PROTECTION REGULATION** | **CP2E**

OBJECTIVE CP2

There are mechanisms to monitor and review information received about consumer protection rights

ACTION CARD CP2E

MEDIATE AND RECONCILE CONFLICTS INVOLVING SERVICE OPERATORS AND CONSUMERS

COST: Medium **FREQUENCY:** Regular

TARGET GROUPS: Regulators, consumer associations, service operators

DESCRIPTION

Breaching service contracts often results in conflict that is first addressed by the involved parties. Failure to correct relationships with customers brings an operator's case to a regulator. Being the key stakeholder regarding consumer protection, this action gives regulators a significant role in mediating and reconciling conflicts involving operators and consumers. Regulators perform this action by carefully analysing the evidence provided by both parties. They then rely on established mediation and arbitration mechanisms to deliver regulatory instructions to the respective parties. Failure to comply with these instructions may result in appropriate penalties.

EXPECTED OUTCOMES

- Conflicts are managed in a timely and adequate manner.
- Service operators and consumers are prevented from further breaches of contract.
- Consumers are reimbursed as appropriate.

EXAMPLE 1: TANZANIA

In **Tanzania**, the regulator EWURA is legislated to attend to complaints against a supplier of regulated goods or services in relation to any matter connected with the supply, possible supply, or proposed supply of goods or services. Handling procedures of consumer complaints focuses on the need for service providers to provide reliable, quality, and affordable goods or services, a preference for amicable complaint settlement procedures as opposed to litigation, and ensuring a speedier, just and less bureaucratic handling procedure. The EWURA Act allows for any person, EWURA Consultative Council, group of people, or an authorized representative of an aggrieved party to submit a complaint. The authority has established Rules on Consumer Complaints Settlement Procedure (GN. No. 10 of 2013) to be applied when handling complaints. For the rules to enable a service provider to be accountable, complaints should be reported within a specified time. Limitation periods are based on the nature of complaint. A complaint lodged after the time limit shall not be considered. The main reason for setting time limits is to enable the authority to act and collect evidence in a timely manner, which helps in resolving matters with integrity. The consumer complaints settlement procedure proposes that EWURA mediates any complaint in an amicable manner within 60 days of the complaint being received. Detailed steps of the mediation procedure are outlined under the procedure link below.

EXAMPLE 2: COSTA RICA

The Public Utilities Regulatory Authority of Costa Rica (ARESEP) is empowered to resolve conflicts between users and service providers that were not resolved by the parties through original channels. For this purpose, once a complaint is filed, ARESEP holds a hearing between the parties with the aim of having them reach a conciliation agreement. In the event that an agreement is reached, a record is drawn up to register the agreements adopted.

At this hearing, the conciliator appointed by ARESEP is in charge of informing the parties of the rights being discussed and of warning them that the agreement might not satisfy the interests of all parties involved. The conciliator must also inform them of their right to consult a lawyer about the content of the agreement prior to signing.

Attendance at the hearing is mandatory for the parties. In the event that the complainant does not attend the hearing, the conciliation process is closed.

EXAMPLE 3: PARAGUAY

The General Law on the Regulatory and Tariff Framework for Drinking Water and Sanitary Sewerage Provision in the Republic of Paraguay determines that user rights include the right to appeal to the Sanitary Services Regulator (ERSSAN)when the provider does not provide a timely and satisfactory reply to the claims and petitions submitted.

Accordingly, ERSSAN adopted a user regulation containing regulatory norms on the rights and obligations of users, as well as on claims procedures, in accordance with the principles of speed, affordability, simplicity and efficiency in administrative procedures. This regulation determines the specific process and rules according to which users may file an appeal before the regulator as a result of the responses received from providers to petitions and claims.

As a result of this process, ERSSAN issues a resolution within a maximum of sixty (60) days, which may revoke, in whole or in part, the provider's response, indicating the effects of the revocation, or confirm the response or resolution offered by the provider.

LINKS

Tanzania: EWURA website: https://www.ewura.go.tz/water-complaints-and-resolution/

Costa Rica: Regulation set forth by the Public Utilities Regulatory Law: http://www.pgrweb.go.cr/scij/Busqueda/Normativa/Normas/nrm_texto_completo.aspx?param1=NRTC&nValor1=1&nValor2=46969&nValor3=82846&strTipM=TC

Paraguay: General Law and User Regulation: https://erssan.gov.py/application/files/7515/8741/1529/Marco_Regulatorio.pdf y https://erssan.gov.py/application/files/2015/8896/1701/Reglamento_del_Usuario.pdf

INTERNAL CAPACITIES NEEDED AND THE ROLE OF PARTNERS

A range of administrative, procurement and mediation skills must be embodied within regulators to successfully complete this action. Sustaining this power, exclusively performed by regulators, requires capacity building support from development partners, while consumer associations, mediator associations, and civil society can play supporting roles. Dedicated regulatory staff must be trained on how to analyse evidence, question the involved parties, and proceed with mediation instructions to conclude cases.

CP3A: Establish reward systems through benchmarking for operators with higher consumer satisfaction

REGULATORY FUNCTION: **CONSUMER PROTECTION REGULATION**	**CP3A**

OBJECTIVE CP3

Consumer protection is enforced through sanctions or rewards

ACTION CARD CP3A

ESTABLISH REWARD SYSTEMS THROUGH BENCHMARKING FOR OPERATORS WITH HIGHER CONSUMER SATISFACTION

COST: Medium **FREQUENCY:** One time

TARGET GROUPS: Regulators, service operators, consumers, civil society

DESCRIPTION

In addition to mediation, reconciliation, and a range of potential penalties which regulators apply to protect consumers, their interests could often be equally well preserved by other means. One of these is to convert consumer satisfaction into benchmarking exercises, where operators' contractual behaviour is rated. Regulators must however, predefine incentives and rewards for the highest rated operators, and promote and reward operators for high quality service provision as an example for others in the sector. In creating a competitive environment, such incentivized regulation also often results in a decreased volume of complaints and conflicts. As a consequence, this reduces the resources required to resolve complaints by motivating operator compliance. This mechanism, commonly shared through the media, allows regulators to identify consumers' annual champions.

EXPECTED OUTCOMES

- Service operators are motivated to comply with contractual obligations.
- Consumer protection is facilitated.
- Consumer associations are actively engaged in the process.

EXAMPLE 1: ZAMBIA

In **Zambia**, the National Water Supply and Sanitation Council (NWASCO) publishes annually operators' performance reports, and the best among them are rewarded. These reports contain information about operator compliance with agreed and predefined consumer protection indicators such as access to water and sanitation, coverage, metering ratios, or hours of supply.

EXAMPLE 2: MEXICO

The National Water Committee (Conagua) is an administrative, regulatory, technical and consulting body that aims to preserve national water bodies and their inherent public assets for their administration, and to guarantee water security in Mexico. To carry out this mission, the agency works with federal, state and municipal governments, as well as with user associations, companies and institutions in the private and public sectors.

Conagua was a part of the organizing committee of the "National Water Award for Operators" created in 2008, which was later called the "National Award for Innovative Processes in Drinking Water and Sanitation Services."

This award is an annual public recognition of drinking water and sanitation service providers that have stood out as a result of the developments and achievements attained in the performance of their functions, as well as the creation and implementation of new methodologies, technologies or processes to improve such public utilities. The main aim of the award is to stimulate providers to optimize their operational processes and methods in technical, commercial and customer service areas through the implementation of new technologies or processes.

EXAMPLE 3: COSTA RICA

In 2002, the Public Utilities Regulatory Authority of Costa Rica (ARESEP) created, through the Costa Rican Institute of Aqueducts and Sewerage (AyA), the Sanitary Quality Seal Program (PSCS) with the aim of promoting "(…) the integrated management of water resources through compliance with applicable regulations, as well as the efficient management of wastewater and the implementation of hygiene and sanitation measures to improve the environment and public health in Costa Rica (..)."

The general aim of the program is to provide a tool for voluntary citizen participation for the improvement of the integrated management of water resources and the provision of public aqueduct and sewerage services.

In the particular case of providers of aqueduct and sewerage services, the program aims to develop a tool for the optimization of water resource management through systems maintenance and improvement with the participation of the population in environmental matters for the benefit of service quality and an adequate drinking water supply in Costa Rica.

Accordingly, the PSCS awards a flag (in different categories) to incentivize the efforts, work and dedication of service providers for the benefit of consumers. To this end, there are specific categories for aqueduct service providers and wastewater treatment systems operators.

LINKS

Zambia: NWASCO web page: http://www.nwasco.org.zm/index.php/media-center/news1/121-2016-water-provider-s-performance-report- launched

Mexico: National Award for Innovative Processes in Drinking Water and Sanitation Services: https://www.gob.mx/imta/agenda/premio-nacional-de-procesos-de-innovacion-en-servicios-de-agua-potable-y-saneamiento?idiom=es

Costa Rica: Sanitary Quality Seal Program: https://www.aya.go.cr/laboratorio/selloCalidad/Paginas/default.aspx

INTERNAL CAPACITIES NEEDED AND THE ROLE OF PARTNERS

Creating a competitive environment through rewards and incentives requires certain regulatory capacities such as procurement, administrative and public relations. Commonly, regulators can perform this action on their own with support from media and marketing agencies, consumer associations, and civil society, that help to make the exercise publicly available and its content more attractive to the wider public. Regulators' staff must be trained on how to manage award events, and how to apply award methodologies.

CP3B: Establish penalty systems for infringing contractual provisions regarding consumer protection

REGULATORY FUNCTION: **CONSUMER PROTECTION REGULATION** | **CP3B**

OBJECTIVE CP4

Consumer protection is enforced through sanctions or rewards

ACTION CARD CP3B

ESTABLISH PENALTY SYSTEMS FOR INFRINGING CONTRACTUAL PROVISIONS REGARDING CONSUMER PROTECTION

COST: Low **FREQUENCY:** One time

TARGET GROUPS: Regulators, service operators, consumers

DESCRIPTION

In more severe cases of breaching service contract obligations, regulators may apply sanctions as a last resort. However, they can open administrative infringement proceedings against an operator only under the terms set out in legislation. Sanctions should be incremental. For example, they can amend procedures, or a decision initially taken by an operator, or penalize operators for non-compliance to regulatory instructions. An operator's staff member may be also penalized if reported information has intentionally not represented reality. Prior to actual application, sanctions must also be transparently outlined through a mechanism, specifying its time sequence, conditions, and terms. Predefined penalty systems allow for the imposition of adequate penalties on utilities for acts or omissions infringing legal provisions within service contracts. Transparently outlined sanction mechanisms ensure the integrity of regulatory infringement actions.

EXPECTED OUTCOMES

- Contractual infringements are reduced or prevented in a timely manner.
- Service operators and consumers are prevented from further breaches of contract.
- Consumers are properly compensated when applicable.

EXAMPLE 1: ZAMBIA

In **Zambia**, the Water Supply and Sanitation Act (No. 28 of 1997) states that utility's operating license can be suspended or cancelled if a provider fails to meet license conditions. Other penalties applicable under the same act can penalize an individual (a staff member of a provider) if they are found to be responsible for a negligent act leading to the provision of unsafe water. This can be a fine, imprisonment, or both. The National Water Supply and Sanitation Council (NWASCO) carries out annual inspections of 11 commercial utilities and six private schemes, with findings published in sector reports.

EXAMPLE 2: BOLIVIA

The Authority for the Auditing and Social Supervision of Drinking Water and Basic Sanitation (AAPS) is the Bolivian regulator, whose functions include monitoring compliance with the commitments undertaken by providers in relation to drinking water and sewerage service provision quality, with the aim of ensuring the achievement of management indicators in the areas of coverage, continuity, quality, quantity and sustainability.

Accordingly, AAPS has a Manual on the Monitoring and Auditing of Providers, which sets forth a sanctions and fines system that determines the types of infringements in which providers may incur, which include the following:

- Infringements related to the provision of an emergency drinking water service.
- Infringements related to the suspension or the continuity of the service.
- Infringements related to non-compliance with reporting obligations toward AAPS or users.
- Infringements related to user service.
- Infringements related to wastewater discharges that exceed permitted quality values.
- Infringements related to any non-compliance in permitted drinking water parameters assessed according to the risk posed for population health.

- Infringements related to non-compliance with obligations related to insurance policies, charges to users (tariffs) and contributions or payments to AAPS or users.

The manual defines the fine for each type of infringement according to the severity of the non-compliance case.

EXAMPLE 3: PARAGUAY

The General Law on the Regulatory and Tariff Framework for Drinking Water and Sanitary Sewerage Provision in the Republic of Paraguay indicates that the Sanitary Services Regulator may apply different types of sanctions to providers and users, which include warnings, fines, protective measures, contractual rescission or permit revocation, or facilities closure.

Sanctions are related to a series of infringements stipulated in law on matters such as the following:

- Infringement of General Law provisions or regulations issued by ERSSAN.
- Provider non-compliance with any of their obligations.
- User non-compliance with any of their obligations.
- Drinking water loss at the facilities.
- Malfunction of consumption meters.
- Errors in billing and/or distribution of utilities bills.
- Non-compliance with water quality parameters.

Accordingly, ERSSAN adopted an infringements and sanctions regulation detailing the types of sanctions to be applied, violation categories (minor, severe or major), fine amounts and aggravating and mitigating circumstances, as well as procedures for payment or revocation, among other aspects.

LINKS

Zambia: NWASCO web page, example of communication linked to unsatisfactory fulfilment of duties: http://www.nwasco.org.zm/index.php/media-center/news1/120-nwasco-implores-lwsc-to-comply-with-water-supply-guidelines

Bolivia: Manual on the Monitoring and Auditing of Drinking Water and Sanitary Sewerage Providers (EPSA) with licenses and temporary authorizations: http://www.aaps.gob.bo/images/MarcoLegal/ResolucionesAdministrativas/RAR%20171%20EPSA.pdf

Paraguay: General Law and Infringements and Sanctions Regulation: https://erssan.gov.py/application/files/7515/8741/1529/Marco_Regulatorio.pdf and https://erssan.gov.py/application/files/3315/8896/1500/Reglamento_de_Infraciones_y_Sanciones.pdf

INTERNAL CAPACITIES NEEDED AND THE ROLE OF PARTNERS

Setting sanctions require regulators to have certain judiciary and administrative skills. These can be sustained and supported by best practices from other regulators. Potential partners include national judiciary and disciplinary institutions, along with development partners. Regulators' staff must be trained on how to apply and manage disciplinary measures within its regulatory mandate.

3. TARIFF SETTING

OBJECTIVE	ACTION	CODE
1. Tariff systems, relevant procedures and responsibilities are validated	A. Define criteria, rules and processes for tariff setting, tariff structure, approval, and service invoicing	**TS1A**
	B. Establish processes, rules, and responsibilities for systematic tariff adjustment	**TS1B**
2. Compliance with approved tariffs and performance is monitored through financial and operational information received from operators	A. Gather operators' tariff revenues, costs, and consumer willingness and ability to pay	**TS2A**
	B. Collect and validate operators' financial and operational data	**TS2B**
	C. Verify the efficiency of operators	**TS2C**
	D. Monitor economic and financial performance indicators at operator, and national level	**TS2D**
3. Administrative infringement proceedings against uncompliant operators are in place	A. Alert operators in case of non-compliance with tariff regulations and issue correcting instruction	**TS3A**
	B. Apply sanctions under the terms set out in legislation	**TS3B**

TS1A: Define criteria, rules and processes for tariff setting, tariff structure, approval, and service invoicing

REGULATORY FUNCTION: **TARIFF SETTING** | **TS1A**

OBJECTIVE TS1

Tariff system, relevant procedures and responsibilities are validated

ACTION CARD TS1A

DEFINE CRITERIA, RULES AND PROCESSES FOR TARIFF SETTING, TARIFF STRUCTURE, APPROVAL AND SERVICE INVOICING

COST: High **FREQUENCY:** One time

TARGET GROUPS: Regulators, relevant authorities and policy makers, parliament, consumer associations

DESCRIPTION

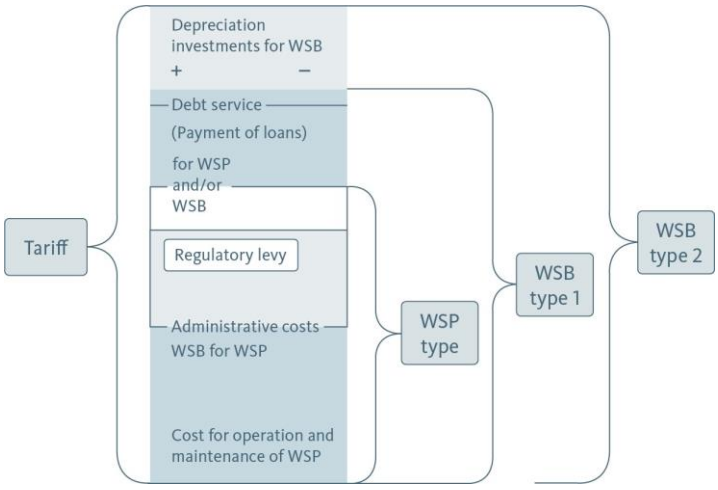
Depending on the regulated price modality, tariffs could be either set or approved by regulators. Since both cases require transparency, regulators must establish clear criteria and procedure for price setting. These guidelines usually rely on basic regulatory principles. For example, they are often based on the principles of recovery of investment and operating costs, efficiency, equity, sustainable use of water resources and infrastructure, consumer protection interests and their economic accessibility. Setting a price for water and sanitation as services of public interest, imply the broad participation of all relevant stakeholders. Tariff guidelines could for instance, impose mandatory dialogue with consumers and validation by a national parliament, making the tariffs enforceable.

EXPECTED OUTCOMES

- There is a transparency and predictability of tariffs, where every social group pays for delivered services.
- There is established equity among different user groups through tariffs, which are based on their respective socio-economic situation.
- There is sustainable operation and investment management for operators and policy makers through tariffs, which adequately reflect the optimal cost of the delivered services.

EXAMPLE 1: KENYA

In **Kenya**, the Water Services Regulatory Board (WASREB) is required to evaluate and recommend water and sewerage tariffs to the water service providers at county level, and approve the imposition of such tariffs in line with consumer protection standards and the interests of other stakeholder. There are three kinds of tariff (type I, II and III) according to the type of cost that each cover. Type I covers operational and maintenance costs, with some basic administrative ones. Type II incudes the above plus the repayment of existing debts. Finally, type III tariffs include all the costs of other tariffs with the addition of the costs of investments and depreciation (full cost recovery). This tariff structure ensures access to all, with differentiated prices for different socio-economic groups.



EXAMPLE 2: PERU

In Peru, Legislative Decree 1280/2016 and Emergency Decree 11/2020 stipulate that the economic regulation of water and sanitation services aims to guarantee the availability and efficient and sustainable management of such services, and of the products and services that derive from such services, when there is no competition in their provision. Economic regulation is based on the principles of economic efficiency, financial viability, social equity, environmental sustainability, risk prevention, simplicity, transparency, non-discrimination and the cost-benefit ratio. The economic regulation of these services is the exclusive and exclusionary prerogative of the National Superintendency of Sanitation Services (SUNASS) on a national level, and includes, among other faculties, tariff-setting, review and readjustment, the establishment of the tariff structure and access charges, and the deregulation process. SUNASS determines the economic costs of service provision on the basis of its assessment of optimized master plans drawn up by providers with the aim of providing universal coverage, its assessment of municipal management unit service provision plans, of specialized operators, and of the provisions set forth in public-private partnership contracts.

EXAMPLE 3: BOLIVIA

The tariff system stipulated in Law 2066 is based on the principles of economic efficiency, neutrality, solidarity, redistribution, financial sufficiency, simplicity and transparency, so that tariffs don't transfer the costs of inefficient management to users or allow the operator to implement anti-competitive practices; on the principle that each user should have the same tariff treatment as other users in the same tariff category; on the principle that the tariff structure redistribute costs according to user ability to pay, and thereby recovering costs and expenses related to operations, expansion, replacement and maintenance, as well as return on shareholder equity; on the principle that tariff formulas be easy to understand, apply and monitor; and that the tariff system be explicit and fully available to the public.

The principles governing rates, tariffs and fees are:
a) Total recovery of operational and maintenance costs.
b) Recovery of repair costs ensuring service sustainability.
c) Guarantee of the lowest price to users, while ensuring service safety and continuity.
d) Neutrality, simplicity and transparency, as set out in the previous article.
e) Return on investments made with loans, without remunerating capital obtained through donations, grants or non-refundable contributions.

The tariff is approved by the Superintendency of Basic Sanitation on the basis of the technically-grounded opinion of the Municipal Government, which shall, in turn, carry out consultations through Popular Participation processes.

LINKS

Kenya: Guidelines on tariffs in Kenya: https://wasreb.go.ke/downloads/Tariff%20guidelines.pdf

Peru: Tariff system in Peru:

https://www.sunass.gob.pe/nuestras-funciones/normar/politica-regulatoria/

Bolivia: Bolivian tariff system:

https://sea.gob.bo/digesto/CompendioII/O/160_L_2066.pdf

INTERNAL CAPACITIES NEEDED AND THE ROLE OF PARTNERS

Setting tariffs has proved to be one of the most complex and delicate regulatory powers. In consequence, it is necessary for regulators to perform it with high levels of skills, which include financial, planning, hydrological, and with the vision of sustainable development. A solid understanding can be achieved through training on different tariff models, and this will help regulators to better align public needs with their sector visions. Since this regulatory power attracts by far the most political attention, it is advisable to conceive tariff guidelines with the support of a neutral actor. Both public and private sector actors should contribute their inputs to the process through facilitation by an impartial external partner.

TS1B: Establish processes, rules, and responsibilities for systematic tariff adjustment

REGULATORY FUNCTION: **TARIFF SETTING** | **TS1B**

OBJECTIVE TS1

Tariff systems, relevant procedures and responsibilities are validated

ACTION CARD TS1B

ESTABLISH PROCESSES, RULES AND RESPONSIBILITIES FOR SYSTEMATIC TARIFF ADJUSTMENT

COST: Low **FREQUENCY:** Regular

TARGET GROUPS: Regulators, relevant authorities and policy makers, parliament, consumer associations

DESCRIPTION

Once defined, tariff guidelines serve the sector in setting the price for services. However, economic, political, or other factors such as disasters or conflicts may force regulators to adjust tariffs in certain geographic areas or after extraordinary events. Following the necessity of being transparent and inclusive in decision-making, regulators must establish clear criteria for tariff adjustment, detailed procedures, and assign responsibilities and roles. Transparent and predefined mechanisms allow for an adequate, timely and systematic review of tariffs on a regular or random basis.

EXPECTED OUTCOMES

- Tariffs adjustment adequately reflects inflation, deflation or changes in the cost of living, investments, and operation.
- There is transparency and predictability regarding tariffs, in which every social group pays for delivered services.
- There is established equity among different user groups through tariffs, which are based on their respective socio-economic situation.
- There is sustainable operation and investment management for operators and policy makers through tariffs, which adequately reflect the optimal cost of delivered services.

EXAMPLE 1: KENYA

In **Kenya**, the tariff review process focuses on balancing commercial and social interests in water service provision. When adjusting tariffs, the Water Services Regulatory Board (WASREB) eliminates any costs that may result from inefficiency and which should not be borne by consumers. Steps for the review process are as follows.

1. Pre-consultation: WASREB receives proposals made by water service providers, makes its first technical revision, and proposes adjustments until they agree on a draft tariff to share in public consultation.
2. Consultation: WASREB invites key stakeholder groups (residential consumers, commercial consumers, local authorities, civil society organizations, women organizations, religious organizations). The agenda should include information on why an update is needed, and information on the proposed tariff system.
3. Post-consultation process: a full report on the results of the consultation process is submitted to WASREB.
4. WASREB post consultation: WASREB analyses the proposal and inputs given by stakeholders in the consultation phase. It then issues a decision on the new tariff system.
5. Publication of the new tariff: the decision should be published in the Kenyan National Gazette.

EXAMPLE 2: TANZANIA

In **Tanzania**, the Energy and Water Utilities Regulatory Authority (EWURA) is mandated to review rates and charges either when an application is lodged by an applicant, or when the authority finds it necessary to do so as stipulated in Section 17 of EWURA Act (Cap 414). The procedure for tariff application is provided under the Tariff Application Guidelines (2017) and EWURA (Tariff Application and Rate Setting) Rules 2017, GN 452. Decisions reached by the authority is communicated through written tariff orders. Tariff orders are usually attached with conditions that need to be fulfilled by applicants within a specified time period.

EXAMPLE 3: BOLIVIA

In Bolivia, Law 2066 stipulates that the review and approval of tariffs is to be carried out every five years on the basis of studies performed by the concessionaire using the terms of reference provided by the Superintendency of Basic Sanitation, which shall provide a reasoned approval or rejection of the studies performed. Formulas for concessionaire rate, tariff and price indices should include: a component that reflects adjustments due to variations in company costs, according to price index variations that directly impact the sector, b) a component that transfers regulation rate variations, c) compensation variables for lower consumption categories in accordance with the regulation. When Drinking Water or Sanitary Sewerage Services are provided directly by a municipal government, the Superintendency of Basic Sanitation shall send the Ministry of Finance a recommendation on the water rate level so that such Ministry can submit a technical report to the National Senate according to the powers granted by law to municipalities.

EXAMPLE 4: ARGENTINA

The binding instrument (Federal Planning, Public Investment and Services Ministry [MPFIPyS] Resolution No. 170/10) stipulates "Five-year economic reviews" as well as "Annual economic reviews" and "Special economic reviews due to acts of God or force majeure." The five-year review is to begin a year before the five-year period ends, and relates to tariffs, costs and the Improvement, Operations, Expansion and Service Maintenance Plan to be implemented in the next five-year period. The annual review seeks to adjust revenue to operational and investment costs in order to fulfill the abovementioned Plan, and is based on the plan progress status, the situation driving the review and the measures adopted to avoid it, and the measures proposed to reestablish a financial balance. The special review is carried out when the concessionaire believes that there have been or will be issues affecting works plans, which may require the Enforcement Authority to conduct an impact assessment and issue proposals to mitigate or revert such impacts.

LINKS

Kenya: WASREB Guidelines on the tariff approval process: https://wasreb.go.ke/downloads/GUIDELINES%20OF%20PUBLIC%20CONSULTATION%20FOR%20TRFF%20APPROVAL%20PROCESS.pdf

Tanzania: https://www.ewura.go.tz/?page_id=221

Bolivia: Tariff review system:

https://sea.gob.bo/digesto/CompendioII/O/160_L_2066.pdf

Argentina: Binding instrument reviews:

https://www.argentina.gob.ar/sites/default/files/resolucion_ssrh_170-10_-instrumento_de_vinculacion.pdf

INTERNAL CAPACITIES NEEDED AND THE ROLE OF PARTNERS

Similarly to setting tariffs, further adjustments and updates require a range of financial, planning, and technical regulatory abilities. Regulators usually benefit from capacity building through training, supported by related sector ministries, the private sector, research institutions, and facilitated by development partners. Other regulatory best practices may be of use, from technical exchanges. Regulators' staff must be trained on different tariff modalities, and financial and social implications, to be able to conduct regular adjustments.

TS2A: Gather operators' tariff revenues, costs, and consumer willingness and ability to pay

REGULATORY FUNCTION: **TARIFF SETTING** | **TS2A**

OBJECTIVE TS2

Compliance with approved tariffs and performance is monitored through financial and operational information received from operators

ACTION CARD TS2A

GATHER INFORMATION ON OPERATORS' TARIFF REVENUES, COSTS AND CONSUMER WILLINGNESS AND ABILITY TO PAY

COST: Medium **FREQUENCY:** Regular

TARGET GROUPS: Regulators, service operators, consumers, civil society

DESCRIPTION

Irrespective of the tariffication model, regulators regularly collect information about tariff revenues, operator costs, and when possible, consumer willingness and ability to pay. This information is used when adjusting future service prices. Rather than gathering it through random checks which require more resources, regulators establish and promote transparent procedures for operators to share relevant operational costs and revenue data, information, and forecasts of future economic and financial scenarios. Such procedures should be templated, and in most cases presented through interactive digital platforms which are more convenient for operators, encouraging them to regularly provide the required information.

EXPECTED OUTCOMES

- Regularly updated information on the operators' economic status and forecasts is publicly available.
- Consumers are informed about the tariff structure and required adjustments.
- Information about consumers' financial capacity to purchase alternative or upgraded services is analysed and shared.

