



THE
WASHREG
APPROACH

AN OVERVIEW



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FOREWORD

The Sustainable Development Goal (SDG) 6 Global Acceleration Framework calls for a dramatic acceleration to meet off-track SDG 6 targets. The SDG targets for 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 one in four 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, demands a stronger focus on both expanding the coverage of facilities and services, and on 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.

This **“WASH Regulation (WASHREG) Approach: An Overview”** is intended to help WASH professionals and other stakeholders understand the elements of WASH regulation within a broader enabling environment for effective and sustainable WASH service delivery. The document aims to provide clarity on the main areas of WASH regulation, the main tasks of water and sanitation regulatory actors and introduces a conceptual framework for

a phased approach to regulatory reform. The conceptual framework for regulatory reform is further explained, and an accompanying full methodology is provided in a separate document: **“The WASHREG Approach: Methodology”**, which provides a practical step by step guide to help countries identify and plan for implementing the “best-fit” solution to regulatory reform.

This product is part of the set of guidance documents produced under the **“Accountability for Sustainability”¹ 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 WASH 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 documents. We believe that by strengthening regulation, countries can improve the performance and sustainability of water and sanitation service delivery, achieving the SDG targets on universal access to services, and realizing the human rights to water and sanitation for all.

¹<https://www.siwi.org/what-we-do/accountability-for-sustainability/#partnership>

GLOSSARY

ENABLING ENVIRONMENT: the set of interrelated sector functions that impact the capacity of governments and public and private partners to engage in the WASH service delivery development processes in a sustained and effective manner. In the context of UNICEF's work, an enabling environment for WASH is one that creates the conditions for a country to have sustainable, at-scale WASH services that will facilitate achievement of Universal Access for All to WASH with Progressive Reduction in Inequality (UNICEF, 2016).

WATER GOVERNANCE: Water governance defines who gets water, when and how, and who has the right to water and its related services and benefits (Allan, 2001). Hence, governance is about the processes and institutions involved in decision-making about water. From this procedural perspective, it has been defined as "a combination of functions, performed with certain attributes, to achieve one or more desired outcomes, all shaped by the values and aspirations of individuals and organisations" (Jiménez et al., 2020).

REGULATION (OR THE REGULATION FUNCTION): the legal mechanisms, enforcement processes and other rules to ensure that stakeholders fulfil their mandates, and that standards, obligations and performance are maintained, as well as to ensure that the interests of each stakeholder are respected (Jiménez et al., 2020).

REGULATION THEORY: a