EXAMPLE 1: KENYA

In **Kenya**, the national regulator WASREB specify the following within its service provision agreements.

- The provider shall maintain a dedicated bank revenue account for tariff revenues collected from customers, and this revenue shall not be mixed with revenue from other sources.
- The provider shall use the tariff revenue solely for the purposes of providing services, maintaining facilities and meeting any debt service obligations on loans taken for providing services, but may also use it to finance renewal and development according to expansion of service area as agreed with the water service board.
- From the revenue account, the first payments shall be a regulatory levy, the licensee administration fee, and the service provider income which shall be adequate to enable the provider meet its own annual expenses approved in the annual budget.
- This revenue account shall be operated with the approval and guidance of the regulatory board as regards priority of outgoings.

EXAMPLE 2: ARGENTINA

The binding instrument (Federal Planning, Public Investment and Services Ministry [MPFIPyS] Resolution No. 170/10) stipulates that the concessionaire is to keep a record of asset, accounting, economic, commercial and contractual information. Resolution 153/22-APN-SOP#MOP established that concessionaire billing must indicate the amount resulting from the difference between tariff revenue and service provision costs, thereby specifying, for the purpose of user information, when billing revenue is insufficient to cover total costs and these must be partially subsidized. This information is determined on the basis of tariff revenue accrued in 2021, along with the operational expenses registered for the same year, including allowances for bad debts, and investment in improvements and maintenance.

EXAMPLE 3: PERU

Legislative Decree 1280/2016 stipulates that public utility providers must implement a cost and revenue registry system for regulatory purposes, with the aim of differentiating revenue obtained from service provision and revenue obtained from budget transfers from other public entities, co-financing or any other type of State subsidy.

Likewise, La Libertad Regional Government issued Regional Management Resolution No. 005-2020-GRLL - GRR/GRVCS approving the updated 2018-2021 Regional Sanitation Plan with a view to 2025 for the same region, requiring indicators to include an assessment of consumer Willingness to Pay for sanitation services as a proportion of the lesser amount between the ability to pay and the efficient fee or tariff.

LINKS

Kenya: WASREB SPA: https://wasreb.go.ke/service-provision-agreements/

Argentina: AySA tariff system: https://www.argentina.gob.ar/argentina.gob.ar/eras/institucional/informacion-tecnica/regimen-tarifario-eras

Peru: Legislative Decree 1280/2016 and La Libertad Regional Government Resolution

https://www.sunass.gob.pe/wp-content/uploads/2020/09/D.LEg-1280.pdf

https://www.regionlalibertad.gob.pe/transparencia/normatividad-regional/resoluciones-gerenciales-otras-gerencias/gerencia-regional-de-vivienda-const-y-saneamiento/gerencia-regional-de-vivienda-const-y-san-2020/13520-rgr-n-005-2020-grll-ggr-grvcs/file

INTERNAL CAPACITIES NEEDED AND THE ROLE OF PARTNERS

Depending how large the regulatory area is, this action entails the collection and processing of significant amounts of information, data, and consumer feedback on service provision. It is therefore easier to conduct it online, for which regulators require strong IT skills. These should be sustained by appropriate financial, analytical and procurement abilities. The role of partners should be to share their related skills, notably sector ministries and research institutions. Regulators' staff must be trained on how to manage the online platform and how to use the information received.

TS2B: Collect and validate operators' financial and operational data

REGULATORY FUNCTION: **TARIFF SETTING** | **TS2B**

OBJECTIVE TS2

Compliance with approved tariffs and performance is monitored through financial and operational information received from operators

ACTION CARD TS2B

COLLECT AND VALIDATE OPERATORS' FINANCIAL AND OPERATIONAL DATA

COST: Medium **FREQUENCY:** Regular

TARGET GROUPS: Regulators, service operators, consumer associations

DESCRIPTION

Collected financial information and operator accounts are systematically verified by regulators. They assess financial and operational performance of operators in two stages to obtain additional necessary data, first in the office and a second stage through local audits. The objective of the validation process is to ensure the accuracy of the information provided, and which can be then used for future tariff adjustments. Unless operators' accounts are validated, these risks putting operations on hold. Regulators must however, conduct this procedure transparently to ensure impartial and rigorous audits.

EXPECTED OUTCOMES

- Accurate financial and operational performance information is available at all times for regulatory purposes.
- Consumers are informed about operators' performance on their request.
- Only validated operators' accounts can be further operationally managed.

EXAMPLE 1: LESOTHO

In **Lesotho**, the Electricity and Water Authority (LEWA) presents relevant financial information collected from the operator WASCO. In March 2016, for example, they presented the following information.

- According to audited financial statements, WASCO reported an annual operating profit of M2,337,000 for the period, from atotal generated revenue of M218,609, 000. The main components of revenue were water and sewerage billing at M199,305,000 (91.17 percent) and new service connections at M15,012,000 (6.87 percent).
- Expenditure for the period was M216,772,000. The main contributors to expenditure were labour costs (40.81 percent), power demands (9.15 percent), reticulation and plant maintenance (6.21 percent), and chemical usage (3.81 percent).
- The profit realized during the 2015-16 financial year came against a backdrop of losses for the previous five years. In 2014-15, a loss of M3,160 million was recorded, higher than the previous year (M1,781 million). This was largely attributed to a substantial increase in expenditure. The company experienced its highest loss (M10,595 million) during the 2011-12 financial year. The improvement is due largely as a result of a substantial and steady growth of water and sewerage billing since 2010-11, coupled with improved cost management.

EXAMPLE 2: ARGENTINA

In Argentina, the operation of the service provided by AySA is governed by Law No. 24.156 on 'National Public Sector Financial and Supervisory System Administration.' Under this framework, the public service provider is controlled by a government accounting system that processes and produces financial information for decision-making by public finance managers and related third parties. The provider is subject to an internal supervisory and audit system run by the General Accounting Office, which is the internal supervisory body of the National Executive Branch that performs initial and successive audits. The supervisory model applied and coordinated by the General Accounting Office must be comprehensive and integrated, encompassing budgetary, economic, financial, asset-related, regulatory and management aspects, as well as program, project and operational assessment, and must be based on the principles of affordability, efficiency and efficacy.

EXAMPLE 3: CHILE

In Chile, the Organic Regulation of Metropolitan Sanitary Works Companies approved by Decree 230/85 stipulates that the institutional structure should include an Internal Audit Unit with functions related to assessing the robustness, sufficiency and application of financial accounting controls for the purposes of measuring efficacy, reliability and security of the information produced. The Company's financial activities should be governed by the rules that apply to State companies and by ministerial instructions issued, particularly with regard to the budgetary system, cost accounting, reporting, publication and auditing of balance sheets and financial statements.

LINKS

Lesotho: http://www.lewa.org.ls/home/WASCO_Application_2017_18.pdf

Argentina: National Public Sector Financial and Supervisory System Administration

http://servicios.infoleg.gob.ar/infolegInternet/anexos/0-4999/554/texact.htm

Chile: Organic Regulation of Metropolitan Sanitary Works Companies

https://www.bcn.cl/leychile/navegar?idNorma=159722

INTERNAL CAPACITIES NEEDED AND THE ROLE OF PARTNERS

Abilities required to conduct this action include financial, management, and administrative skills. Validation exercises as an internal regulatory process would benefit from learning from technical regional exchanges with other regulators. Other possible partners could include national economy and research institutions. Regulators' staff must be trained on different financial and accountant skills either by related sector actors or development partners.

TS2C: Verify efficiency of operators

REGULATORY FUNCTION: **TARIFF SETTING** | **TS2C**

OBJECTIVE TS2

Compliance with approved tariffs and performance is monitored through financial and operational information received from operators

ACTION CARD TS2C

VERIFY THE EFFICIENCY OF OPERATORS

COST: High **FREQUENCY:** Regular

TARGET GROUPS: Regulators, service operators, individual and institutional consumers

DESCRIPTION

As tariff collection may encounter mistakes, regulators regularly and randomly inspect tariff accuracy using different indicators. In accordance, regulators verify other economic efficiency indicators and ensure that the approved tariffs correspond to actual operator expenditures. This action is commonly performed through impartial inspection procedures, with the main objective being to correct any kind of misconduct in a timely manner. All licensed operators, being subject to these inspections, are obliged to cooperate and provide all required information related to their compliance with the approved tariffs. Failure to do so, or frequent tariff overcharge, may affect the issue of future operator licences.

EXPECTED OUTCOMES

- Only adequate tariffs are validated, while those in excess are reimbursed to consumers.
- Non-compliance with indicators is used by regulators when issuing operating licences.
- Consumers are only charged for services that are delivered.

EXAMPLE 1: TANZANIA

In **Tanzania**, some financial indicators that the Energy and Water Utilities Regulatory Authority (EWURA) uses to assess water supply operators are as follows.

INDICATOR	DEFINITION	UNIT
Administration costs per m^3 of water produced	Total administration costs (TZS) / total amount of water produced (m^3).	TZS/m^3
Energy consumption	Energy consumption during the assessment period (kWh) / total amount of water produced (m^3).	kWh/m^3
Operating ratio	Ratio of operating costs to operating revenues. Operational costs include all expenses together with depreciation and interests costs (but excluding debt service payments). Sound national management requires that this ratio should be less than 1.	Ratio
Personnel expenditure per m^3 of water produced	The ratio of total personnel expenditure (TZS) to the total amount of water produced (m^3)	TZS/m^3
Personnel expenditure as a percentage of current collection from water and sewerage bills	Total personnel expenditure in (TZS) expressed as a percentage of total collection from current water and sewerage bills plus collections from other water and sewerage related services (excluding grants and subsidies).	%
Staff/1000 water and sewerage connections	This indicator measures staffing level and is calculated as the ratio of total personnel to total number of water and sewerage connections. Best practice is below 5	Staff / 1000 connections
Working ratio	This is the ratio of operational expenses / operational revenue. Operational expenses do not include depreciation, interest and debt service. Sound national management requires that this ratio should be well below 1.	Ratio

EXAMPLE 2: ARGENTINA

In Argentina, Law 26.221 stipulates that the concession is economically and financially balanced if tariffs for services provided allow for the recovery of all associated costs, including operational, investment, tax and financial costs, if applicable. Accordingly, and with the aim of detecting errors incurred, a financial sustainability indicator was adopted in 2014 on the basis of three ratios: 1) operating revenue vs. operating expenses; 2) operating revenue vs. current expenses (operating and other expenses); and 3) current revenue (operating revenue plus transfers and property income) vs. current expenses. The result demonstrated that the tariff didn't allow for the economic and financial balance stipulated in the regulation.

EXAMPLE 3: MEXICO

In the Mexican State of Veracruz de Ignacio de la Llave, the Water Law stipulates that both the regulatory authority and operators shall establish service tariffs in line with methodologies that establish parameters for calculating the break-even price, which should be sufficient to cover costs derived from operations, maintenance and systems management; rehabilitation and improvement of existing infrastructure; amortization of investments made; financial expenses from liabilities; and investments needed for infrastructure expansion. Within this framework, the Methodological Guide for Tariff Calculations in Drinking Water, Sewerage and Sanitation Service Provision seeks to match the total expenses incurred within a certain time by the Operator to the revenue collected through a tariff applied as payment for its services within the same period, generally of one year.

LINKS

Tanzania: EWURA performance indicators: http://www.ewura.go.tz/wp-content/uploads/2018/06/EWURA-REGIONAL-WATER-UTILITIES- PERFORMANCE-REPORT-2016-17.pdf

Argentina: Tri-Party Agreement between the Federal Planning, Public Investment and Services Ministry, the Province of Buenos Aires and the Government of the Autonomous City of Buenos Aires and the document 'The New AySA Management: Financial Sustainability, Micro-metering, Subsidies and Citizen Engagement'

https://www.argentina.gob.ar/normativa/nacional/ley-26221-125875/texto

https://www.argentina.gob.ar/sites/default/files/doc._4_-_la_nueva_gestion_de_aysa.pdf

Mexico: Methodological Guide for Tariff Calculations in Drinking Water, Sewerage and Sanitation Service Provision

https://agua.org.mx/wp-content/uploads/2010/10/7257_guia_metodologica_calculo_tarifas.pdf; https://faolex.fao.org/docs/pdf/mex188368.pdf

INTERNAL CAPACITIES NEEDED AND THE ROLE OF PARTNERS

A range of administrative, legal, and inspection skills necessary to complete this action obliges regulators to build their internal capacity through training, often seeking support from other national institutions or development partners. Judiciary institutions can for instance, use their expertise in developing inspection methodology. Development partners can support regulators through training, and the establishment of indicators and implementation procedures. Regulators' staff must be trained on how to proceed with the checks, which indicators to analyse, and how to assess misconduct and calculate respective reimbursements.

TS2D: Monitor economic and financial performance indicators at operator and national level

REGULATORY FUNCTION: **TARIFF SETTING** | **TS2D**

OBJECTIVE TS2

Compliance with approved tariffs and performance is monitored through financial and operational information received from operators

ACTION CARD TS2D

MONITOR ECONOMIC AND FINANCIAL PERFORMANCE INDICATORS AT OPERATOR AND NATIONAL LEVEL

COST: Low **FREQUENCY:** Regular

TARGET GROUPS: Regulators, service operators, service clusters

DESCRIPTION

Given the importance of tariff accuracy, it is also necessary to monitor their values over time, and compare operators, and nationwide trends. This action is commonly performed through benchmarking exercises, where data collected through inspections is rated. Regulators then assess the results of audited data at operator, cluster, and national levels to rank operators' performance over several regulatory cycles. This mechanism allows regulators to develop a sector overview, and to draw important conclusions when defining or adjusting future tariffs. It also serves in refining visions for sector development. Regulators must however, predefine incentives aimed to reward operators whose tariff implementation could serve as an example for other players in the sector.

EXPECTED OUTCOMES

- Operators whose performance declines over time might face consequences.
- Operators whose performance improves over time are awarded as sectoral champions.
- Consumers are informed about sector performance.

EXAMPLE 1: ZAMBIA

In **Zambia**, the Urban and Peri-Urban Water Supply and Sanitation Sector Report is produced annually to inform the public on the performance of water and sewerage companies. It highlights and benchmarks the performance of the 11 water and sewerage companies and six private schemes.

EXAMPLE 2: ARGENTINA

In Argentina, Law 26.221 stipulates that instruments of verification and supervision should allow entities and companies to provide the necessary information for benchmarking with other companies, both within the country and abroad, establishing that in order to prepare concessionaire benchmarking as well as analyses of projected and attained efficiency levels, the Enforcement Authority shall set forth Management Indicator reporting and monitoring mechanisms to facilitate the comparison between sectors connected to one type of service or with other services provided domestically or abroad. The data needed for these indicators should be submitted to the Regulator periodically by the concessionaire, along with the annual reports allowing for thorough management information and monitoring. In line with this regulation, the regulator's Benchmarking Management has been drawing up annual reports since 2006 to compare operator indicators with those of other providers under the Federal Association of Water and Sanitation Regulators of Argentina and the Association of Drinking Water and Sanitation Regulators of the Americas.

EXAMPLE 3: PERU

The National Superintendency of Sanitation Services (SUNASS) of Peru, which heads the Regional Benchmarking Task Force (GRTB) of the Association of Drinking Water and Sanitation Regulators of the Americas (ADERASA) has been preparing Regional Benchmarking Reports since 2002. ADERASA gathers regulators from 16 countries in the Americas: Argentina, Bolivia, Belize, Colombia, Costa Rica, Chile, Nicaragua, Panama, Peru, Brazil, Honduras, Ecuador, El Salvador, Paraguay, Dominican Republic and Uruguay. The Benchmarking 2021 report, for example, includes information on 115 water and sanitation operators from 10 countries in the region. SUNASS has also implemented Benchmarking Reports for Providers and community organizations providing services, including economic and financial performance indicators that include service financing and user debt.

LINKS

Zambia: Zambian performance report: http://www.nwasco.org.zm/index.php/media-center/news1/138-water-sector-scores-a-success

Argentina: Annual Benchmarking Reports

https://www.argentina.gob.ar/eras/institucional/informacion-tecnica/benchmarking

Peru: Annual Benchmarking Report

https://www.aderasa.org/grupos-de-trabajo/informes/

https://www.sunass.gob.pe/wp-content/uploads/2020/11/BENCHMARKING-REGULATORIO-DE-LAS-ORGANIZACIONES-COMUNALES-2020-1.pdf

INTERNAL CAPACITIES NEEDED AND THE ROLE OF PARTNERS

Monitoring sector performance trends through benchmarking requires regulators to have solid strategic, financial, and planning skills. Given the importance of the results of this exercise, it is necessary to train regulators' staff on how to read different trends, and how to convert them into strategic decisions. Development partners can support operations by training in a range of required procurement, administrative and public relations skills. Other sector actors would also benefit from training to enhance their participatory capacity when working with regulators on future tariff adjustments.

TS3A: Alert operators in case of non-compliance with tariff regulations and issue correcting instructions

REGULATORY FUNCTION: **TARIFF SETTING** | **TS3A**

OBJECTIVE TS3

Administrative infringement proceedings against uncompliant operators are in place

ACTION CARD TS3A

ALERT OPERATORS IN CASE OF NON-COMPLIANCE WITH TARIFF REGULATIONS AND ISSUE CORRECTING INSTRUCTIONS

COST: Low **FREQUENCY:** One time

TARGET GROUPS: Regulators, service operators, consumers

DESCRIPTION

Non-compliance with approved tariffs may result in licence removal, so should be only used as a last resort. Since removing an operator's licence will result in further disruption of service provision, prior to this, regulators must first exhaust all other means to resolve outstanding issues. After warning operators, regulators initiate a legislatively established process, and operators may submit a response, and are allocated sufficient time for further assessments of their economic and financial performance. During that period, regulators collect more relevant information to be able to draw conclusions and instructions. Failure to comply with these instructions will result in more severe sanctions.

EXPECTED OUTCOMES

- Operators are enforced to act in accordance with agreed tariff regulations.
- Operators are allowed sufficient time within an established transparent administrative procedure to comply with ongoing operations.
- Regulators manage each case of non-compliance in a timely manner.
- Consumers are informed, and reimbursed where applicable.

EXAMPLE 1: ZAMBIA

In **Zambia**, operators whose performance is deteriorating beyond acceptable limits may be placed under special regulatory supervision (SRS). This might take the form of non-adherence to license conditions and service level guarantees (SLGs). Special regulatory supervision is an enforcement tool used to curb negative performance trends, applied following an agreement signed between the national regulator, the National Water Supply and Sanitation Council (NWASCO), and the operator. During the stipulated supervision period, NWASCO closely monitors all operations of the service provider, including decisions made by both management and the board. This means that NWASCO can attend board meetings to monitor internal decisions. Although intrusive, such regulation enables an operator to quickly undertake remedial measures. The operator draws up a plan on how to improve its performance over the SRS period and submits monthly reports indicating the progress being made in meeting the planned activities. This is a stop gap measure to avoid the worst-case scenario of suspension or cancellation of an operating license.

EXAMPLE 2: KENYA

In **Kenya**, a national regulator, the Water Service Regulatory Board (WASREB), will notify and caution water service boards or providers that are not complying with their obligations, and provide a time frame within which there should be rectification. WASREB can issue orders prohibiting particular actions with immediate effect, and follow through with prosecution if this is not complied with. WASREB can issue notices instructing water service boards to ensure non-compliance is resolved within a stated time frame. If the notices are not complied with WASREB can undertake the following:

- Fine the licensee.
- Use the performance guarantee to resolve the problem.
- Issue an order which if not complied with, will be followed by prosecution.

- Issue orders on variations of areas of supply.
- Order a water services board to enforce regulations under section 73 of the Water Act 2002 in its area of supply.
- Use media in publicizing warnings against offenders of the Water Act 2002.

EXAMPLE 3: PARAGUAY

In Paraguay, the Infringements and Sanctions Regulation of General Law No. 1614/2000 on the Regulatory and Tariff Framework for Drinking Water and Sanitary Sewerage Provision stipulates that, in the event of a grounded assumption of infringement, prior to filing summary proceedings, the regulator can demand that the operator correct the potentially irregular conduct and immediately address the damaging consequences that may be underway. Only in the event that the provider obeys and complies with the exact terms of the demand within the established time frame, the regulator shall consider the matter resolved and abstain from filing summary proceedings.

EXAMPLE 4: CHILE

In Chile, the Rural Sanitary Services Law and its implementing regulation stipulates the possibility of sanctioning service operators that fail to comply with the service rules, including the tariff system. However, the system allows the sanctioned entity to request that sanctions be reduced or lifted by submitting to a consulting program aimed at effectively correcting the infringement or complying with the regulations in question. Audits that detect minor cases of non-compliance that do not require training and are not subject to sanctions may result in corrective action to be implemented pursuant to regulator instructions.

LINKS

Zambia: http://www.nwasco.org.zm/index.php/regulatory-tools/regulatory-enhancements

Kenya: https://wasreb.go.ke/downloads/Enforcement%20And%20Compliance%20Strategy.pdf

Paraguay: General Law No. 1614/2000. on the Regulatory and Tariff Framework for Public Drinking Water and Sanitary Sewerage Provision in the Republic of Paraguay

https://www.erssan.gov.py/application/files/7515/8741/1529/Marco_Regulatorio.pdf

Chile: Decree 50. IMPLEMENTING REGULATION OF LAW NO. 20.998, WHICH REGULATES RURAL SANITARY SERVICES

https://www.bcn.cl/leychile/navegar?idNorma=1150724

INTERNAL CAPACITIES NEEDED AND THE ROLE OF PARTNERS

To perform this action, regulators' staff must be trained on improved financial, administrative and management skills. Capacity building can be provided by sector actors or by development partners. Regulators may also involve other operators to support their procedures. Judiciary institutions may be indirectly involved to ensure further impartiality.

TS3B: Apply sanctions under the terms set out in legislation

REGULATORY FUNCTION: **TARIFF SETTING** | **TS3B**

OBJECTIVE TS3

Administrative infringement proceedings against uncompliant operators are in place

ACTION CARD TS3B

APPLY SANCTIONS UNDER THE TERMS SET OUT IN LEGISLATION

COST: High **FREQUENCY:** One time

TARGET GROUPS: Regulators, service operators, service clusters

DESCRIPTION

Regulators penalize operators who do not comply with tariff directives. Possible sanctions include fines, prosecution, changes to operator's management teams, licence removal, or transferring licenses to other operators. However, prior to actual application, sanctions must be made transparent through regulatory policies and acts. Predefined penalty systems allow for the imposition of adequate penalties on utilities for acts or omissions that infringe legal provisions in terms of tariff collection, fulfilment of key performance indicators established in concessions, or other social or environmental regulations. Transparently outlined sanction mechanisms ensure the integrity of regulatory infringement actions.

EXPECTED OUTCOMES

- Transparent sanctions are applied within the rule of law.
- Non-complaints cannot continue their operations without aligning to agreed tariff regulations.
- Affected consumers and other relevant parties are satisfied, morally and financially.

EXAMPLE 1: KENYA

In **Kenya**, following its enforcement strategy, the regulator WASREB enforces tariff-related decisions through the following actions.

- Issuing of fines.
- Ordering the payment of penalties by licensees to third parties aggrieved by action or inaction of licensees.
- Levying of penalties for non-payment of regulatory levies.
- Prosecution of offences committed by licensees under the Water Act or recommending prosecution of culprits to other concerned public agencies for offences in relation to any other Act.
- Use of court action in judicial review proceedings.
- Recommending to the Ministry the removal of the top management and board of directors of the water services board if inspection reports are not followed up by licensee.
- Order the removal of top management team of Water Service Provider and board of directors.
- Cancellation of the Service Provision Agreement (SPA).
- Transfer of licenses to another licensees.

EXAMPLE 2: PARAGUAY

In Paraguay, the sanctions system considers the application of tariffs that don't correspond to user category or consumed volume to be minor violations. However, it is considered a severe violation when users are billed for services that have not been provided, including unauthorized tariffs, or in excess of the authorized margin for average-based billing, as well as collections that are not allowed by the tariff system; the application of unit charges and tariffs greater than those authorized constitutes a major violation. The severity of the violation is related to applicable sanctions. Minor violations result in warnings and severe or major violations result in fines of varying amounts, with the possibility of a rescission or revocation of the concession when a Report by an Independent Third-Party Accounting, Financial and Technical Audit establishes, in line with Tariff regulations, irregularities in the accounting statements and/or in the entity's financial or technical management that could place normal service management at risk, or when unauthorized tariffs are applied to over thirty percent (30%) of users.

EXAMPLE 3: COLOMBIA

In Colombia, the Superintendency of Household Public Utilities (SSPD) may apply sanctions to entities that violate regulations, in accordance with the nature and severity of the violation. These fines may reach up to two thousand (2000) times the statutory monthly minimum wage in the case of natural persons and one hundred thousand (100,000) times the statutory monthly minimum wage in the case of legal persons. Decree No. 1158 of 2017 regulates the criteria and methodology for adjusting and calculating fines by the SSPD for infringements related to household aqueduct, sewerage and garbage collection utilities. The procedure for applying fines is set forth in Law No. 1437 of 2011, Administrative Procedure and Litigation Code.

LINKS

Kenya: Kenya Enforcement Strategy: https://wasreb.go.ke/downloads/Enforcement%20And%20Compliance%20Strategy.pdf

Paraguay: Law No. 1.614/2000 Infringements and Sanctions Regulation

https://www.erssan.gov.py/application/files/3315/8896/1500/Reglamento_de_Infraciones_y_Sanciones.pdf

Colombia: Decree No. 1158 of 2017, which amends Decree No. 1082 of 2015, regulates the criteria and methodology for adjusting and calculating fines by the Superintendency of Household Public Utilities for infringements related to household aqueduct, sewerage and garbage collection utilities.

https://www.funcionpublica.gov.co/eva/gestornormativo/norma.php?i=82615

INTERNAL CAPACITIES NEEDED AND THE ROLE OF PARTNERS

Imposing sanctions require regulators to have certain judiciary and administrative skills. These could also be sustained and supported by best practices from other regulators. Potential partners include national judiciary and disciplinary institutions, and development partners who can train regulators' staff on how to apply and manage sanction measures within their regulatory mandates.

4. COMPETITION

OBJECTIVE	ACTION	CODE
1. Water and sanitation service legislation and regulations are aligned with public competition policies	A. Regulate and promote market competition, public and private, for drinking water and sanitation services	**CO1A**
	B. Ensure healthy competition through equal treatment of all operators within the scope of public procurement	**CO1B**
2. Operators' competition behaviour is audited through collected legal and contractual information	A. Oversee operators' tendering and contracting processes, modifications, terminations, reconfigurations, and mergers	**CO2A**
	B. Publicly disclose information related to competition policies or anticompetitive acts by operators	**CO2B**
	C. Analyse the existence of any anti-competitive advantages granted to operators	**CO2C**
	D. Detect abuses of monopoly by operators and concerted practices harmful for consumers	**CO2D**
3. There are sanction systems for operators for anti-competitive acts that affect consumers	A. Impose mandatory procurement measures or split operators' assets when they benefit from a monopoly	**CO3A**
	B. Impose penalties on operators whose practices against free competition are not reversable	**CO3B**

CO1A: Regulate and promote market competition, public and private, for drinking water and sanitation services

REGULATORY FUNCTION: **COMPETITION** | **CO1A**

OBJECTIVE CO1

Water and sanitation service legislation and regulations are aligned with public competition policies

ACTION CARD CO1A

REGULATE AND PROMOTE MARKET COMPETITION, PUBLIC AND PRIVATE, FOR DRINKING WATER AND SANITATION SERVICES

COST: Medium **FREQUENCY:** One time

TARGET GROUPS: Regulators, service operators, procurement institutions, anti-monopoly institutions

DESCRIPTION

Market competition between public and private contractors is usually regulated by national competition authorities. However, given the specifics of the sector, it is usually WASH regulators that are mandated to apply these rules over competing operators. These can be applied both in networked services (e.g. when private operators deliver services), or where water- or sanitation-related services are not provided through networked services (e.g. water tanks, or emptying latrines and septic tanks). In accordance, regulators technically align competition policies to sector requirements. Regulators define clear and transparent procedures and criteria for market entrance, with the objective of ensuring equal conditions to all potential competitors. Finally, regulators set conditions for continuous market operations by licencing or registering qualified operators.

EXPECTED OUTCOMES

- Procurement processes are open equally to all potential operators.
- Consumers benefit from open competition by purchasing the services at lowest market prices.
- Operators improve their service performance faster in a competitive market.

EXAMPLE 1: TANZANIA

In **Tanzania**, the regulator EWURA, established guidelines in 2013 for regulator of water tankers, which specifies the following.

- Any person intending to supply water in the Dar es Salaam Water Supply and Sewerage Authority (DAWASA) Designated Area using a water tanker shall apply to DAWASCO (Dar es Salaam Water and Sewerage Corporation) for registration of each tanker.
- An application for registration shall be in the form prescribed by DAWASCO and shall contain the following information.
  - The applicant's full name, business address, telephone and fax numbers, email and web page.
  - A list and details of water tankers.
  - A certified copy of registration cards of all water tankers.
  - A non-refundable application fee of TZS100,000 per water tanker, or such other amount as the authority shall from time to time prescribe.
- DAWASCO shall, upon receipt of an application, satisfying itself to its completeness, evaluate such application by taking into account its compliance with applicable law, the water tanker's compliance with technical requirements as prescribed in the Second Schedule, and the applicant's past records.
- DAWASCO shall, upon evaluation of the application, approve, refer back, or deny the application.
- Where DAWASCO has rejected or denied an application for registration, it shall inform the applicant of the reasons for such denial or rejection.

- Where the applicant is not satisfied with DAWASCO's decision under Paragraph 3.5, the applicant may lodge a complaint to the authority for determination.
- Where DAWASCO has approved an application for registration, it shall issue a certificate of registration to the applicant, and the applicant shall from that moment be deemed to be an agent of DAWASCO.
- The operator shall comply with the terms and conditions of the certificate of registration. The period of registration shall be two (2) years and may be extended upon application by the operator.

EXAMPLE 2: CHILE

In Chile, pursuant to the General Law on Sanitary Services (Statutory Decree No. 382 of 1988), the provision of public utilities associated with producing and distributing drinking water and collecting and disposing of wastewater may be carried out within a system of open market competition, by virtue of a concession granted by a Public Works Ministry decree upon the recommendation of the Superintendency of Sanitary Services (SISS).

The law determines that all providers shall comply with the concessions system, regardless of their legal status, whether public or private in nature. It also stipulates that concessions shall be granted to corporations.

In this sense, the main principles for granting concessions, which drive SISS recommendations, are compliance with required technical conditions and the ability to offer the lowest tariffs for service provision, thereby benefiting users of the open competition process.

EXAMPLE 3: PARAGUAY

The General Law on the Regulatory and Tariff Framework for Drinking Water and Sanitary Sewerage Provision in the Republic of Paraguay indicates that the Sanitary Services Regulator (ERSSAN) is empowered and obliged to prevent and impede discriminatory or anti-competitive conduct, or conduct implying an abuse of natural monopolies, both to the detriment of other providers in each stage of the service, as well as users.

Likewise, the regulatory decree of this General Law details and elaborates on ERSSAN functions, clarifying that conduct that should be prevented or impeded refers to provider acts or omissions that imply behavior that is inefficient, or capable of altering (in a unilateral and uncompensated manner) the service quality and/or tariff conditions, such as selective quality reductions, the application of unequal tariffs, or analogous situations, the establishment of non-competitive procurement and contracting systems, among other issues.

With the aim of complying with this obligation, ERSSAN keeps an updated database or comparative reference list of supply and process costs, which it uses to rate provider behaviors in tariff review processes. Likewise, ERSSAN is empowered to regulate the prevention and sanctioning of the above behavior, as well as propose specific rules for its inclusion in the terms and conditions for concessions and permits, with the aim of promoting efficient and equitable competition.

LINKS

Tanzania: EWURA Guidelines for water tank operators: http://www.ewura.go.tz/wp-content/uploads/2015/03/Water-Supply-and-Sanitation- Water-Tanker-Services-Rules-2013.pdf

Chile: General Law on Sanitary Services, Statutory Decree No. 382 of 1988: https://www.bcn.cl/leychile/navegar?idNorma=5545&idParte=

Paraguay: General Law and Regulatory Decree No. 18880 of 2002: https://erssan.gov.py/application/files/7515/8741/1529/Marco_Regulatorio.pdf and https://erssan.gov.py/application/files/4716/6514/3615/Decreto_Reglamentario_N_18880.pdf

INTERNAL CAPACITIES NEEDED AND THE ROLE OF PARTNERS

Regulators' staff must be trained on a range of skills that include legal, procurement and administrative abilities that enable them to define required procedures and related criteria. Such capacity building exercises can be supported by development partners, while national anti-monopoly authorities and consumer associations will take an active role in profiling the competitive WASH sector through substantive inputs reflecting other sector lessons learned. Benefits arising from the competition experience of other regulatory authorities could be facilitated through regional technical exchanges.

CO1B: Ensure healthy competition through equal treatment of all operators within the scope of public procurement

REGULATORY FUNCTION: **COMPETITION** | **CO1B**

OBJECTIVE CO1

Water and sanitation service legislation and regulations are aligned with public competition policies

ACTION CARD CO1B

ENSURE HEALTHY COMPETITION THROUGH EQUAL TREATMENT OF ALL OPERATORS WITHIN THE SCOPE OF PUBLIC PROCUREMENT

COST: Medium **FREQUENCY:** Regular

TARGET GROUPS: Regulators, service operators, procurement institutions, anti-monopoly institutions, media agencies

DESCRIPTION

Once rules and conditions are defined, it is important to apply them through appropriate procurement procedures and related protocols. When procuring, regulators must be always guided by their main principles of non-discrimination, equality, and transparency, to achieve fair competition in the WASH sector. The main objective of regulators is a market where consumer interests are met, so regulators analyses operators' propositions against predefined standards in terms of the quality of service and tariffs. Most importantly, this procedure, being a virtual benchmarking exercise, allows regulators to encourage and promote innovation and technical progress to increase the efficiency of competing operators.

EXPECTED OUTCOMES

- Procurement processes are transparent, and allocation of contracts to operators is undertaken without discrimination.
- All operators feel equal in terms of new market acquisition.
- Consumers enjoy more choices in the WASH services they purchase.

EXAMPLE 1: KENYA

In **Kenya**, under its Water Act 2002, the regulator WASREB (Water Services Regulatory Board) is specified under Article 26,that is dedicated to water supply in bulk, with pro-competition rules for both consumers and operators.

- (9) It shall be a general condition of the license and any service provision agreement that water service needs of the service providers along the bulk water network are met to the agreed proportions, and the water in bulk supplier shall not, for the whole period of the agreement, retain, use or supply water in bulk to another new service provider, unless such alternative provision has been agreed upon between the water in bulk supplier and first service provider.
- (10) The Regulatory Board shall only approve a supply of water in bulk agreement upon confirmation that the water in bulk supplier has a valid extraction permit giving it abstraction rights commensurate with its water sale requirements from the Water Resources Management Authority.
- (11) Notwithstanding the foregoing provisions, in the interest of the public and where technically and economically feasible, the Regulatory Board may order the licensee to either supply water in bulk to another license area or enter into a service provision agreement with an agent who shall supply water in bulk to third parties within its area of supply.

EXAMPLE 2: CHILE

In Chile, the provision of utilities associated with producing and distributing drinking water and collecting and disposing of wastewater may be carried out within a system of open market competition, by virtue of a concession granted by a Public Works Ministry decree upon the recommendation of the Superintendency of Sanitary Services (SISS). These concessions are granted upon the request of a potential concessionaire, which submits the required documentation set forth in the general regulations.

In order to guarantee adequate competition, there is a regulated concessions award process that determines that the SISS examine compliance with general application requirements, and in the event that they are validated, order the applicant to simultaneously publish a summary of the concession terms in the Official Gazette and in a newspaper in circulation within the region of the requested concession. Within 60 days of the publications, all other parties wishing to apply are to submit their petitions in accordance with the same regulatory requirements.

The SISS verifies that these additional applications comply with legal requirements in order to begin the concession-granting process. However, in the event that the SISS should make observations on the additional applications, the interested parties shall have a period of ten (10) days to correct or remediate them, ensuring the possibility of equitable competition among interested providers.

Lastly, within a period of 120 days as of the publication of the summary of terms for the requested concession, the SISS shall inform the Public Works Ministry of the applications submitted and make a recommendation to award the concession to the applicant that complies with the required technical conditions and offers the lowest tariff for service provision.

EXAMPLE 3: PARAGUAY

The General Law on the Regulatory and Tariff Framework for Drinking Water and Sanitary Sewerage Provision in the Republic of Paraguay indicates that the Sanitary Service Regulator (ERSSAN) is empowered and obliged to approve the terms and conditions of the bid or the call for quotations for the concession or service permit, as well as the terms and conditions of the concession contract or permit.

Additionally, the General Law determines the requirements that should be complied with for granting service provision concessions, which include the requirement that the concessionaire selection process be conducted by means of a national or international public tender with the following stages:

- Prequalification of bidding groups.
- Qualification of technical and financial proposals.
- Awarding of the concession to the lowest service tariff quotation, or that with the broadest coverage or investment level, according to the bidding terms and conditions and on the basis of fixed parameters.

Pursuant to the foregoing, the regulatory decree of this General Law details and elaborates on ERSSAN functions, indicating that the regulator is responsible for verifying legal and regulatory compliance of such instruments, ensuring a transparent and equitable competition. In that sense, the regulator's observations are restricted to specifying where there may be a regulatory conflict in the documents submitted for approval. Lastly, ERSSAN has thirty (30) days as from the submission of the full documentation to issue an opinion regarding approval.

LINKS

Kenya: https://wasreb.go.ke/downloads/SUPPLEMENT_183_WATER_RULES.pdf

Chile: Regulation on sanitation concessions related to the production and distribution of drinking water and the collection and disposal of wastewater, and on rules governing the quality of assistance provided to users of these services. Decree No. 1199 of 2005: https://www.bcn.cl/leychile/navegar?idNorma=243794&idParte=0

Paraguay: General Law and Regulatory Decree No. 18880 of 2002:
https://erssan.gov.py/application/files/7515/8741/1529/Marco_Regulatorio.pdf and
https://erssan.gov.py/application/files/4716/6514/3615/Decreto_Reglamentario_N_18880.pdf

INTERNAL CAPACITIES NEEDED AND THE ROLE OF PARTNERS

Regulators' staff must be trained on a range of procurement and administrative abilities to understand how to conduct open and transparent procurement procedures. Such capacity building can be supported by development partners, while other sector actors such as agencies in charge of public procurement, related ministries, and consumer associations could take an active role through providing substantive inputs and lessons learned. They can also help regulators to determine their procurement procedures and protocols along with other similar national examples.

REGULATORY FUNCTION: **COMPETITION** | **CO2A**

OBJECTIVE CO2

Operators' competition behaviour is audited through collected legal and contractual information

ACTION CARD CO2A

OVERSEE OPERATORS' TENDERING AND CONTRACTING PROCESSES, MODIFICATIONS, TERMINATIONS, RECONFIGURATIONS, AND MERGERS

COST: High **FREQUENCY:** Regular

TARGET GROUPS: Regulators, service operators, service clusters, anti-monopoly institutions

DESCRIPTION

Once rules and conditions for market competition are established and licences are issued, regulators collect information related to the dynamics among operators. With an objective of identifying potential and existing concerted practices, regulators collect information about operators' public tenders, market alliances, merges, acquisitions, and other practices that may contradict competition rules. Regulators then analyse consequences regarding fair and open competition. For example, a merger between several operators initially registered to compete against each other, may result in a monopoly of the newly established operator. Regulators also seek information about operators' public purchases, to ensure that procured items are available on equal conditions to other competitors. A non-exhaustive list of potential anti-competitive abuses includes changes in contractual status that may result in competitive advantages such as decreased taxes.

EXPECTED OUTCOMES

- The potential creation of a dominant position or operator monopoly is prevented.
- Operators are obliged to declare any changes that could potentially reduce competition.
- Regulators work in partnership with anti-monopoly institutions to prevent any cross-sectoral abuses.

EXAMPLE 1: KENYA

In **Kenya**, the regulator WASREB, within the license analysis checklist, established under the Water Act 2002, always evaluates operators' procurement policies in the following way.

INFORMATION ON COMMERCIAL MANAGEMENT		
i. Copy of customer contract	Check against model customer contract	The water service provider (WSP) to provide a customer contract aligned to the model customer contract by WASREB
ii. Customer complaint handling procedure	Check against CEG	WSP to develop a customer service policy
iii. Customer service charter	Check against minimum service standards	Well provided
iv. Procurement policy	Approved procurement policy, or evidence of following PPAD Act 2015	WSP to provide an approved and signed procurement policy.
v. Evidence of stakeholder conference	Evidence of stakeholder conference invitation, list of participants, minutes within the last two financial years	To provide properly written and signed minutes since inception. Also provide conference invitation, list of participants
vi. Tax compliance certificate/status	Check validity, validate with iTax	

EXAMPLE 2: COLOMBIA

In Colombia, Law No. 142 of 1994 on Public Utilities makes it possible to enter into contracts through a public call for private companies to finance, operate and maintain aqueduct and sewerage utilities. The law includes tariffs among the criteria for granting such contracts, as long as the formula for determining such tariffs as proposed by the bidder complies with the guiding criteria of financial efficiency, neutrality, solidarity, redistribution, financial sufficiency, simplicity and transparency.

Such tariff formulas must be part of the contract, and the Regulatory Committee on Drinking Water and Basic Sanitation (CRA), pursuant to law, may modify them when the abuse of a dominant position, a violation of the neutrality principle or abuse of the system's users is detected. The CRA may also intervene in the event of tariff practices restricting competition, such as:

- Charging users in a competitive market, or market whose tariffs are not subject to regulation, tariffs below the value of operating costs, especially when the provider offers services in other markets in which it has a dominant position, or in which its tariffs are subject to regulation.
- Offering tariffs below the value of operating costs with the aim of forcing the competition out, preventing the entry of new providers or gaining a dominant position in the market or among potential users.
- Discriminating against users with the same commercial characteristics as others, by granting one group higher tariffs than the other group, even when this discrimination should occur in a competitive market or market without regulated tariffs. Operators are obliged to declare any changes that could potentially reduce competition.

EXAMPLE 3: CHILE

In Chile, pursuant to the General Law on Sanitary Services, the provision of public utilities associated with producing and distributing drinking water and collecting and disposing of wastewater may be carried out within a system of open market competition, by virtue of a concession granted by a Public Works Ministry decree upon the recommendation of the Superintendency of Sanitary Services (SISS).

Within this framework, providers are obliged to hold public tenders to acquire assets or contract services that exceed the minimum established by law. Accordingly, providers must inform the SISS every year on contracts and transactions associated with the purchase of goods and services, so that the entity may compare the prices of such contracts and transactions with market prices, on the basis of a representative sample, and identify any statistically significant differences that should be reported to the Superintendency of Securities and Insurance, which may respond by issuing sanctions and specific measures.

On the other hand, in the event of merger agreements between two or more providers, these must be subject to SISS approval so that the entity may verify that the agreement doesn't infringe any legal regulations. In this sense, the SISS should issue its opinion within seventy (70) days of the date on which approval is requested.

LINKS

Kenya: Kenya Water Act 2002: https://wasreb.go.ke/downloads/ESAWAS.pdf

Colombia: Utilities Law No. 142 of 1994: http://www.secretariasenado.gov.co/senado/basedoc/ley_0142_1994_pr002.html#90

Chile: General Law on Sanitary Services, Statutory Decree No. 382 of 1988: https://www.bcn.cl/leychile/navegar?idNorma=5545&idParte=

INTERNAL CAPACITIES NEEDED AND THE ROLE OF PARTNERS

Implying the need for a range of legal anti-competitive skills, this action is primarily supported by national anti-monopoly institutions. Regulators' staff must however, be trained on how to detect contractual changes, what to analyse in terms of consequences, and when to object to them. Many of these could be outsourced to anti-monopoly institutions or performed jointly, while competing operators will play an important role in flagging to regulators any anti-competitive behaviour.

CO2B: Publicly disclose information related to competition policy or anticompetitive acts by operators

REGULATORY FUNCTION: **COMPETITION** | **CO2B**

OBJECTIVE CO2

Operators' competition behaviour is audited through collected legal and contractual information

ACTION CARD CO2B

PUBLICLY DISCLOSE INFORMATION RELATED TO COMPETITION POLICY OR ANTICOMPETITIVE ACTS BY OPERATORS

COST: Low **FREQUENCY:** Regular

TARGET GROUPS: Regulators, service operators, service clusters, anti-monopoly institutions, civil society

DESCRIPTION

Any information or report on anti-competitive behaviour becomes more relevant and useful when it is accessible to consumers and other operators. Regulators systematically include this, or any other information related to new competition policies, in public communication. Open access to such information enables the public to be informed while also fostering a more competitive environment. Regulators must also include specific recommendations based competition-related inquiries in it their annual reports. Irrespective of the actual format, publicly available annual competition information improves market behaviour and increase consumer satisfaction.

EXPECTED OUTCOMES

- Transparent information about competition policies and abuses is available to the wider public.
- Operators and consumers are informed about new competition policies or related misconduct.
- Anti-monopoly institutions have a better overview of competitive behaviour in the sector and can base decisions on proper evidence.

EXAMPLE 1: UNITED KINGDOM

In the **UK**, the 2004-05 annual report of the Economic Regulator of Water Sector in England and Wales (OFWAT) promoted and informed consumers and operators about policies related to market competition.

- From November 2005, customers who are likely to consume at least 50 megaliters of water a year will be able to purchase water from either their existing water undertaker or from a water supply licensee. It estimates that this facility will be available to around 2,200 customers, who in total spend approximately £200 million on water each year.
- Companies will be able to apply for either a 'retail' license, which entitles the holder to purchase water from a water undertaker (called a wholesale supply) and to retail it to eligible customers; or a 'combined' license, which authorizes the holder to introduce water into a water undertaker's supply system and retail it to eligible customers (a combined supply). Companies will be able to apply to OFWAT for a license from 1 August 2005.

EXAMPLE 2: PARAGUAY

In Paraguay, the Concessionaire Tariff Regulation stipulates the obligation of providers and regulators to report information used for tariff-setting and making it available to users; it also stipulates that any agreement or action by the provider that is conducive to distorting or hiding information on service provision costs with the aim of obtaining higher tariffs in the tariff-setting process shall be considered contrary to free competition and therefore unfair (Articles 44, 45 and 48).

EXAMPLE 3: CHILE

In Chile, the General Law on Sanitary Services (Statutory Decree No. 382 of 1989) stipulates that any action or agreement by operators that is conducive to distorting or hiding information on service provision costs with the aim of obtaining higher tariffs in the tariff-setting process shall be considered contrary to free competition.

LINKS

UK: OFWAT competition policy web information:

https://www.ofwat.gov.uk/?s=anticompetitive+practices&x=0&y=0 https://www.ofwat.gov.uk/regulated-companies/

Paraguay: General Law on the Regulatory and Tariff Framework for Drinking Water and Sanitary Sewerage Provision (see Articles 44, 45 and 48)

https://www.erssan.gov.py/index.php/marco-legal/marco-regulatorio-y-tarifario-del-servicio-publico-de-provision-de-agua-potable-y-alcantarillado-sanitario-para-la-republica-del

Chile: General Law on Sanitary Services

https://www.bcn.cl/leychile/navegar?idNorma=5545

INTERNAL CAPACITIES NEEDED AND THE ROLE OF PARTNERS

Communicating competition policies and related misconducts in annual reports requires a high level of communication and public relation skills, alongside a solid internal regulatory understanding of collected evidence. Communication capacities are usually compensated for through support by external partners. Partners may include national institutions familiar with public reporting, research institutions, and development partners. In some cases, consumer associations may also support this task. Once templated, such reports can be then completed annually by regulators without the need for external support.

CO2C: Analyse the existence of any anti-competitive advantages granted to operators

REGULATORY FUNCTION: **COMPETITION** | **CO2C**

OBJECTIVE CO2

Operators' competition behaviour is audited through collected legal and contractual information

ACTION CARD CO2C

ANALYSE THE EXISTENCE OF ANY ANTI-COMPETITIVE ADVANTAGES GRANTED TO OPERATORS

COST: High **FREQUENCY:** Regular

TARGET GROUPS: Regulators, service operators, service clusters, anti-monopoly institutions

DESCRIPTION

In addition to anti-competitive behaviour, checks and analysis performed through regular and random annual audits also assess state subsidies to operators that can include aid coming national, regional, or local authorities. Impartial auditing procedures are a precondition to this action, obliging regulators to develop sets of transparent procedure guidelines for conducting and reporting audits of state aid. In accordance, regulators evaluate and assess any state subvention to operators that could be harmful to competition. Those that disproportionally help operators beyond necessity are illegal and must be reimbursed. Most importantly, by performing this action, regulators help other operating competitors to avoid being placed in an inferior position, and which could eventually force them out of the market and negatively impact consumers.

EXPECTED OUTCOMES

- State subsidies are reviewed and prevented.
- All operators in a given market enjoy equal conditions to compete jointly, to the benefit of consumers.
- Regulator could establish incentives or aid that apply universally to all competitors.

EXAMPLE 1: EUROPEAN UNION

In the **EU**, the European Commission received a complaint in 1997 from an Italian association of private water distributors, alleging that the Italian government was granting illegal aid to joint stock companies with public majority shareholders created according to Law no.142/90. This law regulates municipalities as service providers. It stated that municipalities could create joint stock companies (SpA) in which they would maintain the majority of the shares. As a result, these undertakings became entitled to receive loans from Cassa Depositi e Prestiti (CDDPP), that turned out to have interest rates lower than the market rate. Moreover, in 1993 and in 1995, Italy established income tax exemption for this category of undertakings and also provided an exemption on all taxes relating to the transfer of assets to joint stock companies created according to Law 142/90.

The European Commission had not been notified, and after requesting clarifications from the Italian authorities, it decided to open a formal investigation procedure. The Commission found out that the granting of this aid was not linked to explicit entrustment with any public service obligations, and the Italian authorities did not demonstrate the existence of any such obligations. On the contrary, the decisive criterion for benefiting from special fiscal treatment was the nature of the company (joint stock company) and its shareholder composition (majority public). Furthermore, the measures did not apply to an entire economic sector, but only to some public undertakings operating in that sector. Having reached this conclusion, the Commission decided that the Italian authorities should take all necessary measures to recover the illegally granted aid under the two schemes, and thus re-establish a level playing field between all operators in the sectors concerned.

EXAMPLE 2: ARGENTINA

In Argentina, the tariff policy—tariff levels and subsidies—developed from 2006 to 2014 was characterized by tariff freezes, which threatened the economic and financial balance of the service; as from 2014, a general (almost universal) subsidy scheme was implemented according to geographical area, making no distinction in user ability to pay, with the State subsidizing providers to allow for a tariff reduction. A subsidy reduction process has been underway since 2022, stipulating a mechanism by which subsidies are restricted to users that were not able to pay the resulting tariffs. Although this experience does not imply subsidy reimbursement—simply its elimination—it is consistent with the concept of assessing State subsidies granted to operators that may harm competition insofar as they disproportionately help operators beyond actual necessity.

LINKS

EU: http://europa.eu/rapid/press-release_IP-02-817_en.htm

Argentina: Values of modification coefficient “k”

https://www.boletinoficial.gob.ar/detalleAviso/primera/273473/20221012 ;
https://www.argentina.gob.ar/normativa/nacional/resoluci%C3%B3n-51-2022-373558/texto

INTERNAL CAPACITIES NEEDED AND THE ROLE OF PARTNERS

A range of administrative, legal and inspection skills is necessary to complete this action, obliging regulators to build their internal capacity through training, often seeking support from anti-monopoly institutions or development partners. Competition authorities could also extend their expertise when developing regulatory monitoring guidelines. Development partners can build upon this through training and establishing implementation procedures. Regulators’ staff must be trained on when to proceed with audits, what and how to analyse and inspect, and how to advance with the concluding decisions.

CO2D: Detect abuses of monopoly by operators and concerted practices harmful for consumers

REGULATORY FUNCTION: **COMPETITION** | **CO2D**

OBJECTIVE CO2

Operators' competition behaviour is audited through collected legal and contractual information

ACTION CARD CO2D

DETECT ABUSES OF MONOPOLY BY OPERATORS AND CONCERTED PRACTICES HARMFUL FOR CONSUMERS

COST: High **FREQUENCY:** Regular

TARGET GROUPS: Regulators, service operators, national governments, development partners, anti-monopoly institutions

DESCRIPTION

It is important to inspect any kind of anti-competitive practice, besides state subsidies, which could be harmful to consumer interests. An impartial auditing procedure is precondition to this action, obliging regulators to develop sets of transparent procedure guidelines for conducting and reporting anti-competitive audits. In accordance, regulators focus on the identification of any possible abuses resulting from a dominant position or monopoly by one or several operators. This could identify for example, oligopolies where several operators secretly agree about charging certain price, or operators who refuses to supply, abusing their dominant market position. Timely identification of a non-exhaustive list of abuses is the main objective of this action, that is sometimes jointly performed by both competition authorities and WASH regulators.

EXPECTED OUTCOMES

- Abuse of dominant position is prevented and the competition is re-established.
- Consumers are protected from such abuses through systematic and regular reviews of operators' behaviour and service provision.
- Operators are obliged to follow market rules and avoid any kind of abuse or be penalized.

EXAMPLE 1: CROATIA

In **Croatia**, the Competition Agency ruled on a case involving the company Vodoopskrba i odvodnja d.o.o. from Zagreb. In the proceedings, the agency would decide whether certain services that the company adopted in July 2013 represented an abuse of a dominant position on the relevant public water supply market.

The case started because there was a new provision stating an obligation for water meters installed in old buildings to be connected with the automatic water meter reading (AWMR) network, a system which Vodoopskrba has already introduced in the old buildings. In other words, water meters were a new market for Vodoopskrba, but they were also the sole owners of the AWMR network .

The Competition Agency adopted a decision ordering Vodoopskrba i odvodnja to temporarily cease and-desist to impede other companies in installing telemetric services and preventing final consumers from freely choosing the provider of the services concerned.

EXAMPLE 2: BOLIVIA

In Bolivia, the Superintendency of Basic Sanitation is empowered to ensure that Drinking Water and Sanitary Sewerage services comply with the anti-monopoly and consumer protection provisions set forth in Law No. 1600 and may take the necessary measures to correct any case of non-compliance. Within this framework, it is stipulated that providers are to align their activities with principles that guarantee open competition, avoiding actions that would impede, restrict or distort it, while prohibiting joint, direct or indirect price-fixing, establishing limitations, distributing production control, markets, supply sources or investment, and developing other similar anti-competitive practices. Abusive practices are also prohibited, such as the direct or indirect imposition of buying or selling prices or other unequitable commercial conditions; the limitation of production, supply sources, markets or technical development to the detriment of consumers; the application of unequal conditions on equivalent operations, representing a

disadvantage to clients and users; the conditioning of contract execution to the counterparty's acceptance of additional obligations that, by virtue of their nature or according to commercial practice, are not inherent to the object of such contracts; and the demand that those requesting the provision of a regulated service become partners or shareholders.

EXAMPLE 3: CHILE

In Chile, the National Economic Prosecutor's Office is in charge of supervising and verifying the possible existence of anti-competitive practices by sanitary public utilities, and in the event that such situations should be detected, the Prosecutor's Office may request that the Court for the Defense of Free Competition classify certain services as subject to price-fixing by the Superintendency of Sanitary Services, as long as monopoly-related characteristics are detected.

LINKS

Croatia: http://www.aztn.hr/en/water-supply-and-sewage-operator-challenged-to-abuse-a-dominant-position/

Bolivia: Law of October 28, 1994

http://www.oas.org/es/sla/dlc/mesicic/docs/blv_res15.pdf

Chile: Statutory Decree No. 1 of 2005 by the Health Ministry establishes the consolidated, coordinated and systematized text of Decree-Law No. 2.763 of 1979 and Laws No. 18.933 and No. 18.469

https://www.senasa.gov.py/application/files/3014/6067/0954/LeyN1614_8jgpoc25.pdf

INTERNAL CAPACITIES NEEDED AND THE ROLE OF PARTNERS

A range of administrative, legal and inspection skills is necessary to complete this action, obliging regulators to build their internal capacity through training, often seeking support from anti-monopoly institutions or development partners. Competition authorities could extend their expertise when conducting these audits. Development partners could build upon this through training and establishing tailored implementation procedures. Regulators' staff must be trained on when to proceed with audits, what and how to analyse and inspect, and how to advance with the respective conclusions.

CO3A: Impose mandatory procurement measures or split operators' assets when they benefit from a monopoly

REGULATORY FUNCTION: **COMPETITION** | **CO3A**

OBJECTIVE CO3

There are sanction systems for operators for any anti-competitive acts that affect consumers

ACTION CARD CO3A

IMPOSE MANDATORY PROCUREMENT MEASURES OR SPLIT OPERATORS' ASSETS WHEN THEY BENEFIT FROM A MONOPOLY

COST: Medium **FREQUENCY:** One time

TARGET GROUPS: Regulators, service operators, administrative courts

DESCRIPTION

Before applying sanctions against an operator, regulators have available a wide range of options that can reduce anti-competitive behaviour. Legal measures commonly applied by competition authorities, could also be copied by WASH regulators. In order to do so, however, these would have to be transparently and clearly outlined within regulatory competition policies to ensure comprehension by all operators. Regulators can for example, request operators to sell some of their assets to competitors, split into several independent entities that would compete with each other, or to finance new or other market players from a fine, all with the objective of restoring competition. In most cases, regulators simply establish tendering and procurement procedure which allow them to review compliance with registration conditions.

EXPECTED OUTCOMES

- Operators are prevented from benefiting from a dominant position when competitive conditions could be met.
- Consumers are protected in their rights and interests through measures which create an open market for everyone.
- Corrective measures are also applicable to a single operator if it does not comply with agreed terms.

EXAMPLE 1: TANZANIA

In **Tanzania**, following the 2013 Guidelines for the Regulation of the Private Boreholes, the Energy and Water Utilities Regulatory Authority (EWURA) specifies the following.

13. – (1) In the event a licensee starts to provide a water supply service to an area with limited or no supply, all operators in said area shall cease to provide borehole services to customers in said area; and the licensee shall, subject to the provisions of sub-rule (2), be at liberty to use existing infrastructure owned by said operators.

(2) A licensee shall, in the event it decides to use the existing borehole and infrastructure owned by an operator, compensate said water operator at an amount as shall be agreed upon by the parties and approved by the Authority.

EXAMPLE 2: ARGENTINA

In Argentina, drinking water and sanitation services are subject to the consumer protection system set forth in Law No 24.240, and the system for the defense of competition set forth by Law No. 25.156. This last regulation prohibits economic concentration between companies by way of mergers, transfers, acquisitions or other means, when their purpose or effect is or could be to restrict or distort the competition in a way that harms general economic interests. Consequently, operations that are conducive to economic concentration must be previously authorized in order to verify that they do not impact the competition in their respective market, or compliance with the regulatory framework, and to this end, the regulator must issue a grounded report. As an example, Resolution No. 665/19 by the Secretary of Domestic Trade authorized the economic concentration resulting from the takeover by SUEZ S.A. of GE WATER AND PROCESS TECHNOLOGIES SOCIEDAD COLECTIVA, which belonged to GENERAL ELECTRIC COMPANY.

LINKS

Tanzania: http://www.ewura.go.tz/wp-content/uploads/2015/03/Water-Supply-and-Sanitation-Regulation-of-Private-Boreholes-Rules- 2013.pdf

Argentina: Law No. 24.240, Consumer Protection Law, and Law No. 25.156. Law for the Defense of Competition

http://servicios.infoleg.gob.ar/infolegInternet/anexos/60000-64999/60016/texact.html

https://www.argentina.gob.ar/normativa/nacional/ley-24240-638/actualizacion

INTERNAL CAPACITIES NEEDED AND THE ROLE OF PARTNERS

A range of legal and administrative skills is necessary to complete this action, that obliges regulators to build their internal capacity through training, often seeking support from anti-monopoly institutions and development partners. Competition authorities could also extend their expertise by defining and imposing remedial actions. Development partners could build upon this through training. Regulators' staff must be trained on when to proceed with remedial measures, how to impose them on operators, and what steps to follow in case of non-compliance.

CO3B: Impose penalties on operators whose practices against free competition are not reversable

REGULATORY FUNCTION: **COMPETITION** | **CO3B**

OBJECTIVE CO3

There are sanction systems for operators for anti-competitive acts that affect consumers

ACTION CARD CO3B

IMPOSE PENALTIES ON OPERATORS WHOSE PRACTICES AGAINST FREE-COMPETITION ARE NOT REVERSABLE

COST: Medium **FREQUENCY:** One time

TARGET GROUPS: Regulators, service operators, administrative courts

DESCRIPTION

In case of a severe breach of competition, or of regulation rules or other legislative acts by competing operators, and when the consequences of such anti-competitive acts are not reversable, regulators impose sanctions as a last resort. These must be clearly predefined and transparently outlined for operators following licence conditions and criteria. Regulators can deregister licenced operators if they do not comply with remedial measures proposed to restore competition. Alternatively, regulators may impose higher fines to reimburse costs resulting from the damage caused, and which could eventually remove operators from the market due to bankruptcy. These measures are usually implemented with judiciary assistance and support.

EXPECTED OUTCOMES

- Operators in breach of regulation and competition rules are removed from the market.
- Consumers are protected from anticompetitive behaviour.
- Only well-performing operators remain in the market.

EXAMPLE 1: TANZANIA

In **Tanzania**, following the 2013 Guidelines for the Regulation of Water Tankers, the Energy and Water Utilities Regulatory Authority (EWURA) can deregister a water tanker operator for any of the following conditions.

1. Using a tanker to conduct an activity other than that it was registered for.
2. Providing false or inaccurate information related to the operation of a water tanker.
3. Drawing water from a non-designated filling point.
4. Selling water at a price which is above the approved cap price.
5. Ceasing to carry out water supply business.
6. Failing to carry out its obligations under these guidelines.

EXAMPLE 2: ARGENTINA

In Argentina, in the case of practices that are prohibited in defense of competition or to avoid dominant positions or economic concentration in the market, Law No. 25.156, which is applicable to drinking water and sanitation services, stipulates the application of fines and business disqualification applicable to operators and directors, managers, administrators, auditors or members of the Supervisory Council, agents or legal representatives that by act or omission in their monitoring, supervisory or oversight duties have contributed to, encouraged or permitted the infringement.

EXAMPLE 3: BOLIVIA

In Bolivia, and pursuant to Laws No. 1600 and No. 2066, the Superintendency of Basic Services is responsible for applying regulations against monopolies and in defense of competition, with the power to impose sanctions against infringements as stipulated in the Regulatory Framework for Drinking Water and Sanitary Sewerage Services.

LINKS

Tanzania: Tanzania Guidelines for the Regulation of Water Tankers 2013: http://www.ewura.go.tz/wp-content/uploads/2015/03/Water- Supply-and-Sanitation-Water-Tanker-Services-Rules-2013.pdf

Argentina: Law No. 25.156. Law for the Defense of Competition

http://servicios.infoleg.gob.ar/infolegInternet/anexos/60000-64999/60016/texact.htm

Bolivia: Law No. 2066 of April 11, 2000 on Drinking Water and Sanitary Sewerage Services Provision and Use

And Law No. 1600 of October 28, 1994.

https://sea.gob.bo/digesto/CompendioII/O/160_L_2066.pdf http://www.oas.org/es/sla/dlc/mesicic/docs/blv_res15.pdf

INTERNAL CAPACITIES NEEDED AND THE ROLE OF PARTNERS

A range of legal and administrative skills is necessary to complete this action, that obliges regulators to build their internal capacity through training, often seeking support from anti-monopoly institutions and development partners. Competition and judiciary authorities could also extend their expertise by defining and imposing sanctions. Development partners could build upon this through training. Regulators' staff must be trained on the available scale of sanctions, how to impose them on operators, and what protocols to follow in these circumstances.

5. THE ENVIRONMENT

OBJECTIVE	ACTION	CODE
1. Regulatory requirements for water abstraction and management of faecal sludge, effluent or wastewater are in place	A. Set standards for the quality of effluent discharges arising from wastewater services	**EN1A**
	B Define mechanisms for approval of water abstraction rights and wastewater effluent discharge permits	**EN1B**
	C. Establish environmental protection zones, associated rules, and regulatory compliance procedures	**EN1C**
2. Environmental compliance of water and wastewater service operators, industries and agriculture is monitored through collected information on the status of water resources, its use and protection	A. Establish and manage water resources abstraction and wastewater effluent discharge registers	**EN2A**
	B. Develop systematic approaches for routinely sharing water resources information with the public	**EN2B**
	C. Raise public awareness on the rational use of water	**EN2C**
	D. Develop inspection protocols for water abstraction and discharge points and receiving waterbodies	**EN2D**
	E. Establish mechanisms for receiving and dealing with citizen complaints related to water resources use	**EN2E**
3. Water abstractors and polluters are sanctioned when committing environmental infringements	A. Penalize actors for their non-compliance with environmental legislation and policies	**EN3A**
	B. Manage non-compliance cases as a knowledge practice for future recalls	**EN3B**

EN1A: Set standards for quality of effluent discharges arising from wastewater services

REGULATORY FUNCTION: **ENVIRONMENT** | **EN1A**

OBJECTIVE EN1

Regulatory requirements for water abstraction and management of faecal sludge, effluent or wastewater are in place

ACTION CARD EN1A

SET STANDARDS FOR QUALITY OF EFFLUENT DISCHARGES ARISING FROM WASTEWATER SERVICES

COST: Medium **FREQUENCY:** Regular

TARGET GROUPS: Regulators, service operators, environmental authorities, civil society organizations, industrial and agricultural consumers

DESCRIPTION

Environment regulators translate national environmental standards and norms into established regulatory frameworks for water and sanitation services within their mandate. They therefore transpose national environmental directives into policies, guidelines, and frameworks, with the objective of protecting the environment from noxious substances discharged through wastewater services. Most commonly, regulators outline a list of substances, along with permissible limits, allowed for municipal, industrial, or agricultural wastewater disposal.

EXPECTED OUTCOMES

- Environmental norms are properly integrated within water and sanitation sectors.
- Service operators' contracts adequately reflect their environmental duties.
- Environmental protection is ensured through clearly defined effluent quality standards.

EXAMPLE 1: TANZANIA

In **Tanzania**, wastewater effluent quality discharges should comply with the latest national standard (TZS 860:2006) on limits for municipal and industrial wastewaters. The standard prescribes permissible limits for municipal and industrial effluents discharged directly into water bodies, and its use promotes a consistent approach towards prevention of water pollution.

Table 2a: Physical Components

Parameter	Limit	Test Method
BOD_5 at 20 ^{o}C	30 mg/L	EMDC1 1173: Part 3 ± Five-day BOD Method
COD	60 mg/L	EMDC1 1173: Part 4 ± Dichromate Digestion Method
Color	300 TCU	ISO 7887: 1994, Water quality ± Examination and determination of color ± Section 3: Determination of true color using optical instruments
pH range	6.5-8.5	EMDC1 1173: Part 2 ± Electrometric Method
Temperature range	20-35^{o}C	See Annex A
Total Suspended Solids	100 mg/L	EMDC1 1173: Part 1 ± Gravimetric Method
Turbidity	300 NTU	APHA Standard Methods:2130 B. Nephelometric Method

Table 2d: Microbiological Components

Parameter	Limit	Test Method
Total Coliform Organisms	10,000counts/100mL	ISO 6222:1999, Microbiological methods

Sample of permissible limits for municipal and industrial wastewaters (TZS 860:2006).

EXAMPLE 2: UNITED KINGDOM

In the **UK,** the EU Urban Wastewater Treatment Directive was transposed in 1991 into UK law through the Urban Wastewater Treatment Regulations (1994). They detail the following standards for discharges from wastewater treatment plants.

- Discharges from urban wastewater treatment plants subject to treatment in accordance with regulation 5(1) and (2) shall, subject to paragraphs 4 and 5 of Part II of this Schedule, meet the requirements shown in Table 1.
- Discharges from urban wastewater treatment plants to those sensitive areas which are subject to eutrophication as identified in sub-paragraph (a) of Part I of Schedule 1 shall, subject to paragraphs 4 and 5 of Part II of this Schedule, also meet the requirements in Table 2.

TABLE 1

REQUIREMENTS FOR DISCHARGES FROM URBAN WASTE WATER TREATMENT PLANTS SUBJECT TO REGULATION 5(1) AND (2)

The values for concentration or for the percentage of reduction shall apply.

Parameters	Concentration	Minimum percentage of reduction[1]	Reference method of measurement
Biochemical oxygen demand (BOD5 at 20°C without nitrification[2]	25 mg/l O_2	70—90	Homogenized, unfiltered, undecanted sample. Determination of dissolved oxygen before and after five-day incubation at 20° ±1°C, in complete darkness. Addition of a nitrification inhibitor
Chemical oxygen demand (COD)	125 mg/l O_2	75	Homogenized, unfiltered, undecanted sample Potassium dichromate

1 Reduction in relation to the load of the influent.

2 The parameter can be replaced by another parameter: total organic carbon (TOC) or total oxygen demand (TOD) if a relationship can be established between BOD5 and the substitute parameter.

TABLE 2

REQUIREMENTS FOR DISCHARGES FROM URBAN WASTE WATER TREATMENT PLANTS TO SENSITIVE AREAS WHICH ARE SUBJECT TO EUTROPHICATION AS IDENTIFIED IN SUB-PARAGRAPH (a) OF PART I OF SCHEDULE 1

One or both parameters may be applied depending on the local situation. The values for concentration or for the percentage of reduction shall apply.

Parameters	Concentration	Minimum percentage of reduction[1]	Reference method of measurement
Total phosphorus	2 mg/l P (10,000—100,000 p.e.) 1 mg/l P (more than 100,000 p.e.)	80	Molecular absorption spectrophotometry
Total nitrogen[2]	15 mg/l N (10,000—100,000 p.e.) 10 mg/l N (more than 100,000 p.e.)	70—80	Molecular absorption spectrophotometry

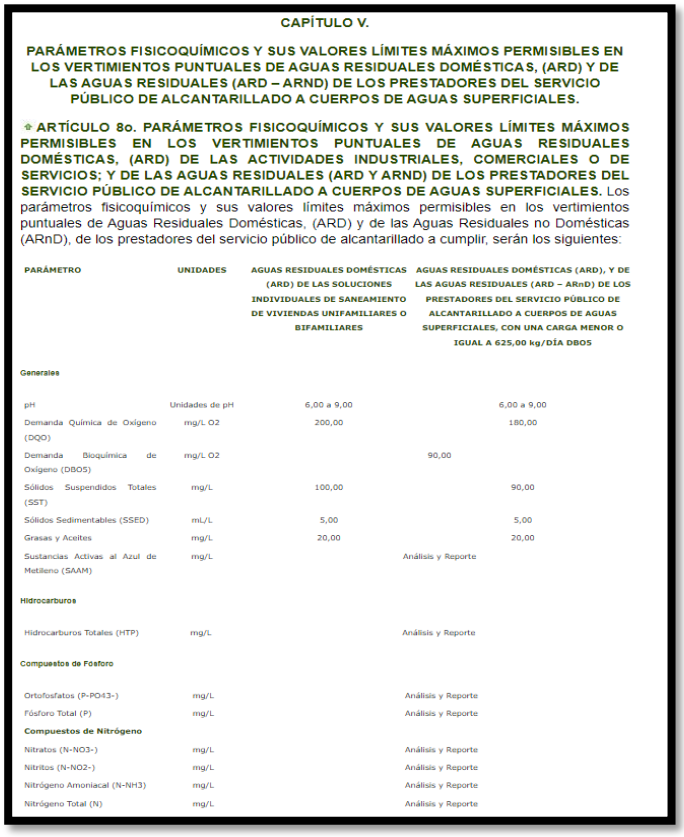
1 Reduction in relation to the load of the influent.

2 Total nitrogen means: the sum of total Kjeldahl-nitrogen (organic N + NH_3), nitrate (NO_3)-nitrogen and nitrite (NO_2)-nitrogen.

EXAMPLE 3: COLOMBIA

In Colombia, Resolution No. 0631 of 2015 stipulates the maximum permissible parameters and limits in the dumping of wastewater into surface water bodies and public sewerage systems. This regulation changed a set of very limited parameters that had been established in 1984 and set forth the maximum permissible parameters.

The regulation also establishes parameters for active ingredients in pesticides in Toxicity Classes I-a, I-b and II, and the maximum permissible limits when dumping non-domestic wastewater (ARND) into the public sewerage system.



CAPÍTULO V.

PARÁMETROS FISICOQUÍMICOS Y SUS VALORES LÍMITES MÁXIMOS PERMISIBLES EN LOS VERTIMIENTOS PUNTUALES DE AGUAS RESIDUALES DOMÉSTICAS, (ARD) Y DE LAS AGUAS RESIDUALES (ARD – ARND) DE LOS PRESTADORES DEL SERVICIO PÚBLICO DE ALCANTARILLADO A CUERPOS DE AGUAS SUPERFICIALES.

ARTÍCULO 8o. PARÁMETROS FISICOQUÍMICOS Y SUS VALORES LÍMITES MÁXIMOS PERMISIBLES EN LOS VERTIMIENTOS PUNTUALES DE AGUAS RESIDUALES DOMÉSTICAS, (ARD) DE LAS ACTIVIDADES INDUSTRIALES, COMERCIALES O DE SERVICIOS; Y DE LAS AGUAS RESIDUALES (ARD Y ARND) DE LOS PRESTADORES DEL SERVICIO PÚBLICO DE ALCANTARILLADO A CUERPOS DE AGUAS SUPERFICIALES. Los parámetros fisicoquímicos y sus valores límites máximos permisibles en los vertimientos puntuales de Aguas Residuales Domésticas, (ARD) y de las Aguas Residuales no Domésticas (ARnD), de los prestadores del servicio público de alcantarillado a cumplir, serán los siguientes:

PARÁMETRO	UNIDADES	AGUAS RESIDUALES DOMÉSTICAS (ARD) DE LAS SOLUCIONES INDIVIDUALES DE SANEAMIENTO DE VIVIENDAS UNIFAMILIARES O BIFAMILIARES	AGUAS RESIDUALES DOMÉSTICAS (ARD), Y DE LAS AGUAS RESIDUALES (ARD – ARnD) DE LOS PRESTADORES DEL SERVICIO PÚBLICO DE ALCANTARILLADO A CUERPOS DE AGUAS SUPERFICIALES, CON UNA CARGA MENOR O IGUAL A 625,00 kg/DÍA DBO5
Generales			
pH	Unidades de pH	6,00 a 9,00	6,00 a 9,00
Demanda Química de Oxígeno (DQO)	mg/L O2	200,00	180,00
Demanda Bioquímica de Oxígeno (DBO5)	mg/L O2	90,00	
Sólidos Suspendidos Totales (SST)	mg/L	100,00	90,00
Sólidos Sedimentables (SSED)	mL/L	5,00	5,00
Grasas y Aceites	mg/L	20,00	20,00
Sustancias Activas al Azul de Metileno (SAAM)	mg/L	Análisis y Reporte	
Hidrocarburos			
Hidrocarburos Totales (HTP)	mg/L	Análisis y Reporte	
Compuestos de Fósforo			
Ortofosfatos (P-PO43-)	mg/L	Análisis y Reporte	
Fósforo Total (P)	mg/L	Análisis y Reporte	
Compuestos de Nitrógeno			
Nitratos (N-NO3-)	mg/L	Análisis y Reporte	
Nitritos (N-NO2-)	mg/L	Análisis y Reporte	
Nitrógeno Amoniacal (N-NH3)	mg/L	Análisis y Reporte	
Nitrógeno Total (N)	mg/L	Análisis y Reporte	

EXAMPLE 4: MEXICO

In Mexico, Official Mexican Regulation NOM-002-ECOL-1996 establishes the maximum permissible contaminant limits allowed in wastewater discharged into the urban or municipal sewerage systems. The regulation establishes the maximum permissible contaminant limits allowed in wastewater discharged into the urban or municipal sewerage systems with the aim of preventing and controlling the contamination of water bodies and national resources as well as protecting the infrastructure of such systems, and requires mandatory compliance from entities conducting such discharges.

Pursuant to the regulation, the maximum permissible contaminant limits in wastewater discharged into the urban or municipal sewerage systems should not exceed those indicated in the following table. In the case of grease and oils, it is the weighted average according to flow, on the basis of results from analyses carried out on each of the individual samples.

MAXIMUM PERMISSIBLE LIMITS			
PARAMETERS (Milligrams per liter, unless otherwise specified)	Monthly Average	Daily Average	Instantaneous
Grease and Oils	50	75	100
Sediments solids	0.5	0.75	10
Total cadmium	0.5	0.75	1
Total cyanide	1	1.5	2
Total copper	10	15	20
Hexavalent chromium	0.5	0.75	1
Total mercury	0.01	0.015	0.02
Total nickel	4	6	8
Total lead	1	1.5	2
Total zinc	6	9	12

The maximum permissible limits are only reference values; in the event that a value exceeds the reference value in the table, the entity responsible for the discharge is obliged to provide the competent authority with the daily and monthly averages, as well as the laboratory results of the corresponding analyses, in a timely manner and as required by local legal codes.

LINKS

Tanzania: http://www.ewura.go.tz/wp-content/uploads/2015/03/Water-and-Wastewater-Quality-Monitoring-Guidelines-for-WSSAs-DAWASCO-and-DAWASA.pdf

UK: https://www.legislation.gov.uk/uksi/1994/2841/schedule/3/made

Colombia: Maximum permissible limits in dumping

https://www.minambiente.gov.co/wp-content/uploads/2021/11/resolucion-631-de-2015.pdf

Mexico: Maximum permissible limits

https://www.profepa.gob.mx/innovaportal/file/3295/1/nom-002-semarnat-1996.pdf

https://www.profepa.gob.mx/innovaportal/file/3295/1/nom-002-semarnat-1996.pdf

INTERNAL CAPACITIES NEEDED AND THE ROLE OF PARTNERS

Establishing wastewater effluent quality standards requires a blend of technical and legal expertise, including an understanding of the current level of wastewater treatment, laboratory testing capacity, and the ambient water quality status of receiving water bodies and their relative ecological vulnerability. Development partners and environmental civil society groups are well placed to provide technical support governments and regulators through capacity and knowledge building workshops, and could potentially help support a national review and mapping of existing evidence of ambient water quality and ecological status, upon which regulators could designate ecologically sensitive receiving water bodies and plan further ecological surveys if needed.

EN1B: Define mechanisms for the approval of water abstraction rights and wastewater effluent discharge permits

REGULATORY FUNCTION: **ENVIRONMENT** | **EN1B**

OBJECTIVE EN1

Regulatory requirements for water abstraction and management of faecal sludge, effluent or wastewater are in place

ACTION CARD EN1B

DEFINE MECHANISMS FOR THE APPROVAL OF WATER ABSTRACTION RIGHTS AND WASTEWATER EFFLUENT DISCHARGE PERMITS

COST: High **FREQUENCY:** One time

TARGET GROUPS: Regulators, service operators, industrial and agricultural consumers, environmental authorities

DESCRIPTION

Environmental regulators establish water abstraction and discharge policies in collaboration with ministries of environment (or other responsible ministries), and in turn receive necessary regulatory guidance for actual implementation. In accordance, regulators define the rules for abstraction and discharge permit application and management, and relevant procedures, with the objective of establishing transparent national mechanisms for current and potential operators. Abstraction and discharge permit mechanisms must clearly stipulate standards and conditions, along with consequences resulting from non-compliance.

EXPECTED OUTCOMES

- Environmental norms in terms of water resources protection are adequately transposed into water and sanitation regulations.
- Service operators' contracts stipulate authorized abstraction limits and substance discharge limits.
- Transparently regulated processes of permit issuance allows all stakeholders equal access.

EXAMPLE 1: SOUTH AFRICA

In **South Africa**, the government's Water and Sanitation Department proposes a clear and transparent procedure for obtaining abstraction permits. Pre-positioning and validation are undertaken when license applications are received and is used to check if everything needed to process the license is available. Applicants are asked to provide missing information and may receive feedback before an application fee is paid (R 114.00 in 2007), so applicants can decide whether to continue. Initial assessment and grouping include a rapid assessment of possible impacts and benefits of the proposed water use. In some cases, a simple set of questions can be used, or applicants can use a screening tool to do their own pre-assessments. Then, a regional assessment is conducted in the local office where the application was submitted. A regional office gathers all the information required to decide on whether to approve the application and makes a recommendation to the national office. Applications are then evaluated by specialist groups at a national office, who also make recommendations on the application. Applications are then submitted to the Chief Director: Water Use for a decision on whether to approve the application, after considering all the relevant information. Once a decision has been made, regional offices are informed, and will inform applicants of the outcome. If approved, the regional offices issue the license and highlight any conditions that might be attached to that water use. The figure below shows this process.

EXAMPLE 2: IRELAND

In **Ireland**, the licensing and certification process follows a number of EU Directives by the imposition of restrictions or prohibitions on the discharge of dangerous substances, and thus preventing or reducing pollution by wastewater discharges.

All discharges to the aquatic environment from sewerage systems owned, managed and operated by water services authorities require a waste water discharge license or certificate of authorization from the Irish Environmental Protection Agency (EPA). Authorities are required to apply to the EPA for a license or certificate of authorization by set dates, depending on the population equivalent of the area served by the sewer network. The authorization process requires the EPA to place stringent conditions on the operation of such discharges, to ensure that potential effects on receiving water bodies are strictly limited and controlled. In overall terms, the aim is to achieve good surface water and ground water status in addition to complying with standards and objectives established for associated protected areas. Licensing and certification processes are open and transparent, and access to the application documentation is freely available on the EPA website.

Any person may make written submissions to the Environmental Protection Agency in relation to license applications, and thus participate in the processing of a particular application. The EPA welcomes and encourages such participation. The EPA must give due regard to all submissions received in its consideration of each license application. The EPA will take comments in account regarding any wastewater discharge application or certificate of authorization application into account.

EXAMPLE 3: ECUADOR:

In Ecuador, the Water Regulation and Monitoring Agency, ARCA, has established a technical regulation called 'Regulation of Water Use and Development Authorizations' (No. DIR-ARCA-RG-004-2016) that seeks to improve authorizations for all types of water use, including water distribution, through procedure validation, monitoring and standardization. In order to achieve this improvement with the new regulation, ARCA has created training videos, tutorials and virtual forums with the aim of explaining the relationship between ARCA and the Secretariat of Water, user obligations, applicable legal categories, and other matters.

Sources: (ARCA, s.f)

EXAMPLE 4: COLOMBIA

In Colombia, there are administrative procedures that allow public aqueduct utilities to access water use, called 'concessions for the use of water.' Decree No. 1076 of 2015 sets out an order of priorities for the granting of these concessions, the first of which is water use for human consumption, collectively or as a community, in urban or rural areas. Likewise, the regulation establishes that utility concessions may be granted for periods of up to fifty (50) years. With regard to dumping, the decree demands that public utilities, as water resource users, have the pertinent dumping permit or a Sanitation and Dumping Management Plan (PSMV).

LINKS

South Africa: http://www.dwa.gov.za/WAR/licenceprocess.aspx

Ireland: http://www.epa.ie/licensing/watwaste/wwda/

Ecuador: ARCA Tutorial

http://www.regulacionagua.gob.ec/regulacion-n004-autorizaciones-de-uso-y-aprovechamientos/

Colombia: Decree No. 1076 of 2015. (See Article 2.2.3.2.7.6. Order of Priorities)

https://funcionpublica.gov.co/eva/gestornormativo/norma.php?i=78153

INTERNAL CAPACITIES NEEDED AND THE ROLE OF PARTNERS

To establish mechanisms for the approval of abstraction rights and discharge permits, regulators require adequate technical capacity to understand the impacts and benefits of abstractions or discharges at different geographical scales. In addition, a range of administrative and procedural skills are required, and regulators' staff must be trained on setting, and make publicly available, standardized assessment procedures for approval or rejection of applications, based on common standardized questions. Development partners and environmental authorities may assist this process by providing technical assistance in setting the contexts of assessments and with capacity building workshops.

EN1C: Establish environmental protection zones, associated rules, and regulatory compliance procedures

REGULATORY FUNCTION: **ENVIRONMENT** | **EN1C**

OBJECTIVE EN1

Regulatory requirements for water abstraction and management of faecal sludge, effluent or wastewater are in place

ACTION CARD EN1C

ESTABLISH ENVIRONMENTAL PROTECTION ZONES, ASSOCIATED RULES AND REGULATORY COMPLIANCE PROCEDURES

COST: High **FREQUENCY:** One time

TARGET GROUPS: Regulators, service operators, Industrial and agricultural consumers, environmental authorities

DESCRIPTION

Regulators actively support the establishment and correct use of boundary zones for environmental protection of sensitive water bodies, through ensuring appropriate abstraction or disposal of wastewater and sludge. This action is performed in coordination with national environmental authorities. Regulators are required to include new zones in their registers, and to follow environmental authority directives in terms of compliance with existing protected areas. Regulators implement this action by withdrawing abstraction or discharge permits previously issued in these areas.

EXPECTED OUTCOMES

- Boundary areas are protected from inappropriate wastewater and sewage sludge discharge.
- Effective coordination between regulators and environmental authorities is in place.
- Environmental directives are transparent and accessible to all interested parties.

EXAMPLE 1: EUROPEAN UNION

In the **EU**, nitrates are a relevant pollutant for water and wastewater services, with excess nitrates contaminating water supplies and causing public health issues, whilst improper sewage sludge disposal contributes to increased pollution in water bodies. Council Directive 91/676/aims to protect water quality across Europe by preventing nitrates from agricultural sources polluting ground and surface waters, and by promoting the use of good farming practices. This 'nitrates directive' forms an integral part of the Water Framework Directive and is one of the key instruments in protecting water from agricultural pollution.

Implementation of the nitrates directive at country level involves the identification of vulnerable water bodies, designation of nitrate vulnerable zones (NVZs) and establishing associated voluntary and mandatory regulatory requirements for agricultural users within with NVZs, including minimizing nutrient loss to vulnerable water bodies from the application of sewage sludge to land by stipulating limits to nutrients that can be applied.

EXAMPLE 2: EUROPEAN UNION

In the **EU**, Council Directive 91/271/EEC concerning urban wastewater treatment aims to protect the environment from the adverse effects of urban wastewater discharges and discharges from certain industrial sectors. Specifically, the directive requires the following, amongst others.

- The collection and treatment of wastewater in all agglomerations of >2000 population equivalents (p.e.).
- Secondary treatment of all discharges from agglomerations of > 2000 p.e., and more advanced treatment for agglomerations >10 000 p.e. in designated sensitive areas and their catchments.

Sensitive areas must be designated and include the following.

- Freshwater bodies, estuaries and coastal waters which are eutrophic or which may become eutrophic if protective action is not taken.

- Surface freshwater intended for the abstraction of drinking water which contain or is likely to contain more than 50 mg/l of nitrates.
- Areas where further treatment is necessary to comply with other council directives such as those related to fish waters, bathing waters, on shellfish waters, on the conservation of wild birds and natural habitats, etc.

EXAMPLE 3: PERU

In Peru, the implementing regulation of Water Resource Law No. 29338 Article 123, orders the National Water Authority, in coordination with the environmental authority and the corresponding sector authorities, to declare water resource protection zones that prohibit, limit or restrict any type of activity that affects water quality and associated resources. The same Law (Article 129) allows the National Water Authority to declare closed areas prohibiting the execution of water development works, and regulates the granting of permits, authorizations and licenses for water use and dumping.

EXAMPLE 4: GUATEMALA

In Guatemala, the protected areas law, Decree No. 4-89, created the Rainforest Conservation Subsystem with the aim of ensuring a constant water supply of acceptable quality. This subsystem has allowed for the protection of ecosystems such as the tropical premontane rainforest, the tropical montane rainforest and the tropical subalpine rainforest, which cover around 36,108 (ha) of Guatemalan territory.

LINKS

EU: NVZs – EU: https://ec.europa.eu/environment/water/water-nitrates/index_en.html

UWWTD and Sensitive Areas – EU: https://ec.europa.eu/environment/water/water-urbanwaste/index_en.html

https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:01991L0271-20140101

Peru: Implementing regulation of Water Resource Law No. 29338

https://www.minam.gob.pe/wp-content/uploads/2017/04/Ley-N%C2%B0-29338.pdf

Guatemala: Decree No. 4-89, Protected Areas Law

https://www.mem.gob.gt/wp-content/uploads/2015/06/5._Ley_de_Areas_Protegidas_Decreto_4-89.pdf

INTERNAL CAPACITIES NEEDED AND THE ROLE OF PARTNERS

Establishing environmental protection zones requires technical capacities to identify and locate sources of pollution from industry or agriculture, or other sources, and to know what pollutants are being discharged into sewerage systems. In addition, regulators' staff must be trained on how to assess and monitor the ecological status of water bodies. Combined, these skills will help to facilitate the designation and legal establishment of protection zones, and the assignment of related associated restrictions and regulatory compliance procedures. Development partners and environmental authorities can also provide technical support to regulatory reviews, mapping of evidence of pollution and ecological status of water bodies, and planning further environmental surveys, if needed, to fill gaps in knowledge.

EN2A: Establish and manage water resources abstraction and effluent discharge registers

REGULATORY FUNCTION: **ENVIRONMENT** | **EN2A**

OBJECTIVE EN2

Environmental compliance of water and wastewater service operators, industries and agriculture is monitored through collected information on the status of water resources, its use and protection

ACTION CARD EN2A

ESTABLISH AND MANAGE WATER RESOURCES ABSTRACTION AND EFFLUENT DISCHARGE REGISTERS

COST: Medium **FREQUENCY:** Regular

TARGET GROUPS: Regulators, service operators, environmental authorities, industrial and agricultural consumers

DESCRIPTION

Regulators issue abstraction and discharge licences and control usage and abuses through established and transparent mechanisms, including through the establishment and management of publicly accessible registers of licenses. In accordance to established register mechanisms, regulators verify submitted abstraction or discharge proposals, issue licences only to those meeting predefined standards, and record the information in the register. Regulators withdraw permits in cases of non-compliance and record the reasons for withdrawal in the register.

EXPECTED OUTCOMES

- National registers exist of all water abstractions and effluent discharge points.
- Abstraction and discharge registers are managed in a transparent manner.
- Only licenced users can operate.

EXAMPLE 1: MALAYSIA

In **Malaysia**, one of its federal state governments, Selangor, established Lembaga Urus Air Selangor (LUAS), an agency to manage the water sources register under Lembaga Urus Air Selangor Enactment, 1999. This stipulates that 'notwithstanding anything contained to the contrary in any other law, the Authority shall exercise and show supervision and control over the use and flow of water in any water source and whether occurring naturally on the surface or subsurface of the ground', This means that no person or public authority can disrupt natural flow water or take water from any water source except in such quantities as approved by LUAS. Controlling water source usage is made through granting licences on such conditions as the Authority may think fit to any public authority or person to undertake any activity related to water sources and to regulate the licensees and their activities. LUAS imposes a charge on the use of water or any other resource from any water source including but not limited to the abstraction, extraction, discharge, drainage, diversion and impoundment of such water or other resources. Any person who, without the permission of LUAS, abstracts, consumes, or diverts water - or any other resource - commits an offence and shall, on conviction, be liable to a fine or imprisonment. LUAS manages water abstractions and effluent discharge; register through a licence application mechanism available at its web platform at the link below.

EXAMPLE 2: IRELAND

In **Ireland**, the Environmental Protection Agency (EPA) launched a register of water abstractions in accordance with European Union (Water Policy) (Abstractions Registration) Regulations 2018 (S.I. No. 261 of 2018). . Development of such a register was also a requirement of the Water Framework Directive (2000/60/EC) and was indicated in the River Basin Management Plan 2018-2021. Responsible management of water resources involves ensuring that river flows, lake and groundwater levels can sustain aquatic environments, while also allowing use of water for drinking water supply and other agricultural, commercial, industrial and recreational purposes. To assess if Irish water resources are being managed sustainably, it is important to know the volume of water being abstracted and from which rivers, lakes and groundwater. This register aims to capture this information and the data

will be used in conjunction with information on discharges, flows and water levels, and water status, to identify if there are any rivers, lakes or groundwater bodies that have unsustainable abstractions that require active management. The requirement to register relates to abstractions of 25 cubic metres (25,000 litres) or more. Small private supplies, e.g. using domestic wells (which typically abstract between 0.5-1.0 cubic meter of water per day) do not require registration.

EXAMPLE 3: MEXICO

In Mexico, there is a Public Registry of Water Rights (REDPA) which registers national water usage permits, deeds with resource abstraction permits and works in free abstraction zones.

On a state-wide scale, the State of Nuevo León issued the State Environmental Law ordering the establishment and operation of the pollutant emissions and transfer registry, the mandatory registry of fixed sources under state jurisdiction, and the registry of wastewater discharges in drainage and sewerage systems or receiving bodies under state jurisdiction (Article 8). The law establishes that wastewater discharges that are not registered at the Environmental and Natural Resource Protection Agency could be sanctioned.

EXAMPLE 4: COLOMBIA

In Colombia, Decree No. 1076 of 2015, Article. 2.2.3.4.1.1 orders environmental authorities to organize and keep a register of: a) public water usage concessions; b) permits for the occupation and exploitation of channels, riverbeds, beaches and the riverside strip referred to in Article 83, letter d) of Decree-Law No. 2811 of 1974; c) permits for the exploration and exploitation of groundwater; e) transfers of concessions and permits; f) administrative measures required to approve plans for public and private hydraulic works and to authorize their operation; g) information on private water bodies collected via the survey referred to in Article 65 of Decree-Law No. 2811 of 1974, and h) information related to water use for human and domestic consumption, and domestic wastewater resulting from individual basic sanitation solutions in isolated rural households.

LINKS

Malaysia: https://www.luas.gov.my/index.php?option=com_content&view=article&id=112&Itemid=138&lang=en

Ireland: http://www.epa.ie/licensing/watwaste/watabs/

Mexico: Public Registry of Water Rights (REDPA)

http://legismex.mty.itesm.mx/estados/ley-nl/NL-L-Ambiental2022_10.pdf

Colombia: Registry of Water Usage Authorizations

https://www.funcionpublica.gov.co/eva/gestornormativo/norma.php?i=78153

INTERNAL CAPACITIES NEEDED AND THE ROLE OF PARTNERS

Establishing and maintaining public registers for environmental permits related to water abstractions and discharges requires administrative and IT capacity to establish and manage online and offline record keeping systems with frequent updating requirements. Administrative capacity is also needed for dealing with public enquiries. Development partners may be able to assist regulators through facilitating peer learning, especially if a new online system is to be established.

EN2B: Develop systematic approaches for routinely sharing water resources information with the public

REGULATORY FUNCTION: **ENVIRONMENT** | **EN2B**

OBJECTIVE EN2

Environmental compliance of water and wastewater service operators, industries and agriculture is monitored through collected information on the status of water resources, its use and protection

ACTION CARD EN2B

DEVELOP SYSTEMATIC APPROACHES FOR ROUTINELY SHARING WATER RESOURCES INFORMATION WITH THE PUBLIC

COST: Medium **FREQUENCY:** One time

TARGET GROUPS: Regulators, service operators, Industrial and agricultural consumers, environmental authorities, civil society organizations

DESCRIPTION

Regulators support environmental authorities when they are required to provide relevant water and sanitation information related to environmental protection. Such information is usually collected through registers that record the issuing, management, and monitoring of licence use and abuse. Regulators must make this publicly available and accessible at all times, often compiled through regular reports and shared digitally on web portals.

EXPECTED OUTCOMES

- Water resources information is available and accessible to the public.
- Monitoring information is properly interpreted by regulators.
- Consumers are kept informed about environmental changes related to water resources.

EXAMPLE 1: ZAMBIA

In **Zambia**, the Environment Management Act of 2011 established that the Minister shall, within two years of the commencement of the Act and every five years thereafter, publish a State of the Environment Report. The report shall provide information on the quality of the environment, including the following.

- Describe the quality of the environment and the results of environmental quality monitoring.
- Describe any significant adverse effects that have been caused, are being caused or are likely to be caused in the foreseeable future, and where possible, identify the causes and trends.
- Describe the monitoring, enforcement and other measures which have been, and are being, taken to address the causes of the adverse effects and to improve environmental quality.
- With respect to international agreements and negotiations relating to the environment in Zambia, the regional or the global environment, report on all agreements to which Zambia is a party, and on their domestic implementation, and report on negotiations in which Zambia has participated since the previous State of the Environment Report.

The section on water includes commentaries on water availability, surface water potential, groundwater potential, total water resources potential, change in ecosystem processes, wetlands, water accessibility, and water quality.

EXAMPLE 2: EUROPEAN UNION

In the **EU**, the Water Framework Directive (WFD) established a framework for the assessment, management, protection, and improvement of the quality of water resources across the EU. As en example, the European Commission produced a report on the state of Europe's water in 2018, with these key messages.

- Of the different water bodies recognised by the Water Framework Directive (WFD) across Europe, groundwaters generally have the best status. Good chemical status has been achieved for 74% of the groundwater area, while 89% of the area achieved good quantitative status.
- Around 40% of surface waters (rivers, lakes, and transitional and coastal waters) are in good ecological status or potential, and only 38% are in good chemical status.
- In most Member States, a few priorities substances account for poor chemical status, the most common being mercury. If mercury and other ubiquitous priority substances were omitted, only 3% of surface water bodies would fail to achieve good chemical status. Improvements for individual substances show that Member States are making progress in tackling the sources of contamination.
- Overall, the second River Basin Management Plans (RBMPs) show limited change in status, as most water bodies have the same status in both cycles. The proportion of water bodies with unknown status has decreased and confidence in status assessment has grown. Improvements are usually visible at the level of individual quality elements or pollutants but often do not translate into improved status overall.
- The main significant pressures on surface water bodies are hydro morphological pressures (40%), diffuse sources (38%), particularly from agriculture, and atmospheric deposition (38%), particularly of mercury, followed by point sources (18%) and water abstraction (7%).
- Member States have made marked efforts to improve water quality or reduce pressure on hydro morphology. Some of the measures have had an immediate effect; others will result in improvements in the longer term.

EXAMPLE 3: MEXICO

In Mexico, the Secretariat of the Environment and Natural Resources (Semarnat) is developing a National Environmental and Natural Resource Information System (SNIARN) that offers useful information to support decision-making, allowing society to obtain data and analyses on the state of the environment across the country. The system informs all interested parties of water availability and quality and environmental services in aquatic ecosystems. Additionally, through the National Water Information System, CONAGUA provides statistical and geographic information on the water sector, facilitating decision-making in relation to the design, implementation and monitoring of public policy aimed at achieving water management sustainability.

EXAMPLE 4: ECUADOR

Ecuador has established a Public Water Registry, a system managed by the General Water Authority with the aim of "allowing the interaction of various social and institutional actors in the organization and coordination of comprehensive and integrated water resource management." (Unique Environmental Information System - SUIA, 2022). The system contains useful information for decision-making, monitoring, analyses and the development of a strategic vision of public and private institutions related to water resource management. The information encompasses issues such as water use and development, water planning, irrigation and drainage technical viability, and information on public utilities, and it is available on the Ministry of the Environment, Water and Ecological Transition website.

LINKS

Zambia: http://www.zema.org.zm/index.php/download-category/state-of-environment-reports/

EU: https://www.eea.europa.eu/themes/water/european-waters/water-quality-and-water-assessment/water-assessments

Mexico: Report on the state of the environment in Mexico and the National Water Information System (SINA).

https://apps1.semarnat.gob.mx:8443/dgeia/informe18/index.html

http://sina.conagua.gob.mx/sina/

Ecuador: Unique Environmental Information System. SUIA.

http://suia.ambiente.gob.ec/?page_id=671

INTERNAL CAPACITIES NEEDED AND THE ROLE OF PARTNERS

Developing systematic approaches to sharing information on the status of water resources, requires capacity for analysis, synthesis, and presentation in suitable formats, such as reports and web-based databases. Development partners and civil society environmental groups might support this process through facilitating technical advice and capacity development for regulators' staff.

EN2C: Raise public awareness on the rational use of water

REGULATORY FUNCTION: **ENVIRONMENT** | **EN2C**

OBJECTIVE EN2

Environmental compliance of water and wastewater service operators, industries and agriculture is monitored through collected information on the status of water resources, its use and protection

ACTION CARD EN2C

RAISE PUBLIC AWARENESS ON THE RATIONAL USE OF WATER

COST: Low **FREQUENCY:** Regular

TARGET GROUPS: Regulators, service operators, water consumers, environmental authorities, civil society organizations, media agencies

DESCRIPTION

Environmental regulators are usually required to promote relevant information on water conservation and protection to consumers, so that they are aware of government strategies and are encouraged to use water rationally. Environmental regulators perform this task alone or in coordination with economic regulators, with the aim of supporting consumers in decreasing their water bills. This is achieved through different water saving awareness campaigns, often merged to increase overall efficiency, are made available through web-based tools, media, consumer associations, and civil society.

EXPECTED OUTCOMES

- Water resources information is available and accessible to the public.
- Consumers are informed about government strategies for water efficiency and water conservation.
- Consumers conserve and protect water.

EXAMPLE 1: UNITED ARAB EMIRATES

In the **United Arab Emirates**, the Dubai Electricity and Water Authority (DEWA), runs an annual three month campaign called 'let's make this summer green' to encourage the public to adopt practices to protect the environment and reduce their carbon footprint. This is part of the efforts by DEWA to engage customers and members of society in concerted efforts to preserve natural resources and encourage different sectors to adopt conscious and responsible lifestyles to consolidate environmental sustainability and promote sustainable development in Dubai. The campaign includes tips to reduce electricity and water use such as regularly maintaining air conditioning units, setting them at 24°C, only using energy-intensive appliances outside of the peak load hours of 12-6 pm, cleaning and replacing filters, ensuring all doors and windows are closed to prevent cold air from escaping, unplugging electrical appliances; and irrigating plants and gardens in the morning or evening to reduce evaporation, and closing water valves before travelling to avoid leakages.

EXAMPLE 2: PANAMA

In Panama, Decree-Law No. 2 of January 7, 1997, "which establishes the regulatory and institutional framework for the provision of drinking water and sewerage services," determines that tariff-setting for drinking water and sewerage service provision shall be based on the principle of rational and efficient use of water resources. Pursuant to this principle, Executive Order No. 436 of April 9, 2010 identifies certain activities such as types of non-rational use (washing unpaved streets or paths, squandering or deliberately wasting drinking water, opening water hydrants without prior authorization from the utility, etc.) and allows the National Public Utilities Authority to apply sanctions in the event of non-rational use.

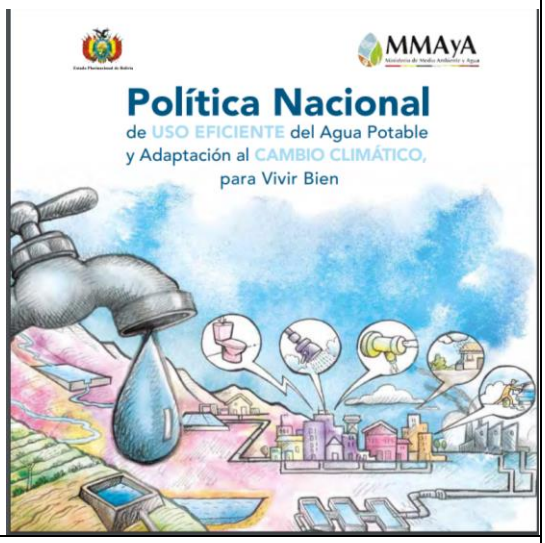
EXAMPLE 3: BOLIVIA

In Bolivia, in 2018, the Ministry of the Environment and Water developed, through the Vice-Ministry of Drinking Water and Basic Sanitation, the 'National Policy for the Efficient Use of Drinking Water and Adaptation to Climate Change for Living Well,' which requires mandatory compliance from central, departmental and municipal authorities, as well as from Drinking Water and Sanitary Sewerage Utilities and the general population.

The policy guidelines are as follows:

1. To promote the use of Low Water Consumption Artifacts and Alternative Technologies.
2. Service quality management and water loss reduction.
3. Additional actions to foster rational water use.
4. Communication and information.

Pursuant to the Policy, "Drinking Water and Sanitary Sewerage Utilities (EPSA) must seek to keep loss levels within acceptable limits, and the Authority for the Auditing and Social Supervision of Drinking Water and Basic Sanitation (AAPS) must ensure this."



LINKS

UAE: http://www.wam.ae/en/details/1395302774431

Panama: Decree-Law No. 2 (of January 7, 1997) "which establishes the regulatory and institutional framework for the provision of drinking water and sewerage services" and Executive Order No. 436 of April, 2010 on rational water use.

https://www.asep.gob.pa/wp-content/uploads/agua/legislacion/ley_2.pdf

https://www.asep.gob.pa/wp-content/uploads/agua/legislacion/ejecutivo_436.pdf

Bolivia: National Policy for the Efficient Use of Drinking Water and Adaptation to Climate Change for Living Well.

http://www.aaps.gob.bo/images/transparencia/comunicacion/Cartilla.Pol%C3%ADtica%20Uso%20eficiente%20Agua-julio.2018.pdf

INTERNAL CAPACITIES NEEDED AND THE ROLE OF PARTNERS

Raising awareness on rational use of water needs the internal technical capacity to generate evidence of unsustainable use of water and trends, and communication capacity to be able to systematically package and share the information with the public to ensure positive behavioural change. Development partners and national environmental authorities could provide technical assistance to regulators in supporting the development of water conservation strategies, including drawing from examples of successful consumer engagement approaches. Media agencies and civil society organizations could also play active roles in supporting regulatory communication efforts.

EN2D: Develop inspection protocols for water abstraction and discharge points and receiving water bodies

REGULATORY FUNCTION: **ENVIRONMENT** | **EN2D**

OBJECTIVE EN2

Environmental compliance of water and wastewater service operators, industries and agriculture is monitored through collected information on the status of water resources, its use and protection

ACTION CARD EN2D

DEVELOP INSPECTION PROTOCOLS FOR WATER ABSTRACTION AND DISCHARGE POINTS AND RECEIVING WATER BODIES

COST: Medium **FREQUENCY:** One time

TARGET GROUPS: Regulators, service operators, Industrial and agricultural consumers, environmental authorities

DESCRIPTION

Environmental regulators may support national environment authorities or develop their own inspection mechanisms through regular inspection reports on environmental infringements. This action is performed in accordance to transparent inspection protocols, predefined and accessible to users. Guidelines must outline how the inspections are conducted, approved, and reported. Regulators must also transparently outline users' obligations and rights during inspection procedures and along the time sequence of audits.

EXPECTED OUTCOMES

- Water abstraction points, discharge designated areas, and receiving water bodies are inspected.
- Service operators are prevented from undertaking inappropriate practices.
- Consumers are granted access to inspection reports and notes.

EXAMPLE 1: CHINA

In **China**, the Environmental Protection Department of the Hong Kong Government outlined within its Guidelines for Assessment of Water Pollution, that assessments shall rely on the concept of assimilative capacity of the receiving water body and water quality objectives. Assimilative capacity will vary with the characteristics of each site and with the type and number of discharges or activities or affected beneficial uses. Quantification of the assimilative capacity of the receiving environment shall take into account physical processes, as well as all chemical, biochemical and biological processes. Sensitive receivers based on beneficial uses shall be identified, and water quality impacts shall be assessed with reference to water quality objectives or adopted criteria. Assimilative capacity of a water body is regarded as exceeded if the water quality objectives (WQOs) for the most sensitive target of the beneficial uses to be protected for that water body are exceeded.

In evaluating water pollution impacts, both point and non-point sources of water pollutants shall be considered. Non-point pollutants refer to substances which can be introduced into receiving water bodies as a result of urban or rural runoff. Point sources are related to specific discharges from municipal or industrial facilities.

EXAMPLE 2: IRELAND

In **Ireland**, the Environmental Protection Agency (EPA) has runs a monitoring programme to meet the goals of the EU Water Framework Directive (WFD), and to achieve 'good' status generally and to retain 'high' and 'good' status where such already exists. Towards these goals, EPA's work involves the following.

- Covers groundwater and surface waters: rivers, lakes, coastal and transitional waters.
- Includes special sub-programmes for protected areas included in the Register of Protected Areas as defined in Article 6 of the WFD.

- Includes artificial and heavily modified water bodies, and these, apart from those under the canals monitoring programme, are monitored within the appropriate main monitoring programmes (rivers, lakes, or transitional and coastal waters).

There are three types of monitoring under the Water Framework Directive.

- Surveillance monitoring: aims to allow assessment of long term changes in natural conditions; efficient and effective design of future monitoring programmes; validation of impact assessment procedures detailed in Annex II of the Directive; and assessment of long term changes resulting from human activity.
- Operational monitoring: aims to establish the status of water bodies identified at being at risk of failing to meet their environmental objectives; and assess any changes in the status of such bodies resulting from programmes of measures.
- Investigative monitoring: is required where the reason for any exceedances is unknown; where surveillance monitoring indicates that the legislative objectives for a body of water are not likely to be achieved and operational monitoring has not already been established, in order to ascertain the causes of a water body failing to achieve environmental objectives; or to ascertain the magnitude and impacts of accidental pollution; and shall inform the establishment of a programme of measures for achieving environmental objectives and specific measures necessary to remedy the effects of accidental pollution.

EPA also encourages community monitoring through a 'green home' award programme. A ceremony takes place where participants success and efforts of householders to improve environmental actions within the home was acknowledged

EXAMPLE 3: PERU

In Peru, the General Directorate of Environmental Health (DIGESA) has established a procedure for the selection of sampling points at water bodies and effluents in order to ensure data quality and the custody of samples so as to adequately assess wastewater pursuant to the procedure for the sanitary authorization of dumping. Additionally, DIGESA set forth the Water Quality Monitoring Protocol to establish practical guidelines for oil industry monitoring, which covers the monitoring of pollutant discharges into the atmosphere and pollutant discharges into surface water bodies, the reinjection of formation water into groundwater, and the management of solid and hazardous waste.

EXAMPLE 4: COLOMBIA

In Colombia, the Unique Regulatory Decree on the Environment orders, in Article 2.2.3.3.4.17. *a,* that subscribers or users whose premises or buildings require commercial, industrial, official or special services from the domestic sewerage public utility comply with the dumping regulations in force. With the aim of supporting this order, the Regulation Committee for Drinking Water and Basic Sanitation issued RESOLUTION No. 800 of 2017 ordering the incorporation of dumping measurements into user public utilities contracts, obliging providers to "comply with the maximum permissible parameters and values in domestic and non-domestic wastewater dumping (ARnD) as set forth in Resolution No. 631 of 2015 by the Ministry of the Environment and Sustainable Development, or any resolution amending, adding to, clarifying or replacing the former."

LINKS

Hong Kong: https://www.epd.gov.hk/eia/english/legis/memorandum/annex14.html

Ireland EPA web site: http://www.epa.ie/water/watmg/wfd/monitoring/

Peru:

Microsoft Word - PROTOCOLO DE VERTIMIENTOS.doc (minsa.gob.pe)

Water Quality Monitoring Protocol (minem.gob.pe)

Colombia: Unique Regulatory Decree (DUR) No. 1076 of 2015 (ARTICLE 2.2.3.3.4.17.) and CRA Resolution No. 800 of 2017

https://www.funcionpublica.gov.co/eva/gestornormativo/norma.php?i=78153

https://normas.cra.gov.co/gestor/docs/original/documents/Resolucion_CRA_800_de_2017.pdf

INTERNAL CAPACITIES NEEDED AND THE ROLE OF PARTNERS

Developing inspection protocols for water abstraction and discharge points and receiving water bodies requires technical capacity in terms of understanding what to inspect, when and where to inspect, and how often. This involves both inspection of ecological status as well as parameters that affect ecological status, routinely and during pollution incidents. The exact parameters are decided upon based on knowledge of what levels and pollutants and volumes of water are triggers for potential worsening or improving trends. Development partners can support through technical advice and capacity development. This could include for example, participatory workshops to establish frameworks of parameters, thresholds and inspection protocols, based on a desk review of the situation and drawing on positive examples from similar contexts. Environmental authorities can support regulators by sharing their expertise.

EN2E: Establish mechanisms for receiving and dealing with citizen complaints related to water resources use

REGULATORY FUNCTION: **ENVIRONMENT** | **EN2E**

OBJECTIVE EN2

Environmental compliance of water and wastewater service operators, industries and agriculture is monitored through collected information on the status of water resources, its use and protection

ACTION CARD EN2E

ESTABLISH MECHANISMS FOR RECEIVING AND DEALING WITH CITIZEN COMPLAINTS RELATED TO WATER RESOURCES USE

COST: Medium **FREQUENCY:** One time

TARGET GROUPS: Regulators, environmental authorities, civil society organizations

DESCRIPTION

Environmental regulators are often responsible for identifying any possible unsustainable use of water resources. Regulators are increasingly performing this task through online platforms or by phone, where citizens are invited to submit their complaints, follow up with a regulator on appropriate resolutions, and potentially obtain compensation. Interactive digital mechanisms could be developed alongside similar kinds of existing platforms within environmental authorities. Complaint mechanisms must clearly outline the steps and procedures, and be accessible to all interested parties.

EXPECTED OUTCOMES

- Potential breaches and non-compliance with water abstraction and wastewater effluent discharge licenses are quickly identified.
- Environmental damage to water bodies is minimized.
- Citizens are actively engaged in protecting the environment.

EXAMPLE 1: CANADA

In **Canada**, the mission of Québec's Ministère du Développement durable, de l'Environnement et des Parcs (MDDEP) is to protect the environment and natural ecosystems for the benefit of current and future generations. As part of its mission, the ministry monitors activities to ensure they comply with Québec's environmental laws, and citizens are invited to play a part by reporting any activity that appears harmful to the environment. The ministry checks complaints and response when there is reason to believe an activity does not comply with laws and regulations, such as manure spreading too close to a drinking water well.

EXAMPLE 2: COLOMBIA

Article 256 of the Criminal Code establishes the crime of fluid fraud. Any person employing any type of clandestine mechanism, or altering monitoring systems or metering apparatus, to appropriate water to the detriment of others shall be subject to a prison sentence of sixteen (16) to seventy-two (72) months, and a fine of one point three three (1.33) to one hundred and fifty (150) statutory monthly minimum wages in force. It is a crime to have a parallel connection to that which is installed by the water services company, to manipulate the normal operation of the meter, etc.

Any citizen may report the crime at the complaint's reception desk of the Public Prosecutor's Office, the courthouses of the Ministry of Justice and Law, the National Police stations, the Police departments, and the general correspondence windows of the district branches of the Public Prosecutor's Office. The report may also be made by phone, in writing or online either by the victim or a third party. The report must include the time, place and a description of the event.

EXAMPLE 3: GUATEMALA

The Criminal Code of Guatemala, Decree No. 17-73, categorizes the crime of "water theft" in Article 260. This category establishes a penalty of one to three years in prison and a fine of one thousand to five thousand quetzales for anyone who, with the aim of appropriation, illicit use or the intent to cause harm, should contain, deviate or block watercourses, or destroy, in whole or in part, dams, canals, ditches or any other means of water retention or conveyance, or in any way disturb or impede the rights of a third party over such water. The report must be submitted before the Public Prosecutor's Office, at a courthouse or police station, and can be made orally or in writing.

LINKS

Canada: http://www.environnement.gouv.qc.ca/ministere/plaintes/env-complaint.htm

Colombia: How is a crime reported in Colombia?

https://www.fiscalia.gov.co/colombia/servicios-de-informacion-al-ciudadano/donde-y-como-denunciar/

Guatemala: Criminal Code. (See Article 260)

https://tse.org.gt/images/UECFFPP/leyes/Codigo_Penal.pdf

INTERNAL CAPACITIES NEEDED AND THE ROLE OF PARTNERS

Establishing complaints and reporting mechanisms for potential environmental breaches requires administrative and IT capacity to establish and maintain a dedicated and 24 hour phone line and associated online reporting systems to track progress in dealing with reports. Technical capacity is also required to develop guidelines regarding what classifies as a potential breach, along with communication skills to raise public awareness of the importance of reporting potential environmental breaches. Development partners can support by facilitating participatory dialogue to reach a consensus on a list of guidelines for packaging and communicating to the public, and providing technical and financial support.

EN3A: Penalize actors for their non-compliance with environmental legislation and policies

REGULATORY FUNCTION: **ENVIRONMENT** | **EN3A**

OBJECTIVE EN3

Water abstractors and polluters are sanctioned when committing environmental infringements

ACTION CARD EN3A

PENALIZE ACTORS FOR THEIR NON-COMPLIANCE WITH ENVIRONMENTAL LEGISLATION AND POLICIES

COST: Medium **FREQUENCY:** One time

TARGET GROUPS: Regulators, service operators, industrial and agricultural consumers, environmental authorities

DESCRIPTION

Environmental regulators sanction non-compliant operators, and industrial or agricultural users. Sanctions, applied as a last resort, must be defined in advance and made publicly accessible. Regulators may sanction any kind of misconduct due to consequent damage being irreversible. In cases where self-corrective measures are still possible, regulators issue remedial instructions with a fixed deadline, though failure to address these in time may result in more severe penalties.

EXPECTED OUTCOMES

- Operators are prevented from continuing inappropriate practices.
- The environment is protected from further damage.
- Consumers are transparently informed about respective penalties.

EXAMPLE 1: GERMANY

In **Germany**, environmental criminal offences are defined in sections 324 et seqq. under Chapter 29 ('Offences against environment') of the German Criminal Code (StGB), and in a number of environmental laws (e.g. sections27 et seqq. Chemicals Act; sections 71, 71a Federal Nature Conservation Act). The prosecution of administrative and criminal offences is generally in the remit of the German federal states (Länder), although the Federal government is responsible for prosecution of several specific violations. The German Environment Agency is the competent body for prosecution and sanctioning. Especially serious offences of environmental law are punishable by fines or prison sentences of up to two, three or five years. The penalty for particularly serious cases, e.g. ones which endanger the public water supply (cf. section 330 StGB), is imprisonment for a term of ten or 15 years. However, just as with fines, sanctions imposed usually do not reach the maximum degree. Unlike administrative offence and in other countries, German law allows for the prosecution of individuals only and not of legal entities. This is because German criminal law assumes the personal guilt of the offender. Since 2017, however, the law provides for the confiscation of the proceeds of crime from companies if the criminal act was committed by an employee (section 73b StGB).

EXAMPLE 2: IRELAND

In **Ireland**, the Environmental Protection Agency (EPA) Office of Environmental Enforcement (OEE) commissioned a study on the use of civil/administrative sanctions relevant to environmental protection in Ireland, the UK, USA, Germany and Australia. It identified 20 administrative sanctions available to environmental regulators to enforce environmental law, without resort to criminal or civil court proceedings. Ireland already has access to 11 of these 20 non-criminal sanctions identified, including those below.

- Enforcement undertakings: Written undertakings to remedy the harm done that can be enforceable in court.
- Fixed or variable penalties: Payment of specified or variable monetary amounts to discharge or compensate for the breach (on the spot fines or infringement notices).
- Environmental or community services orders: Offenders carry out a specified project for public benefit, e.g. the provision of recycling facilities, conservation or remediation work, training, or education initiatives.
- Compensation orders: Offenders compensate the regulator or a third party for costs incurred.
- Name and shame or publicity orders: Orders requiring publicity of environmental consequences or penalties.

EXAMPLE 3: COLOMBIA

In Colombia, Law No. 1333 of 2009 established an administrative procedure for environmental sanctions. The procedure is initiated by environmental authorities in the event of regulatory infringement or environmental damage. The procedure presumes the fault or willful misconduct of the presumed offender, which leads to preventive measures, and the offender is definitively sanctioned if the presumption of fault or willful misconduct is not dispelled, a task for which the offender shall bear the burden of proof and may use all legal evidence available. The environmental sanction shall expire 20 years after the act or omission giving rise to the infringement.

The sanctions that may be imposed are as follows:
1. Daily fines for up to five thousand (5000) statutory monthly minimum wages in force.

2. The temporary or definitive closure of the establishment, construction or service.

3. The evocation or termination of the environmental license, authorization, concession, permit or registration.

4. The demolition of the work at the expense of the offender.

5. The definitive confiscation of specimens, exotic wild species, products and by-products, elements, means or implements used to commit the infringement.

6. The restitution of specimens of wild fauna and flora.

7. Community service pursuant to the conditions set forth by the environmental authority.

EXAMPLE 4: PERU

In Peru, the Environmental Assessment and Auditing Body (OEFA) is the entity empowered to investigate possible administrative infringements and impose sanctions for non-compliance with obligations and commitments deriving from environmental management instruments, environmental regulations, environmental commitments undertaken in concession contracts, and mandates and provisions issued by OEFA. Among other matters, the authority may investigate violations to the administrative authorization system for water consumption and wastewater dumping. Applicable sanctions are defined by the OEFA Board of Directors on the basis of the provisions of Article 136 of General Environmental Law No. 28611, namely:
a. Warning.
b. Fine of up to 30,000 Tax Units in force on the date of payment.
c. Temporary or definitive confiscation of objects, instruments, artifacts or substances employed to commit the infringement.
d. Suspension or restriction of the activity causing the infringement.
e. Suspension or termination of the permit, license, concession or any other type of authorization, as the case may be.
f. Partial or total closure of the facilities or establishment in which the activity that generated the infringement is carried out.

LINKS

Germany: https://www.umweltbundesamt.de/en/topics/sustainability-strategies-international/environmental-law/environmental-administrative-offences-environmental

Ireland: Irish EPA web site: https://www.epa.ie/our-services/compliance--enforcement/whats-happening/prosecutions-and-penalties/

Colombia: Law No. 1333 of 2009

https://www.funcionpublica.gov.co/eva/gestornormativo/norma.php?i=36879

Peru: OEFA institutional information

Institutional information - Environmental Assessment and Auditing Body - Government of Peru (www.gob.pe)

INTERNAL CAPACITIES NEEDED AND THE ROLE OF PARTNERS

Penalizing actors for their non-compliance with environmental legislation and policies requires a range of legal capacities to establish a framework of non-legal, legal, and criminal punishments available to be used, and to develop guidance on their suitable and proportionate use. If punishments are monetary, financial and administrative capacities are needed to establish and set formulas to calculate the amount of fines, depending on the pollutant, relative toxicity, potential to cause environmental damage, and costs of actual damage caused in terms of remediation (clean up) and social and ecological damage. Development actors can assist by providing technical assistance in formula setting, a by supporting environmental economists in national environmental authorities, and peer reviewing developed formulas.

EN3B: Manage non-compliance cases as a knowledge practice for future recalls

REGULATORY FUNCTION: **ENVIRONMENT** | **EN3B**

OBJECTIVE EN3

Water abstractors and polluters are sanctioned when committing environmental infringements

ACTION CARD EN3B

MANAGE NON-COMPLIANCE CASES AS A KNOWLEDGE PRACTICE FOR FUTURE RECALLS

COST: Low **FREQUENCY:** Regular

TARGET GROUPS: Regulators, consumers, environmental authorities, civil society

DESCRIPTION

Regulators manage databases of all non-compliance cases, open to public access on websites or through regular reports. This activity is important as it allows regulators to illustrate trends and anticipate future environmental misconducts. Regulators analyse recorded cases and adjust their policies based on information collected, monitoring, and conclusions drawn. Citizens use this information, to understand environmental threats and become more vigilant when engaged in protecting the environment.

EXPECTED OUTCOMES

- All information related to environmental infringements is open to public access at all times.
- Service operators are assessed through their environmental performance.
- Regulators have an overview of different trends in environmental non-compliance.

EXAMPLE 1: CANADA

In **Canada**, following the legislative framework, environmental enforcement officers enforce federal legislation that deals with different risks to the environment and biodiversity. Laws regulate, for example, the use of toxic substances, their release to air, water or land, as well as the import and export of substances that present a risk to the environment and/or human life or health, such as hazardous wastes and hazardous recyclable materials. Environmental enforcement officers work throughout Canada in collaboration with provincial and territorial governments, and with national and international agencies and organizations. The Canadian government established a web space where interested parties can consult a database of various environmental and wildlife non-compliance cases.

EXAMPLE 2: COLOMBIA

In Colombia, Law No. 1333 of 2009 (Article 59) created the General Environmental Offenders Registry based on the following principles: the principle of veracity of information, the principle of timeliness of information, the principle of comprehensive interpretation of constitutional rights, and the principle of security.

The authorities empowered to impose the administrative environmental sanctions set forth in the Law must register and/or update the information pertaining to environmental offenders in the General Environmental Offenders Registry (RUIA).

EXAMPLE 3: PERU

In Peru, the Environmental Assessment and Auditing Body (OEFA) manages the Environmental Audits Interactive Portal (PIFA), which makes it possible to identify sanctioned offenders and previously sanctioned repeat offenders. The system provides information that makes it possible to identify the offender, the name and place of the unit subject to auditing, the sector it belongs to, the charges raised, the breached regulation, etc. The offender remains in the RUIA for five years, and in the case of repeat offenders, one year with the possibility of an additional year if the fine is not paid or the corrective measure is not complied with.

LINKS

Canada: https://www.canada.ca/en/environment-climate-change/services/environmental-enforcement/notifications.html

Colombia: RUIA

https://www.funcionpublica.gov.co/eva/gestornormativo/norma.php?i=36879

Peru: PIFA

https://www.gob.pe/17355-consultar-el-registro-unico-de-infractores-ambientales-sancionados-por-el-oefa

INTERNAL CAPACITIES NEEDED AND THE ROLE OF PARTNERS

Internal capacity for knowledge management of historical enforcement cases is required for the documentation, capture, organization, and storage of information that is made publicly available. Development partners can provide support to classify different types of environmental breaches, and facilitate peer to peer exchanges. Environmental authorities can support regulators by sharing good practices used in other sectors.

6. PUBLIC HEALTH

OBJECTIVE	ACTION	CODE
1. There are rules ensuring public health standards for safe drinking water and sanitation	A. Define drinking water quality standards	**PH1A**
	B. Establish water quality regulatory compliance monitoring and reporting protocols	**PH1B**
	C. Establish regulatory framework and guidelines for water and sanitation safety plans	**PH1C**
	D. Develop and maintain registers of authorized laboratories to perform water quality analyses	**PH1D**
2. Regulatory compliance with water and sanitation safety plans is monitored through collected information on water quality	A. Develop procedures to collect information required to regulate drinking water quality and water and sanitation safety plans	**PH2A**
	B. Periodically develop publicly available regulatory updates and water quality compliance reports	**PH2B**
	C. Develop fact sheets on health implications of priority drinking water contaminants	**PH2C**
	D. Establish drinking water quality failure event management procedures and protocols	**PH2D**
	E. Develop inspection and audit protocols to ensure compliance with approved water and sanitation safety plans	**PH2E**
	F. Develop protocols for inspecting laboratories undertaking regulatory compliance analyses, in conjunction with respective accreditation bodies	**PH2F**
	G. Develop protocols for dealing with consumer water quality complaints	**PH2G**
3. Penalty systems are adopted and enforced to penalize service operators for actions that infringe legal provisions on drinking water quality	A. Identify and investigate drinking water safety regulatory compliance failures and provide instructions for remediation measures	**PH3A**
	B. Initiate administrative infringement procedures against non-compliant drinking water service operators and impose adequate sanctions	**PH3B**

PH1A: Define drinking water quality standards

REGULATORY FUNCTION: **PUBLIC HEALTH** | **PH1A**

OBJECTIVE PH1

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

ACTION CARD PH1A

DEFINE DRINKING WATER QUALITY STANDARDS

COST: Low **FREQUENCY:** One time

TARGET GROUPS: Regulators, ministries of health, service operators

DESCRIPTION

In some cases, public health regulators transpose and update health-based limits or minimum requirements for drinking water quality, with reference values assigned to different water quality parameters. In other cases, regulators have the role of enforcing them. Often, countries look to the 'WHO guidelines for drinking water quality' as a reference guide, containing specific sheets that detail known public health implications of contaminants in water, and make recommendations for maximum permissible thresholds. Regulators are obliged to strictly follow these guidelines when agreeing water quality parameters with operators.

EXPECTED OUTCOMES

- National regulators convert public health norms and standards into drinking water quality standards.
- Service operators are legally bound by drinking water standards when providing drinking water services.
- Consumer health is adequately protected.

EXAMPLE 1: KENYA

In **Kenya**, standards are developed by the Kenya Bureau of Standards (KEBS). The role of the Water and Sanitation Regulatory Board (WASREB) is to enforce the following basic requirements for drinking water, that it is: free from pathogenic (disease causing) organisms; contains no chemicals that have adverse or long-term effects on human health; is fairly clear (i.e. low turbidity, little colour); is not saline (salty); contains no compounds that cause an offensive taste or smell; and does not causing an encrustation of the water supply system nor stains clothes washed in it.

Schedule 5 Microbiological limits for drinking water and containerized drinking water (Source: Adopted from KS 05-459: Part 1: 1996)

SL. NO.	Type of micro-organism	Drinking Water	Containerized Drinking Water	Methodsof Test
(i)	Total viable counts at 37^{O}C, per ml, max	100	20	KS 05 – 200+
(ii)	Coliforms in 250ml	Shall be absent	Shall be absent	KS 05 – 200
(iii)	E. Coli in 250ml	Shall be absent	Shall be absent	KS 05 – 200
(iv)	*Staphylococcus aureus* in 250ml	Shall be absent	Shall be absent	KS 05 – 200
(v)	Sulphite reducing anaerobes in 50ml	Shall be absent	Shall be absent	KS 05 – 200
(vi)	*Pseudomonas aeruginosa fluorescence* in 250ml	Shall be absent	Shall be absent	KS 05 – 200
(vii)	*Streptococuus faecalis*	Shall be absent	Shall be absent	KS 05 – 200
(viii)	Shigella in 250ml	Shall be absent	Shall be absent	KS 05 – 200
(ix)	Salmonella in 250ml	Shall be absent	Shall be absent	KS 05 – 200

SL .NO	SUBSTANCEOR CHARACTERISTIC	UNIT	DRINKING WATER	BOTTLED DRINKING WATER	METHODS OF TEST
(i)	Color	True color units	15+	15+	KS 05 – 459
(ii)	Taste and odor		Shall not be offensive to consumers	Shall not be offensive to consumers	KS 05 – 459
(iii)	Suspended matter		Nil	Nil	KS 05 – 459
(iv)	Turbidity	NTU, max	5	1	KS 05 – 459
(v)	Total dissolved solids	mg/1, max	1,500	1,500	KS 05 – 459
(vi)	Hardness as CaCo3	mg/1, max	500	500	KS 05 – 459
(vii)	Aluminum as A1	mg/1, max	0.1	0.1	KS 05 – 459
(viii)	Chloride as Cl-	mg/1, max	250	250	KS 05 – 459
(ix)	Copper as Cu	mg/1, max	0.1	0.1	KS 05 – 459

EXAMPLE 2: NICARAGUA

In Nicaragua, Technical Standard No. NTON 11-051-19 approved on September 30, 2020 defines drinking water as that which fulfils quality standards for drinking water as described in the WHO Guidelines for Drinking Water Quality and stipulates that water for human consumption and hand-washing of agricultural workers must be drinking water.

EXAMPLE 3: URUGUAY

In Uruguay, UNIT Standard 833:2008 issued by the Uruguayan Institute of Technical Standards establishes a series of requirements that must be met in drinking water for human consumption, regardless of water collection point, treatment type, production and distribution system. The requirements were adopted through a review process essentially based on World Health Organization (WHO) Guidelines. Of the total parameters that have been standardized in the country, 13.04% are below the values defined by the WHO, 7.83% are above WHO values and 46.96% match WHO values, while the WHO does not have reference values for the remaining 32.17% of parameters.

LINKS

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

WHO Guidelines for Drinking Water Quality: https://www.who.int/water_sanitation_health/publications/drinking-water-quality-guidelines-4-including-1st-addendum/en/

Nicaragua: WHO Guidelines for Drinking Water Quality, Technical Standard No. NTON 11-051-19:

https://www.who.int/water_sanitation_health/publications/drinking-water-quality-guidelines-4-incluido-1st-addendum/en/

http://legislacion.asamblea.gob.ni/normaweb.nsf/9e314815a08d4a6206257265005d21f9/4695f50dc80af6a306258631005864ed?OpenDocument

Uruguay:

http://www.ose.com.uy/descargas/Clientes/Reglamentos/unit_833_2008_.pdf; https://iris.paho.org/handle/10665.2/55388

INTERNAL CAPACITIES NEEDED AND THE ROLE OF PARTNERS

Establishing drinking water quality standards requires a blend of technical and legal expertise, including an understanding of the current level of water treatment, laboratory testing capacity, and the ambient water quality status of water sources. Development partners could provide technical support ministries of health to translate recommended maximum permissible thresholds from the WHO guidelines to suit local contexts. Regulators can also benefit from such training, by building internal monitoring capacity for actions that they commonly perform on behalf of ministries of health.

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.

EXAMPLE 3: HONDURAS

In Honduras, the Drinking Water Technical Standard approved by Agreement No. 084 of July 31, 1995 sets forth measures for public health promotion, illness prevention, recovery and rehabilitation that establish adequate or maximum permissible levels for water components or characteristics that could pose a risk to health. It also establishes Water Quality Monitoring in four stages (basic, normal, advanced and special situations), with an incremental number of assessable parameters in each stage, in addition to the minimum sample collection frequency for collecting agencies pursuant to the affected population, and adopts the analysis methods described in the Water and Wastewater Analysis Manual of the American Water Works Association (AWWA).

EXAMPLE 4: GUATEMALA

In Guatemala, the Regulation of Sanitary Standards for the Administration, Construction, Operation and Maintenance of Water Distribution Services for Human Consumption (Government Agreement No. 113-2009) stipulates that sanitary supervision of water distribution services for human consumption should be carried out through the National Program for the Supervision of the Quality of Water for Human Consumption. The program aims to establish and execute the most appropriate technical mechanisms for developing the sanitary supervision of water that is distributed to the population through public or private distribution systems, while providing the information needed to ensure that the water supplied is of drinking water quality on a continuous basis, and ensuring the availability of updated information on the quality of the water supplied and the service provided, organizing and correcting the information in an agile and reliable manner. In this framework, the sanitary monitoring of water distribution services corresponds to service providers, which must cover a mandatory minimum of three distributed water quality monitoring points that are representative of the distribution network, and are obliged to comply with maximum permissible and acceptable limits for physical, chemical and microbiological water characteristics, and minimum frequencies and methods for sampling and analysis pursuant to the specifications in the Guatemalan Mandatory Standard COGUANOR NGO 29001, 1st Revision. The results of this sanitary supervision must be reported to the Department of Health and Environmental Program Regulation, which must implement a database containing accessible information.

LINKS

Kenya: 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

Honduras: National Technical Standard for Drinking Water Quality

https://faolex.fao.org/docs/pdf/hon175672.pdf

Guatemala: Regulation of Sanitary Standards for the Administration, Construction, Operation and Maintenance of Water Distribution Services for Human Consumption

http://faolex.fao.org/docs/pdf/gua196717.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.

PH1C: Establish regulatory frameworks and guidelines for water and sanitation safety plans

REGULATORY FUNCTION: **PUBLIC HEALTH** | **PH1C**

OBJECTIVE PH1

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

ACTION CARD PH1C

ESTABLISH REGULATORY FRAMEWORKS AND GUIDELINES FOR WATER AND SANITATION SAFETY PLANS

COST: Low **FREQUENCY:** One time

TARGET GROUPS: Regulators, ministries of health, service operators

DESCRIPTION

Regulators support ministries of health (or other relevant authorities) in regulating drinking water quality by establishing regulatory frameworks and guidelines for risk management approaches, such as water and sanitation safety plans (WSPs) as proposed by the WHO. WHO guidelines for drinking-water quality recommend WSPs as the most effective means of consistently ensuring the safety and acceptability of drinking-water supplies. In accordance, regulators establish guidelines for risk assessment including all steps in water supply from catchment to consumer, followed by implementation and monitoring of risk management control measures, with a focus on high priority risks. The water and sanitation safety planning approach is increasingly being adopted globally as best practice for the provision of safe drinking water and sanitation.

EXPECTED OUTCOMES

- Regulatory frameworks and guidelines for water and sanitation safety plans are established.
- Service operators are legally bound by water and sanitation safety plans.
- Consumer health is adequately protected.

EXAMPLE 1: UNITED KINGDOM

In the **UK**, the regulatory framework for risk assessments (WSPs) is established as follows.

1. The regulation requires a comprehensive risk assessment for every treatment works and connected supply system. These risk assessments must cover all hazards and hazardous events which could present a risk of supplying water that could cause a risk to public health or an unwholesome supply.
2. The Inspectorate fully endorses the WHO Water Safety Planning approach to the management of drinking water supplies.
3. Risk assessments must take all process steps in the supply chain looking at potential risks.
4. The methodology requires risk to be characterized for each hazard/hazardous event using a scoring system based on likelihood and consequence criteria. Risks should be characterized before (uncontrolled) and after taking into account permanent control measures in place.
5. A risk assessment should take into consideration all parameters, elements, substances, micro-organisms including parasites, algae and viruses, and all variants that are indicative of a risk to drinking water quality and wholesomeness.
6. Risks to raw water quality should use information obtained from abstraction point monitoring, catchment surveys and information on pesticide usage, to identify chemicals which could be detected in raw water through their usage or properties. The output of catchment risk assessments should be used to confirm water treatment needs.
7. Risk assessments should be kept under continual review, and companies should have documented processes in place to capture new information, changes to residual risks, and to agree and prioritize actions required for mitigating residual risks.
8. Water suppliers should mitigate risks in an expedient manner to ensure that uncontrolled risks to public health and wholesomeness are not allowed to persist for unacceptably long periods of time. If permanent mitigation involves the

implementation of a medium or long term solution, interim operational measures should be put in place to ensure that consumers are not supplied with unwholesome water.

EXAMPLE 2: CHINA

In **China**, the Water Supplies Department of the Hong Kong Government produced Guidelines for Drinking Water Safety Plans for Buildings in Hong Kong. This specifies the primary objective as the prevention of chemical or microbial contamination during transfer and storage of drinking water between the connection points and points of consumption. The Water Supplies Department assures provision of safe and wholesome water supply at all connection points to buildings, in compliance with drinking water quality standards, which currently adopt values of chemicals and other substances set out in the WHO guidelines for drinking water quality (2011). Whereas water quality may be affected by internal plumbing, implementation of water and sanitation safety plans for buildings can reduce deterioration and maintain water quality up to the point of consumption. Following the WHO guidelines, more stringent water quality requirements may apply in specific buildings which require water of appropriate quality, taking into account high risk groups due to their type of exposure and potential vulnerabilities.

EXAMPLE 3: COSTA RICA

In Costa Rica, Executive Order No. 38924-S, pursuant to current guidelines of the World Health Organization (WHO), defines Water Safety Plans (WSP) as one or more documented plans that identify possible risks, from the catchment area to the consumer; it details and prioritizes these risks and implements control measures for their mitigation, in addition to service provision management risks. In the biannual water quality reports that operators must submit, they are obliged to report WSPs or other voluntary quality programs being implemented. A WSP, according to the Manual for the Development of Water Safety Plans by the WHO and the IWA, usually contains, among other aspects, a description of the water supply system, a determination of the risks, hazardous events and a risk assessment, the determination and validation of control measures, and the classification of risks.

EXAMPLE 4: BRAZIL

In Brazil, according to Ordinance No. 2914/2011 of the Ministry of Health, the entity in charge of the water for human consumption distribution system must maintain a systematic assessment of the collective distribution system, stipulating health risks and on the basis of the following criteria: occupation of the riverbed that contributes to the source; water characteristic history; physical characteristics of the system; operational practices; and quality of distributed water according to Water Safety Plan (WSP) principles recommended by the World Health Organization (WHO) or those defined in the guidelines in force in the country.

EXAMPLE 5: URUGUAY

In Uruguay, according to the recommendations of the World Health Organization (WHO), the Regulation approved by the Energy and Water Services Regulator, (URSEA) via Resolution 120/2018, establishes that the Drinking Water Service Provider (EPSA) must adopt a risk management approach to drinking water services, stipulating the requirements and obligations that the EPSA must comply with when designing and implementing Water Safety Plans throughout all the distribution systems under its purview, and a progressive schedule with a view to 2030 aiming to have all drinking water distribution systems in Uruguay under a Water Safety Plan by that year.

LINKS

UK: WHO web page: https://www.who.int/publications/i/item/WHO-SDE-WSH-05.06

https://www.who.int/news/item/03-03-2021-new-water-safety-planning-training-videos

UK: https://www.dwi.gov.uk/water-companies/water-safety-plans/

https://www.dwi.gov.uk/private-water-supplies/pws-installations/treatment-guide-2/

China (Hong Kong): https://www.wsd.gov.hk/filemanager/en/content_1734/WSPBHK_main_text_e.pdf

Costa Rica: Water Safety Plans (WSP)

http://www.agq.com.es/documentos/DE_289_Decreto_No_38924_S_Reglamento_para_calidad_agua_potable.pdf

Brazil: Ordinance No. 2.914 of December 12, 2011. Establishes the procedures for the supervision and

monitoring of the quality of water for human consumption and its drinkability standard.

https://www.gov.br/agricultura/pt-br/assuntos/inspecao/produtos-vegetal/legislacao-1/biblioteca-de-normas-vinhos-e-bebidas/portaria-no-2-914-de-12-de-dezembro-de-2011.pdf/view

Uruguay: REGULATION ON WATER SAFETY PLANS

Http://www.ursea.gub.uy/web/mnormativo2.nsf//0/832578EE0057357E03258275005984BF/$File/reglamentopsa-Marzo2018.pdf

INTERNAL CAPACITIES NEEDED AND THE ROLE OF PARTNERS

To establish frameworks and guidelines for water and sanitation safety plans requires the in-country capacity on risk management, and specifically on risk management in relation to water supply. Based on that understanding, and perceived need and demand including buy-in from decision makers, the process to establish frameworks and related guidelines that suit specific contexts can begin and will need to be tailored to the prevalent typologies of water supply modalities, technologies, and capacities for implementation at different levels and in different service delivery model scenarios. Development partners could support the entire process by providing awareness raising and capacity development training, promoting peer to peer learning from countries with more experience, and in providing direct technical assistance to review draft frameworks and guidelines.

PH1D: Develop and maintain registers of authorized laboratories to perform water quality analyses

REGULATORY FUNCTION: **PUBLIC HEALTH** | **PH1D**

OBJECTIVE PH1

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

ACTION CARD PH1D

DEVELOP AND MAINTAIN REGISTERS OF AUTHORIZED LABORATORIES TO PERFORM WATER QUALITY ANALYSES

COST: High **FREQUENCY:** Regular

TARGET GROUPS: Regulators, ministries of health, service operators

DESCRIPTION

Regulators support ministries of health in establishing laboratory accreditation schemes and maintaining registers of accredited laboratories for undertaking drinking water sampling and analyses. Whereas accreditation schemes and their management remain almost exclusively under the responsibility of ministries of health, actual operation of registers can be outsourced to regulators, with an objective of making drinking water quality testing more convenient for operators.

EXPECTED OUTCOMES

- Transparent registers of authorized laboratories are in place.
- Service operators organize sample testing processes internally.
- Analysed results are easily accessible and subject to regulatory correction.

EXAMPLE 1: INDIA

In **India**, a register of accredited laboratories is managed by the National Accreditation Board for Testing and Calibration Laboratories (NABL). NABL was established with the objective of providing the government, industry associations and industry in general with a Conformity Assessment Body accreditation scheme, that involves third-party assessments of technical competence of testing including medical and calibration laboratories, proficiency testing providers, and reference material producers. NABL offers accreditation services in a non-discriminatory manner, with an accreditation system in accordance with ISO/ IEC 17011: 2017 (Conformity assessment – requirements for accreditation bodies accrediting conformity assessment bodies). The NABL accreditation system also acknowledges the requirements of Mutual Recognition Arrangements (MRAs) of which NABL is a member.

EXAMPLE 2: UNITED KINGDOM

In the **UK**, the Drinking Water Inspectorate (DWI) administers regulations that require that every drinking water supplier must ensure that its analytical methods, laboratory procedures, analytical equipment, sampling procedures, transport of samples, and storage of samples are checked periodically by an accredited third party. The Department for Business, Energy and Industrial Strategy appointed the United Kingdom Accreditation Service (UKAS) as the sole accreditation body for assessing drinking water testing facilities and sampling arrangements in accordance with ISO/IEC 17025 and the Drinking Water Testing Specification (DWTS).

A list of organisations carrying out drinking water testing; showing their accreditation status for drinking water testing *

Organisation	Accreditation Status			Electronic Reporting **
	UKAS No.	Sampling	Analysis	
Aberdeen City Council	1325		ISO17025 DWTS	NO

Accreditation of sampling procedures, transport and storage of samples, laboratory analysis and on-line monitoring to EN ISO/IEC 17025, or its equivalent, is a regulatory requirement. Accreditation to DWTS provides assurances to the DWI that companies comply with all the requirements of regulation. The Drinking Water Inspectorate maintains a list of companies including UKAS-accredited laboratories on its website.

EXAMPLE 3: BOLIVIA

In Bolivia, in order to ensure the reliability of analytical results, Regulations NB 495, NB 496 and NB 512 (texts approved by Ministerial Resolution No. 126/18 of the Ministry of the Environment and Water) stipulate that when carrying out the Monitoring of the Quality of Water for Human Consumption and adopting any pertinent corrective measures, drinking water and sanitary sewerage service providers should own or hire a laboratory to perform the authorized testing. Additionally, the regulator of test sample analyses should use an accredited laboratory or one that is recognized for its best practices and hired for these purposes. The standard considers an accredited laboratory to be that which has been formally recognized as capable of performing water quality monitoring tasks, given that it fulfils all the requirements demanded of administrative and technical quality systems according to International Standard NB-ISO IEC 17025, as recognized by a competent accreditation body.

EXAMPLE 4: PERU

In Peru, Supreme Decree No. 010-2019-VIVIENDA regulates non-domestic wastewater discharges into the sanitary sewerage system, stipulating that the inspection to be performed by the sanitation service provider must, among other requirements, collect the samples and have the analyses performed by a laboratory accredited by the National Quality Institute (Inacal). Accredited laboratories are those which have obtained the Accreditation Certificate granted by the Inacal for performing wastewater analyses pursuant to regulatory parameters. The list of accredited laboratories, as well as those suspended or cancelled due to sanctions or other reasons, is registered and published on the official Inacal website.

LINKS

India: https://nabl-india.org

UK: https://www.dwi.gov.uk/drinking-water-products/laboratory-information/

https://www.dwi.gov.uk/drinking-water-products/laboratory-information/designated-test-laboratories-and-consultants/

https://www.ukas.com/wp-content/uploads/2021/12/LAB-33-Food-and-Feed-Control-Laboratories-NRLs.pdf

Bolivia: Regulatory compendium on the quality of water for human consumption

https://www.bivica.org/files/normativa-calidad-agua.pdf

Peru: Supreme Decree No. 010-2019-Vivienda

https://www.fao.org/faolex/results/details/es/c/LEX-FAOC187059/

INTERNAL CAPACITIES NEEDED AND THE ROLE OF PARTNERS

Capacity is required to accredit and establish registers of authorized laboratories, including the need to first establish a central accreditation body, commonly under ministries of health. Ministries also have the ability to undertake shadow sampling and testing, for comparison with results from laboratories undergoing accreditation, in order to determine their eligibility for inclusion in the register. This could also be potentially outsourced to independent accredited laboratories. Ministries of health will require a range of administrative capacities to establish protocols for accreditation, and development partners could provide support in this process.

PH2A: Develop procedures to collect information required to regulate drinking water quality and water and sanitation safety plans

REGULATORY FUNCTION: **PUBLIC HEALTH** | **PH2A**

OBJECTIVE PH2

Regulatory compliance with water and sanitation safety plans is monitored through collected information on water quality

ACTION CARD PH2A

DEVELOP PROCEDURES TO COLLECT INFORMATION REQUIRED TO REGULATE DRINKING WATER QUALITY AND WATER AND SANITATION SAFETY PLANS

COST: Low **FREQUENCY:** One time

TARGET GROUPS: Regulators, service operators, civil society

DESCRIPTION

Regulators develop transparent and clear procedures for operators to provide water safety information. These outline operators' obligations in terms of what information on drinking water quality they must provide to regulators and how often. Such procedures can be digitalized and connected to accredited laboratories through interactive online mechanisms. Regulators coordinate the assessment and analysis of the collected data with ministries of health and make this publicly available.

EXPECTED OUTCOMES

- Essential information on water safety is made available and accessible.
- Service operators follow clear and transparent procedures.
- Consumer health is adequately protected.

EXAMPLE 1: UNITED KINGDOM

In the **UK**, the Water Industry (Suppliers' Information) Direction 2021 stipulates the following.

- On or before the 7th day of each month, a water supplier must report to the drinking water quality regulator the results of analysis of all compliance samples taken during the penultimate month.
- On or before the 7th day of each month, a water supplier must report to the drinking water quality regulator details of the out of service records for any of the above assets for the penultimate month.
- On or before 21 October each year, under Regulation 28, a water supplier must report to the drinking water quality regulator a full submission of risks identified under Regulation 27(1).

Provision of monthly information relating to compliance with the Regulations: (1) On or before the 7th day of each month, a water supplier must report to the drinking water quality regulator the results of analysis of any compliance sample taken during the penultimate month (for example, a report in March must be about the samples taken during the previous January) where the analysis showed that the sample exceeded: (a) the prescribed concentration or value for a parameter listed in Schedule 1 to the Regulations; or (b) the specification of an indicator parameter listed in Schedule 2 to the Regulations.

Provision of information—events, incidents, emergencies etc.: (1) A water supplier must notify the drinking water quality regulator of: (a) The occurrence of any event which, because of its effect or likely effect on the quality or sufficiency of water supplied by the supplier, gives rise, or is likely to give rise, to a significant risk to the health of persons to whom the water is supplied.

Provision of annual information on consumer contacts about drinking water quality: (1) On or before 31 January in each calendar year, a water supplier must report to the drinking water quality regulator about each contact about drinking water quality that the water supplier received from any of its consumers during the previous calendar year, as specified in Information Letter 01/2006 (or any subsequently amended or updated version of this Information Letter).

EXAMPLE 2: ARGENTINA

In Argentina, the results of the testing carried out by the drinking water and sanitation services operator are systematically reported to the regulator in various formats and according to different modalities. Some of them are:

-Warning levels: Within twenty-four hours of detection, the operator informs the regulator of any bacteriological anomalies, allowing the regulator to verify their remediation.

-Technical Indicator System: The operator reports to the regulator monthly on the levels of each operating parameter for each district of the area in question.

-Annual Service Levels Report: At the end of each annual period, the operator informs the regulator of service levels in accordance with all contractually stipulated quality parameters. The report is used to analyze trends.

The testing reported by the operator is audited by the regulator through inspections and verifications, such as the review of records of analytical results from the concessionaire's laboratory, or the collection of separate samples by the regulator at certain points for their analysis by hired laboratories.

Depending on the case, the regulator carries out inspections and analyses at points of interest in order to verify, primarily, that the concessionaire has remediated the quality deficiencies detected and the negative trends in operating parameters.

The regulator verifies the existence and/or remediation of anomalies it may have learned about through different sources, such as any anomalies reported by the operator, users or other institutions or bodies.

According to the results of each intervention conducted to test samples, the regulator requires that the operator remediate anomalies and monitor water quality in the areas where the anomalies were found, as well as investigate causes and/or monitor results.

EXAMPLE 3: PARAGUAY

In Paraguay, General Law No. 1.614/2000 on the Regulatory and Tariff Framework for Public Drinking Water and Sanitary Sewerage Provision stipulates that the service provider shall comply with its obligations to conduct quality testing of basic parameters for drinking water and discharges into the sanitary sewerage system and receiving water bodies, as well as other regulatory indicators, via monthly reports to the regulator containing the results of testing activities in the format that is expressly required by the regulator.

Additionally, all providers are to submit monthly reports to the regulator containing information on the quality of raw and produced water, well water and network drinking water.

For the purposes of facilitating regulator supervision, the provider shall allow the inspection of facilities, equipment, records and files.

LINKS

UK: UK Drinking Water Inspectorate: https://cdn.dwi.gov.uk/wp-content/uploads/2021/05/27170442/The-Water-Industry-Suppliers-Information-Direction-2021-1.pdf

Argentina: Quality Norms of the Argentine Water and Sanitation Regulator (ERAS)

https://www.argentina.gob.ar/eras/institucional/informacion-tecnica/normas-de-calidad

Paraguay: General Law No. 1.614/2000 on the Regulatory and Tariff Framework for Drinking Water and Sanitary Sewerage Provision

https://www.erssan.gov.py/application/files/8815/8896/1415/Reglamento_de_Calidad_para_Permisionarios.pdf

INTERNAL CAPACITIES NEEDED AND THE ROLE OF PARTNERS

Administrative capacity is required to develop procedures for receiving the information necessary to regulate drinking water quality. In addition, regulators must be technically skilled to understand the implications of non-compliance, which can help to set the frequency and contents of what needs to be reported. Development partners could support regulators by organizing consultative workshops to help reach a consensus on agreed procedures. Ministries of health and civil society organizations can also support regulators through capacity building.

PH2B: Periodically develop publicly available regulatory updates and water quality compliance reports

REGULATORY FUNCTION: **PUBLIC HEALTH** | **PH2B**

OBJECTIVE PH2

Regulatory compliance with water and sanitation safety plans is monitored through collected information on water quality

ACTION CARD PH2B

PERIODICALLY DEVELOP PUBLICLY AVAILABLE REGULATORY UPDATES AND WATER QUALITY COMPLIANCE REPORTS

COST: Medium **FREQUENCY:** Regular

TARGET GROUPS: Regulators, consumer associations, civil society, service operators

DESCRIPTION

Information and data about drinking water quality become more relevant when accessible, and being open access enables the public to be properly informed. Regulators must therefore promote best practices through drinking water quality reports, including specific recommendations based on reported evidence and service performance. These reports often include the definition of water quality indicators, offered as steering tools and targeting results. Irrespective of its actual format, annual drinking water quality reports, being comparative in their structure, motivate operators to achieve even higher standards. Regulators, therefore, periodically assesses collected water quality regulatory compliance data, and make them accessible to the public through media, websites, or other means of communication.

EXPECTED OUTCOMES

- Public health information on the status of drinking water safety is widely available and accessible.
- Service operators are compared through drinking water quality reports and are held accountable.
- Consumer health is adequately protected.

EXAMPLE 1: NEW ZEALAND

In **New Zealand**, the Ministry of Health publishes annual reports on drinking-water quality and compliance, highlighting the significance of government reforms in this important area of public health. The release of its Annual Report on Drinking-water Quality 2017-18, for example, includes information on individual supplies, providing a better overall picture of water quality and associated risks. It reinforces key recommendations from an inquiry which followed the 2016 Havelock North outbreak of gastroenteritis in which more than 5000 people became ill. The inquiry found a widespread systemic failure of drinking-water suppliers.

With safe drinking-water a government priority, the Ministry of Health, the Ministry for the Environment, and the Department of Internal Affairs have continued to push through improvements, including implementation of the inquiry's 51 recommendations. The resulting report contains information on drinking-water quality for all registered, networked supplies serving populations of more than 100 people from 1 July 2017 to 30 June 2018, covering 3,839,000 people. Following a recommendation from the inquiry, the format has changed to improve clarity and accessibility, with non-compliance being highlighted.

EXAMPLE 2: UNITED KINGDOM

In the **UK**, the Drinking Water Inspectorate (DWI) publishes publicly available quarterly and annual reports which assess drinking water quality at a national level from the perspective of the DWI Chief Inspector. The reports cover water quality testing and results, public confidence in drinking water, events, and technical audit activities. They also contain a summary of all results of the water companies regulatory sampling programme, and a list of all the cautions and prosecutions carried out by DWI.

EXAMPLE 3: PERU

In Peru, the Regulation on the Quality of Water for Human Consumption, Supreme Decree No. 031-2010-SA, among other aspects, seeks to regulate the dissemination and access to information on the quality of water for human consumption by establishing the right to this information as a regulatory guideline, thereby allowing the user to access water quality information free of charge and in a timely fashion. To this end, the provider is obliged to provide the Health Authority and the supervisory body with affidavits

containing all the information related to water quality monitoring. Accordingly, the Health Authority's functions include consolidating and publishing sanitary monitoring information on water for human consumption throughout the country, with the obligation to regulate, organize and administrate the National Information System on sanitary monitoring of water for human consumption.

EXAMPLE 4: MEXICO

In Mexico, the Water Law for the State of Jalisco, which was issued with, among other aims, that of establishing the general bases for the provision of drinking water, drainage, sewerage, treatment and final disposal of wastewater, establishes a State Water Information System as a public instrument of citizen access pursuant to the terms set forth in the State of Jalisco Transparency and Public Information Law and the Federal Law on Transparency and Access to Public Government Information. This system gathers the public information related to water in the State of Jalisco, including drinking water and sanitation system water, and stipulates that the information in the State information system shall be publicly available, allowing any interested party to access it.

EXAMPLE 5: URUGUAY

In Uruguay, the State Sanitary Works provider (OSE) allows online access to relevant data on drinking water quality based on the analyses conducted by the OSE Integrated Laboratory Management System (SIGLA). These are organized quarterly by Department and District and detail the number of samples analyzed, the parameters analyzed, regulatory reference points and the percentage of samples that comply with regulatory requirements.

LINKS

New Zealand: https://www.health.govt.nz/news-media/media-releases/publication-annual-report-drinking-water-quality

Peru: Regulation on the Quality of Water for Human Consumption, Supreme Decree No. 031-2010-SA.

http://www.digesa.minsa.gob.pe/publicaciones/descargas/Reglamento_Calidad_Agua.pdf

Mexico: Water Law for the State of Jalisco and its municipalities

https://info.jalisco.gob.mx/sites/default/files/leyes/ley_del_agua_para_el_estado_y_sus_municipios.pdf

Uruguay: OSE website

http://www.ose.com.uy/agua/calidad-del-agua

INTERNAL CAPACITIES NEEDED AND THE ROLE OF PARTNERS

Capacity required for preparing and publicly sharing drinking water regulatory compliance reports includes an understanding of what information is pertinent, and how to package and communicate best that information. Development partners could assist in either drafting or peer reviewing reports, and civil society organizations and media agencies can help regulators communicate information to the public.

PH2C: Develop fact sheets on health implications of priority drinking water contaminants

REGULATORY FUNCTION: **PUBLIC HEALTH** | **PH2C**

OBJECTIVE PH2

Regulatory compliance with water and sanitation safety plans is monitored through collected information on water quality

ACTION CARD PH2C

DEVELOP FACT SHEETS ON HEALTH IMPLICATIONS OF PRIORITY DRINKING WATER CONTAMINANTS

COST: Low **FREQUENCY:** One time

TARGET GROUPS: Consumers, consumer associations, civil society, service operators, regulators

DESCRIPTION

Regulators and ministries of health jointly develop and update fact sheets on priority contaminants for drinking water of public health concern, and make them accessible to the public through media, websites, or other means of communication. Fact sheets serve as essential means to communication that are often made available in public places, with the objective of making operators even more accountable. Regulators promote public distribution of fact sheets within their regulatory network, while ministries of health remain in charge of their development and production.

EXPECTED OUTCOMES

- Public health information on the risks of contaminants for drinking water safety is widely available and accessible.
- Consumers and other stakeholders are more aware, and can also request information from service providers.

EXAMPLE 1: UNITED STATES OF AMERICA

In the **USA**, the Environmental Protection Agency (EPA) has drinking water regulations for more than 90 contaminants. The Safe Drinking Water Act (SDWA) includes a process that EPA must follow to identify and list unregulated contaminants. This process may lead to the development of a national primary drinking water regulation (NPDWR) in the future. EPA must periodically publish this list of contaminants (the Contaminant Candidate List, CCL), and decide whether to regulate at least five or more contaminants on the list (regulatory determination). A regulatory determination is a formal decision on whether EPA should initiate a rulemaking process to develop a NPDWR for a specific contaminant. EPA considers three criteria when making a determination to regulate.

- The contaminant may have an adverse effect on the health of people.
- The contaminant is known to occur or there is a high chance that the contaminant will occur in public water systems often enough, and at levels of public health concern.
- In the sole judgment of the Administrator, regulation of the contaminant presents a meaningful opportunity for health risk reductions for persons served by public water systems.

EXAMPLE 2: UNITED KINGDOM

In the **UK**, the work of the Drinking Water Inspectorate (DWI) is wide-ranging, covering all aspects of the quality of public water supplies. Closely aligned with its statutory duties, the DWI has responsibility for many other functions.

- Dealing with queries relating to drinking water quality from consumers, organizations, and businesses.
- Provision of advice to ministers and officials on drinking water supply issues, and on parliamentary questions and other queries arising.
- Provision of advice to ministers on private water supplies (those not supplied by a water company), and related issues.
- Provision of advice and support to local authorities on all aspects of drinking water quality, including private water supplies.
- Management of Defra's Water Quality and Health research programme.

Related to these non-statutory duties, the DWI provides information and advice to consumers on the quality of drinking water, including priority contaminants of public health concern, including the following: Chlorine / Cryptosporidium and cryptosporidiosis / Fluoride/ Lead/ Nitrate/ Pesticides/Pharmaceuticals/ Taste and odour

EXAMPLE 3: COLOMBIA

In Colombia, the Ministry of Health elaborated the ABECÉ document on water and basic sanitation, which outlines the risks of consuming contaminated water; likewise, the document 'Towards a Healthy Household, a Living Home,' the Ministries of Social Protection, National Education, the Environment, Housing and Territorial development and the Ministry of Agriculture included a chapter called 'Sips of Life. Water for Consumption at Home,' which explains the risks of using contaminated water.

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Fuentes de agua

Para el abastecimiento de agua en las viviendas, se pueden utilizar tres tipos de fuentes naturales: aguas superficiales (nacimientos, ojos de agua, manantiales, quebradas, ríos, lagos y embalses), aguas subterráneas (aljibes, pozos) y aguas de lluvia.

Para el buen uso de estas fuentes, es necesario protegerlas, manteniéndolas limpias y evitando que se contaminen con basuras, plaguicidas u otras sustancias químicas, cadáveres o excrementos de animales y residuos varios de procedencia humana.

Adicionalmente a las anteriores fuentes, se pueden utilizar como suministro de agua, aguas de mar o saladas previo tratamiento, aguas de condensación, de deshielo, suministradas por carro tanque o embotelladas a nivel comercial.

Para una mayor seguridad acerca de las características de una fuente de agua para consumo humano se recomienda consultar con las autoridades locales de salud.

Manejo del agua en la vivienda

El agua contaminada nos enferma, por ello es importante filtrarla, hervirla o clorarla para que sea apta para el consumo

El consumo de agua contaminada produce, entre otras, las siguientes enfermedades:

- Enfermedad diarreica aguda.
- Parasitismo.

La enfermedad diarreica aguda (EDA), son aquellas enfermedades digestivas que se caracterizan por múltiples deposiciones acuosas, con presencia de vómito, fiebre y deshidratación. Hay una gran variedad de enfermedades de este tipo, algunas más graves que otras, como el cólera que en caso de no recibir atención oportuna y adecuada puede causar la muerte.

2 | Sorbos de Vida

LINKS

US: USA EPA: https://www.epa.gov/sdwa/how-epa-regulates-drinking-water-contaminants#decide

UK: UK Drinking Water Inspectorate (DWI) webpage: http://www.dwi.gov.uk/consumers/advice-leaflets/index.htm

Colombia:

https://www.minsalud.gov.co/sites/rid/Lists/BibliotecaDigital/RIDE/VS/PP/SA/manual-educativo-nacional-vivienda-saludable.pdf

INTERNAL CAPACITIES NEEDED AND THE ROLE OF PARTNERS

The capacity required to develop fact sheets on drinking water contaminants of concern relating to public health, includes the ability to interpret scientific studies, either national or international, including those developed by the WHO in its guidelines for drinking water quality series, and tailor them to local contexts and audiences. Development partners can assist regulators and ministries of health in this process through awareness raising on specific contaminants of concern, and peer reviewing fact sheets.

PH2D: Establish drinking water quality failure event management procedures and protocols

REGULATORY FUNCTION: **PUBLIC HEALTH** | **PH2D**

OBJECTIVE PH2

Regulatory compliance with water and sanitation safety plans is monitored through collected information on water quality

ACTION CARD PH2D

ESTABLISH DRINKING WATER QUALITY FAILURE EVENT MANAGEMENT PROCEDURES AND PROTOCOLS

COST: Low **FREQUENCY:** One time

TARGET GROUPS: Regulators, service operators, consumer associations, ministries of health

DESCRIPTION

Regulators respond and activate event management protocols and procedures when alerted to a drinking water quality compliance failure by a service operator or by consumers. In accordance, regulators develop these protocols and procedures and specify conditions and circumstances which may trigger their activation. In general, protocols outline different types of failure, steps to be taken for each of them, and the roles of different institutions involved in the procedures. Although such procedures are often conducted by regulators, overall responsibility of addressing failures that cause public health concerns remains exclusively under national health institutions, in most cases ministries of health. In consequence, regulators perform this action in close coordination with public health sector actors.

EXPECTED OUTCOMES

- Dangerous impacts on public health are prevented.
- Analyses and results of monitoring are compared.
- Service operators are corrected when regulatory requirements are not met.

EXAMPLE 1: SINGAPORE

In **Singapore**, the Food Agency developed the Code of Practice on Drinking Water Sampling and Safety Plans in 2019. This states that water providers prepare management procedures (including corrective actions) to be taken in response to variations that occur during normal operational conditions, and during specific 'incident' situations where a loss of control of the supply system may occur. This includes unforeseen and emergency situations such as when it is necessary to issue advice (e.g. 'boil water', 'do not drink', 'do not use water'), or when a non-compliance with water quality standards occur. Where any water quality incident occurs that is likely to pose a potential danger to human health, providers shall, as soon as practicable, make reasonable efforts to inform the public or persons to whom water was sold or supplied, about the health risk and measures that should be taken to address the risk as a part of remedial action. Where necessary, providers may issue a statement or a notice to be delivered through an appropriate mode (e.g. by hand, email, or briefings), and publish it on the providers' websites, or advertise them on bulletin boards near to where water was provided, or advertise through appropriate media (radio, television, newspapers, social media).

EXAMPLE 2: IRELAND

In **Ireland**, when Irish Water find a microbiological or chemical failure during water quality monitoring, , they must notify the Environmental Protection Agency (EPA) and investigate why the failure occured. The EPA oversees investigations to ensure that a satisfactory solution is found, and Irish Water keep the EPA informed throughout the process. Early in each investigation, Irish Water consult with the national health services to check if the failure might impact on people's health, and may advise the issuing of a 'boil water' or water restriction notice on a supply, and if so, Irish Water must inform consumers as quickly as possible. When the cause of the failure is fixed, Irish Water consult the health service again and any notice is removed, while informing the public

that water is safe to drink or use again. Notices can apply to all or part of a supply, and how long they last will depend on how long it takes to fix the problem. Irish Water may also issue precautionary notices even when no water quality failure has been found, if they are concerned that a problem in the supply might cause a failure.

EXAMPLE 3: MEXICO

In Mexico, the National Water Committee (CONAGUA) has elaborated a Drinking Water, Sewerage and Sanitation Manual on the Establishment of Preventive and Safety Measures and the Design of Protective Works for Drinking Water Infrastructure in Emergency Situations. The Manual establishes that operators must provide drinking water services to users even in the event of a natural disaster, for which infrastructure and staff must be prepared to provide a quick response with the aim of restoring the service, both in the event of a natural disaster and in an emergency situation. To this end, the manual makes recommendations that could be adopted by drinking water, sewerage and sanitation operators of any size and complexity. The manual defines dangers that would lead to probable disasters as "the forces that could damage the components of the Drinking Water, Sewerage and Sanitation System (SAPAS)," such as the contamination of a water source due to a chemical substance spill. The document describes how to elaborate a prevention and contingency plan, which must be used before, during and after a disaster, and indicates measures aimed directly at avoiding water contamination.

EXAMPLE 4: COLOMBIA

The Ministry of Housing, Urban and Territorial Affairs issued Resolution No. 0154 of 2014 adopting guidelines for the formulation of emergency and contingency plans for the management of disasters and emergencies related to the provision of household aqueduct, sewerage and cleaning services. It later issued Resolution No. 0549 of 2017 adopting guidelines for the development of these plans and ordering public aqueduct service providers that provide and distribute water for human consumption to submit contingency plans for risks to water for human consumption; the document aims to provide a detailed plan of the activities that are to be carried out in the event of an emergency related to the alteration of the quality of water for human consumption. It includes objectives, strategies and actions for addressing emergency situations. The guiding document orders the identification of threats posed by the presence of substances that alter water quality as a result of natural and socio-natural phenomena and their potential contribution of direct and indirect contaminants; it also orders the identification of threats posed by substances that alter water quality as a result of human activity and the possible contaminants resulting from the provision of public aqueduct and sewerage services, as well as possible contaminants resulting from sector-wide activities other than household public services.

LINKS

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

Ireland: Irish Water web page: https://www.water.ie/docs/2017-DW-Report_web_Final.pdf

Mexico: Drinking Water, Sewerage and Sanitation Manual on the Establishment of Preventive and Safety Measures and the Design of Protective Works for Drinking Water Infrastructure in Emergency Situations

https://files.conagua.gob.mx/conagua/mapas/SGAPDS-1-15-Libro3.pdf

Colombia:

https://www.minvivienda.gov.co/sites/default/files/2020-08/0154-2014.pdf

https://minvivienda.gov.co/sites/default/files/normativa/0549%20-%202017.pdfhttps://www.water.ie/docs/2017-DW-Report_web_Final.pdf

INTERNAL CAPACITIES NEEDED AND THE ROLE OF PARTNERS

To establish drinking water quality failure and event management protocols, technical capacity to understand public health implications of failure and contamination events is required. Further technical skills are needed by regulators to establish different pathways of response. Development partners could provide technical assistance in supporting the development of protocols.

PH2E: Develop inspection and audit protocols to ensure compliance with approved water and sanitation safety plans

REGULATORY FUNCTION: **PUBLIC HEALTH** | **PH2E**

OBJECTIVE PH2

Regulatory compliance with water and sanitation safety plans is monitored through collected information on water quality

ACTION CARD PH2E

DEVELOP INSPECTION AND AUDIT PROTOCOLS TO ENSURE COMPLIANCE WITH APPROVED WATER AND SANITATION SAFETY PLANS

COST: High **FREQUENCY:** One time

TARGET GROUPS: Regulator, service operators, ministries of health, consumer associations

DESCRIPTION

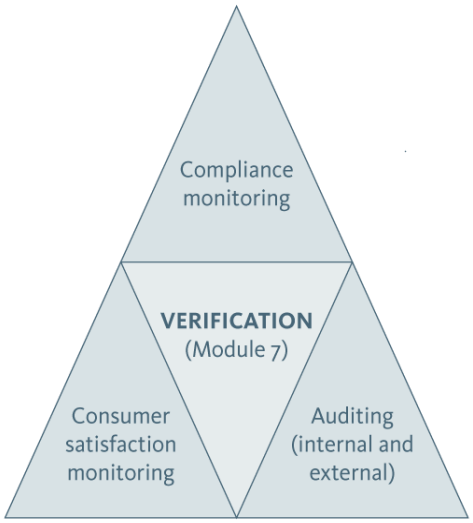
Regulators regularly inspect service operators to control their compliance with water and sanitation safety plans. They perform these audits on behalf of ministries of health or support their own inspection mechanisms through regular inspection reports on drinking water quality. If delegated to regulators, this action is performed in accordance with transparent inspection protocols, predefined and accessible to all operators and consumers. These guidelines must present how inspections are conducted, approved, and reported. Regulators must also transparently outline operators' obligations and rights during inspection procedures, along with the time sequence of the audits.

EXPECTED OUTCOMES

- Service operators are regularly inspected.
- Dangerous impacts on public health are prevented.
- Water and sanitation safety plans are complied with by the implementation of corrective measures.

EXAMPLE 1: GLOBAL

The auditing of water and sanitation safety plans (WSPs) involves independent and systematic checks to confirm completeness, adequate implementation, and effectiveness. Auditing is an integral part and core component of WSP verification (see figure), but is distinct from WSP reviews. The WSP team should undertake WSP reviews regularly, and also after incidents or 'near misses', to keep WSPs current and effective. WSP auditing, by comparison, should ideally be carried out by an independent person or persons not directly involved in the development and implementation of WSPs. Although distinct, WSP review and auditing are related, in that the results of auditing should always inform WSP teams' ongoing review process, and both activities contribute to the continuous improvement of the WSP. Auditing may also form part of drinking-water quality surveillance programmes, being continuous and vigilant public health assessments and reviews of the safety and acceptability of a drinking water supply. The WHO guidelines for drinking-water quality (2011) recommend that surveillance programmes include WSP auditing, in addition to direct assessments of water quality.



EXAMPLE 2: URUGUAY

In Uruguay, the Regulation approved by Resolution No. 120/2018 by the Energy and Water Services Regulator (URSEA) establishes that Drinking Water Service Providers (EPSAs) must guarantee a formal verification procedure with the aim of conducting a final assessment of the global efficacy of the water safety plan, including the entire water supply chain and guaranteeing the reliability of a continuous water supply that is compatible with consumer safety objectives. The verification includes three activities that are performed simultaneously: a) verification monitoring; b) sanitary inspection, internal and external audits; and c) consumer satisfaction assessments. The sanitary inspections and internal audits aim to confirm whether the water safety plan complies with applicable requirements and ensure that water quality and risks are monitored.

According to this regulation, systems with over 20,000 inhabitants must conduct at least one internal audit annually. Systems with fewer than 20,000 inhabitants must conduct at least one sanitary inspection and one simplified internal audit annually. Without prejudice to the foregoing, these systems shall be subject to an internal audit pursuant to the schedule set forth by the EPSA, which shall contemplate a minimum of 3 annual systems by department.

The criteria, methods and frequencies that are to be adopted when conducting internal audits, in addition to report results and registry maintenance, must be defined in a documented procedure under the responsibility of the corresponding EPSA management, which is to ensure the timely adoption of any actions needed to eliminate non-conformities detected and their causes, as recorded during internal and external audits. Each action plan proposed must specify various stages of implementation and associated deadlines.

Additionally, the URSEA, as regulator, shall conduct external water safety plan audits independently of the EPSA. The URSEA may also conduct testing and analyses to verify whether the water supply is safe and complies with quality, safety and health rules, as well as other regulatory requirements.

EXAMPLE 3: PERU

The Regulation on the Quality of Water for Human Consumption, Supreme Decree No. 031-2010-SA, orders the Directorate of Environmental Health (DIGESA) as well as Health Offices, Regional Health Offices and Regional Health Management Boards across the country to administrate the sanitary supervision program for water distribution. Likewise, the Health Authority, SUNASS, and legally empowered municipalities, must supervise the systems of water distribution for human consumption in their jurisdiction in accordance with the provisions and sanitary requirements determined by the Regulation. In the context of these powers, sanitary inspections are delegated to the service providers, which must report on quality self-monitoring in accordance with the provisions of the same Regulation. This self-monitoring is defined as: “1. All activities performed to identify, eliminate or monitor any risk to water distribution systems, from abstraction to the point of delivery to consumers, be this a property connection, public pool, reservoir tank pump or a point of delivery via a tanker, in order to ensure that water for consumption complies with the requirements set forth in the Regulation; 2. The verification of the efficiency and sanitary quality of distribution system components; 3. The organization of consumer claims and complaints regarding the quality of water provided or other sanitary risks generated by the distribution system, in order to adopt the corresponding corrective measures; and 4. The application of the contingency plan to ensure the quality of water for consumption in emergencies.”

LINKS

Global: WHO:

https://apps.who.int/iris/bitstream/handle/10665/204280/9789241509527_eng.pdf;jsessionid=ED6AE3BD80F2463416C6E90B0F929ADD?sequence=1

Uruguay: Regulation on Water Safety Plans

http://www.ursea.gub.uy/web/mnormativo2.nsf//0/832578EE0057357E03258275005984BF/$File/ReglamentoPSA-Marzo2018.pdf

Peru: Regulation on the Quality of Water for Human Consumption

http://www.digesa.minsa.gob.pe/publicaciones/descargas/Reglamento_Calidad_Agua.pdf

INTERNAL CAPACITIES NEEDED AND THE ROLE OF PARTNERS

To establish an inspection and audit protocols to ensure compliance with the approved water and sanitation safety plans, requires in-depth capacity on risk management, and specifically on risk management as it relates to water supply. Based on that understanding, the process to develop inspection and audit protocols can begin. Development partners can support the entire process by providing awareness raising and capacity development training, promoting peer learning from countries with more experience, and providing direct technical assistance to review draft protocols.

PH2F: Develop protocols for inspecting laboratories undertaking regulatory compliance analyses, in conjunction with respective accreditation bodies

REGULATORY FUNCTION: **PUBLIC HEALTH**	**PH2F**
OBJECTIVE PH2 Regulatory compliance with water and sanitation safety plans is monitored through collected information on water quality	**ACTION CARD PH2F** **DEVELOP PROTOCOLS FOR INSPECTING LABORATORIES UNDERTAKING REGULATORY COMPLIANCE ANALYSES, IN CONJUNCTION WITH RESPECTIVE ACCREDITATION BODIES**

COST: Medium **FREQUENCY:** One time

TARGET GROUPS: Regulators, laboratories, service operators, ministries of health

DESCRIPTION

Regulators support systematic audits or inspections of accredited laboratories on behalf of national health authorities. If delegated to regulators, this action is performed in accordance to transparent inspection protocols, predefined and accessible to accredited laboratories. These protocols must present how inspections are conducted, approved, and reported. Regulators must also transparently outline laboratories' obligations and rights during inspection procedures, along with the time sequence of audits.

EXPECTED OUTCOMES

- Accredited laboratories are regularly inspected.
- Dangerous impacts on public health are prevented.
- Water and sanitation safety plans are complied with by the implementation of corrective measures.

EXAMPLE 1: IRELAND

The European Council adopted Directive 2004/10/EC and Directive 2004/9/EC relating to the application of the good laboratory practice (GLP) principles. These Directives lay down the obligation of Member States to designate the authorities responsible for GLP inspections in their territory.

In **Ireland**, the National Standards Authority (NSAI) provides requirements for reporting and for the internal market (i.e., mutual acceptance of data), and procedures for inspection and verification of good laboratory practice (GLP). The standard which details criteria in relation to GLP and quality assurance is ISO 17025. Although accreditation to an NSAI standard is not a license requirement, all laboratories conducting analysis should have in place a robust quality system to demonstrate compliance with license conditions. In determining the performance characteristic of a method, and determining its suitability for test matrix data, the following must be obtained through evaluation and testing.

- Limit of quantification: the lowest concentration that can be determined with acceptable laboratory reproducibility and trueness.
- Accuracy: how close the measurement is to the true value expressed as the mean.
- Precision: how close the measurement is to the mean value expressed as the standard deviation.
- Uncertainty of measurement: uncertainty in the measured value.

To determine the suitability of a method and investigate for known interferences, 'spiking' should be conducted. This is the adding of a predetermined sample to a concentration in the range of interest or at least a minimum of 50% of this value. Recovery of the

added spike should not be significantly less than 90 percent or greater than 110 percent. When testing organic methods, recovery of the added spike should not be significantly less than 80 percent or greater than 120 percent.

EXAMPLE 2: COSTA RICA

In Costa Rica, the Regulation on Drinking Water Quality stipulates that any laboratory performing physical, chemical and microbiological analyses must have a sanitary operating license granted by the Ministry of Health, in accordance with Executive Decree No. 34728-S, 'General Regulation for the Granting of Operating Licenses by the Ministry of Health.' This framework stipulates a verification inspection system according to which all establishments and activities that have received a sanitary operating license shall be subject to the inspection or auditing of their services, whether it is programmed, conducted in response to a report, if required, or conducted as part of a selective testing initiative aiming to verify conditions that were stated under oath. In the event that the establishment is proven to be in breach of established requirements, the health authority shall proceed to order the revocation of the granted license and the closure of the Laboratory.

EXAMPLE 3: COLOMBIA

In Colombia, Decree No. 1575/2007 establishes the need for laboratories that analyze water for human consumption to be previously authorized by the Ministry of Social Protection, and for sanitary authorities at department, district and municipal levels to supervise the quality of water for human consumption. To this end, among other actions, such authorities may inspect, supervise and monitor laboratories that perform physical, chemical and microbiological analyses of water for human consumption.

LINKS

Ireland: Irish Environmental Protection Agency:
http://www.epa.ie/enforcement/ensuringhighqualityaqueousemissionsmonitoringdata/goodlaboratorypracticesandqualityassurance

NSAI: https://www.nsai.ie

OECD Guidance on principles of GLP:
http://www.oecd.org/chemicalsafety/testing/oecdseriesonprinciplesofgoodlaboratorypracticeglpandcompliancemonitoring.htm

Costa Rica: Executive Decree No. 38924-S and General Regulation for the Granting of Operating Licenses by the Ministry of Health

http://www.agq.com.es/documentos/DE_289_Decreto_No_38924_S_Reglamento_para_calidad_agua_potable.pdf;
http://www.pgrweb.go.cr/scij/Busqueda/Normativa/Normas/nrm_texto_completo.aspx?param1=NRTC&nValor1=1&nValor2=63938&nValor3=92587&strTipM=TC

Colombia: Decree 1575 of 2007

https://www.funcionpublica.gov.co/eva/gestornormativo/norma.php?i=30007

INTERNAL CAPACITIES NEEDED AND THE ROLE OF PARTNERS

Developing protocols for inspecting laboratories undertaking regulatory compliance analyses, in conjunction with respective accreditation bodies, requires prior capacity in terms of an understanding of laboratory testing capacities and limitations, so as to set realistic inspection targets. Protocols will also need to factor in the capacity of inspecting institutions. Development partners can support ministries of health in providing targeted technical assistance for developing protocols, and in capacity training to conduct inspection activities.

PH2G: Develop protocols for dealing with consumer water quality complaints

REGULATORY FUNCTION: **PUBLIC HEALTH** | **PH2G**

OBJECTIVE PH2

Regulatory compliance with water and sanitation safety plans is monitored through collected information on water quality

ACTION CARD PH2G

DEVELOP PROTOCOLS FOR DEALING WITH CONSUMER WATER QUALITY COMPLAINTS

COST: Medium **FREQUENCY:** One time

TARGET GROUPS: Regulators, laboratories, service operators, ministries of health, consumer associations

DESCRIPTION

Regulators develop protocols for investigating and dealing with consumer water quality complaints, through to satisfactory resolution. Regulators are increasingly performing this task through online platforms or by phone, where consumers are invited to submit their complaints and follow up with regulators on appropriate resolutions and potential compensation. Interactive digital mechanisms could be developed along with similar kinds of platforms that already exist within national health authorities. Either way, regulators analyse complaints and respond to them, in coordination with health authorities. Complaint mechanisms must clearly outline the steps and procedure accessible to all interested parties.

EXPECTED OUTCOMES

- Dangerous impacts on public health are prevented.
- Service operators are corrected when regulatory requirements are not met.

EXAMPLE 1: UNITED KINGDOM

In the **UK**, consumers contact the Drinking Water Inspectorate (DWI) if they have concerns about drinking water quality, or they are not satisfied with how their water supplier has dealt with their concerns. The DWI has a duty to investigate these matters, and complaints are logged and investigated by an inspector. If consumers contact the DWI with a concern about their tap water quality and they have not contacted their own water supplier, the DWI will refer them to their water supplier. As the regulator for drinking water quality in England and Wales, the DWI has a duty to investigate consumer complaints about public water supplies, where the water is used for human consumption as defined in drinking water quality regulations.

The following steps are undertaken after receiving complaints.

- The Inspectorate will send an email from the DWI Enquiries mailbox to the supplying water company's nominated day-to-day contact with the reference number for the complaint, requesting a full report on the company's communications with the consumer and its investigation into the matter.
- Companies should provide a similarly password-protected report to DWI.Enquiries@defra.gov.uk within 10 working days of the date of the email. The Inspectorate will acknowledge receipt by email.
- Following receipt of the water supplier's report, the Inspectorate will assess the supplier's investigation of the consumer's concern. The role of the Inspectorate is to assess the water supplier's actions and investigation with regard to the complaint to determine if it has met the requirements of the Regulations.
- If the Inspectorate is satisfied with the supplier's investigation into the consumer's concern, the Inspectorate will write to the consumer to explain the outcome of the investigation, and advise the consumer on any further actions they should take to help address their concern (for example, replacement of the private supply pipe). A password-protected PDF copy of the letter will be sent to the supplier's day to day contact for the company's records.
- If the Inspectorate concludes that the supplier has not fully complied with the requirements of the Regulations and/or their duties under the Act, the Inspector will write to the board level contact of the supplier, and will make recommendations or initiate further enforcement as deemed necessary, in accordance with the Inspectorate's published

Enforcement Policy. These letters will not normally be copied to the consumer unless the consumer submits a request under the Freedom of Information Act, in which case a redacted version protecting individuals' identity may be provided.

- If the Inspectorate makes any recommendations or proceeds to further enforcement, the consumer will be informed in the Inspectorate's final letter to the consumer.

EXAMPLE 2: PERU

In Peru, under the Framework Law on the Management and Provision of Sanitation Services and its implementing regulation, Comptrollership Resolution No. 146-2019-CG and Law No. 28716, as well as the General Regulation for Sanitation Service User Claims, various operators, such as Servicio de Agua Potable y Alcantarillado de Ayacucho SA, have approved internal monitoring systems that include protocols on claims reception by phone, with the aim of achieving a speedy management of claims and suggestions in the time frames stipulated by the regulator, and ensuring a quick and timely response to users.

EXAMPLE 3: PANAMA

In Panama, Resolution No.: JD-1297 by the Public Utilities Regulator adopted a procedure for responding to complaints submitted regarding public drinking water and sanitary sewerage service provision, with the following main aspects:

1. Clients may present complaints to the Regulator's office in person, in writing, by phone, mail, fax or any other suitable medium, in relation to public drinking water and sanitary sewerage service provision, when not satisfied by the response offered by the provider.
2. The Regulator shall notify providers of the complaints received, assuming that the providers accept the events described by the claimant if they do not refute them within seven days of receiving the complaint notification, in which case the Regulator shall demand that the provider respond to the submitted complaint.
3. The Regulator may at any time conduct inspections it deems convenient in order to verify the statements made or events described in the complaint, or those laid out by the provider in its response.

A mediation may be ordered at any moment with the aim of having the parties come to an agreement. The agreements arising from the mediation shall be mandatory and conclude the complaints process. If the parties do not reach an agreement on the events that motivated the complaint, the process shall continue in accordance with the complaints procedure.

LINKS

UK: UK Drinking Water Inspectorate (DWI): https://cdn.dwi.gov.uk/wp-content/uploads/2020/11/03135403/Guidance-on-Consumer- Complaints-Version-1.1.pdf

Peru: General Management Resolution No. 023-2929. Servicio de Agua potable y alcantarillado de Ayacucho S.A.

https://www.sedaayacucho.pe/archivos/750-resolucion-de-gerencia-general-n-023-2020-seda-ayacuchogg-protocolo-de-atencin-de-reclamos-va-telefnica.pdf

Panama: Resolution No.: JD-1297 of March 29, 1999. Procedure for responding to complaints submitted to the regulator regarding public drinking water and sanitary sewerage service provision

https://www.asep.gob.pa/wp-content/uploads/atencion_usuario/procedimiento/jd_1297.pdf

INTERNAL CAPACITIES NEEDED AND THE ROLE OF PARTNERS

Developing protocols for dealing with consumer water quality complaints requires technical capacity to understand the relative seriousness and implications of specific complaint types. This understanding will allow the development of protocols with different complaint classifications of, which can allow for nuanced responses within protocols. Administrative and IT capacity is also required for establishing and administering of a phone line, email address and database. Development partners can provide targeted technical and administrative support to regulators when they are developing protocols.

PH4A: Identify and investigate drinking water safety regulatory compliance failures and provide instructions for remediation measures

REGULATORY FUNCTION: **PUBLIC HEALTH** | **PH4A**

OBJECTIVE PH4

Penalty systems are adopted and enforced to penalize service operators for actions that infringe legal provisions on drinking water quality

ACTION CARD PH4A

IDENTIFY AND INVESTIGATE DRINKING WATER SAFETY REGULATORY COMPLIANCE FAILURES AND PROVIDE INSTRUCTIONS FOR REMEDIATION MEASURES

COST: Low **FREQUENCY:** Regular

TARGET GROUPS: Regulators, service operators, ministries of health

DESCRIPTION

Regulators audit service operators' compliance throughout the drinking water supply chain, and issue reports with instructions on remediation measures to be taken for non-compliance or non-statutory recommendations. After drinking water safety failure is identified through its monitoring procedures, regulators proceed with further investigation of such misconduct, to assess consequent risk and damage to public health. Prior to sanctions being applied, regulators have available a range of possible statutory recommendations and clean-up remedies to neutralize the risk or prevent further damage. They must, however, perform this action based on investigation protocols that specify clear steps and procedural roles.

EXPECTED OUTCOMES

- Service operators are prevented from supplying drinking water that is not of adequate quality.
- Consumer health is protected.
-

EXAMPLE 1: IRELAND

In **Ireland**, the Environmental Protection Agency carries out audits of public water suppliers that are an important way of checking how the they are performing, and ensuring that drinking water regulations are being complied with. The EPA audits examines a number of areas including water sources, water treatment works, management of distribution systems, sampling and analytical methods used, and consumer contacts about water quality. When selecting suppliers to audit, the EPA adopts a risk-based approach to ensure that those in most need of attention have a greater degree of inspection and enforcement. Where the EPA finds any deficiencies, recommendations are made in the audit report as to the corrective actions water suppliers need to take. Most recommendations are technical and do not necessarily mean there is any immediate threat to drinking water quality. Water suppliers are required to reply within the timeframe specified in the audit report, setting out what they has done or propose to do in order to satisfy the recommended actions. The EPA then tracks progress in carrying out these actions. All audits and its corrective instructions, remedies and directions are available on the EPA website.

EXAMPLE 2: GUATEMALA

In Guatemala, Government Agreement No. 113-2009 stipulates that the Ministry of Public Health and Social Assistance may request that Service Providers submit detailed reports on sanitary monitoring actions taken and/or their results when deemed necessary, especially if there may be a risk to human health. The results of the sanitary supervision of the distribution of water for human consumption must be reported to the Department of Health and Environmental Program Regulation, which must include them in a specific database. According to the results of the sanitary supervision, the Ministry of Public Health and Social Assistance may order that certain Service Providers implement the corrective measures that are indispensable for the improvement of water quality and/or the service, especially if there may be a risk to human health.

EXAMPLE 3: HONDURAS

In Honduras, Agreement No. 084 of July 31, 1995, stipulates Water Quality Monitoring in four stages (basic, normal, advanced and special situations), establishing a minimum testing frequency for each case. When one or several parameters exceed maximum permissible limits established by the regulation, the pertinent authorities must be informed so that a case study can be carried out and corrective measures can be implemented; in the event that a maximum permissible limit is exceeded, sanitary supervision must also be increased, and national authorities must be consulted on the risk level and corrective actions to be adopted.

LINKS

Ireland: EPA web page:

http://www.epa.ie/water/dw/dwaudits/

https://www.water.ie/docs/2017-DW-Report_web_Final.pdf

Guatemala: Government Agreement No. 113-2009

http://faolex.fao.org/docs/pdf/gua196717.pdf

Honduras: National Technical Standard for Drinking Water Quality

https://faolex.fao.org/docs/pdf/hon175672.pdf

INTERNAL CAPACITIES NEEDED AND THE ROLE OF PARTNERS

Identifying and investigating drinking water safety regulatory compliance failures and providing instructions for associated remediation measures requires technical capacity in risk based assessment, quality assurance and auditing skills, in order to establish protocols and conduct inspections. Development partners can support regulators in providing targeted technical assistance and inspection capacity building workshops.

PH4B: Initiate administrative infringement procedures against non- compliant drinking water service operators and impose adequate sanctions

REGULATORY FUNCTION: **PUBLIC HEALTH** | **PH4B**

OBJECTIVE PH4

Penalty systems are adopted and enforced to penalize service operators for actions that infringe legal provisions on drinking water quality

ACTION CARD PH4B

INITIATE ADMINISTRATIVE INFRINGEMENT PROCEDURES AGAINST NON-COMPLIANT DRINKING WATER SERVICE OPERATORS AND IMPOSE ADEQUATE SANCTIONS

COST: Low **FREQUENCY:** One time

TARGET GROUPS: Regulators, service operators, ministries of health

DESCRIPTION

Regulators and national health authorities are responsible for opening administrative procedures against non-compliance, and issuing sanctions only as a measure of last resort. Sanctions must be defined in advance and made publicly accessible, and regulators, in principle, may sanction any kind of misconduct that results in consequent damage that is irreversible. In cases where self-corrective measures are still possible that can revert the public health damage, regulators issue remedial instructions to operators with fixed deadlines, and failure to address these may result in more severe penalties.

EXPECTED OUTCOMES

- Non-compliant operators are prevented from causing further damage.
- Remediation of damage caused by operators is demanded and ensured.
- Consumer health is protected.

EXAMPLE 1: IRELAND

In **Ireland**, the Environmental Protection Agency (EPA) can issue a 'direction'(legally binding instruction) under the Drinking Water Regulations to the national regulator, Irish Water, where there is a risk to human health or where remedial action is required to fix a water quality issue. The EPA issued nine legally binding Directions to Irish Water during 2017. Examples include the following.

- There is no chlorine monitor or alarm in place.
- There have been persistent water quality failures and Irish Water have not acted or not acted quickly enough to improve water quality.
- Irish Water have not provided information to the EPA when asked for it.

If not complied with, the EPA may decide to prosecute. For example, the EPA had issued Directions to Irish Water due to persistent trihalomethane failures in six supplies in Donegal. In September 2017, the EPA began legal proceedings and the cases were heard in April 2018.

A remedial action list (RAL), first prepared by the EPA in 2008, includes public water supplies in need of significant corrective action, usually at the treatment plant. In 2017, the EPA included persistent pesticide problems. Updated every three months, supplies are added to the list for one or more of the following reasons:

- Persistent failure to comply with standards for priority parameters, for example, *E. coli*, trihalomethanes, aluminum, turbidity.
- Inadequate treatment, such as where there is no treatment other than chlorination for a surface water supply.

- Results from monitoring or compliance checks by the EPA indicate a lack of operational control at treatment plants.
- The Health Service Executive identify a supply where improvements are required.

The EPA identified the preparation and completion of action programmes for remedial action list supplies as a priority action to protect drinking water. When Irish Water have demonstrated that a supply is safe and secure, it can be removed from the RAL.

EXAMPLE 2: PARAGUAY

In Paraguay, in the event of a possible lack of compliance by the operator, the Sanitary Services Regulator (ERSSAN) may demand that the necessary measures be adopted. In the event that such measures are not implemented, summary proceedings are carried out to prove the infringement and apply the corresponding sanction. The sanctions system deems a severe violation to be non-compliance with drinking water quality parameters or established wastewater discharge limits, as long as the case of non-compliance does not pose a risk to human health, the safety of inhabitants or the environment, in which case the violation would be deemed major, as is the case of not conducting or submitting the regular service quality test reports within the established time frames.

Other major violations are: supplying drinking water for human consumption without complying with maximum permissible bacteriological parameters, containing physical or chemical contaminants that, even in low concentrations, are harmful to health; and discharging or allowing the circulation of wastewater in the sanitary sewerage system with the presence of toxic, flammable or explosive elements, without adopting the necessary contingency measures. Severe and major sanctions are applied as fines, with the possibility of rescinding or revoking provider status in situations of extreme severity or urgency that pose a hazard to population health, or affect service continuity due to generalized drinking water contamination, posing a sanitary risk and affecting an area greater than twenty percent (20%) of the zone under the concession or license, without remediation within forty-eight (48) hours of the contamination being detected, or when there is environmental pollution caused by a generalized spill in a significant service area, with wastewater exceeding regulatory parameters, without remediation within forty-eight (48) hours as of the moment the pollution is detected.

LINKS

Ireland: EPA Drinking Water Report for Public Supplies: https://www.water.ie/docs/2017-DW-Report_web_Final.pdf

Paraguay: Law No. 1.614/2000. Infringements and Sanctions Regulation

https://www.erssan.gov.py/application/files/3315/8896/1500/Reglamento_de_Infraciones_y_Sanciones.pdf

INTERNAL CAPACITIES NEEDED AND THE ROLE OF PARTNERS

Penalizing operators for non-compliance requires the capacity to have first established a framework of non-legal, legal, and criminal punishments available, and guidance on their suitable and proportionate use. If punishments are monetary, then capacity is needed to establish formulas to calculate the value of fines. Development partners and ministries of health could assist by providing technical assistance to regulators in framework setting.

THE WASHREG APPROACH

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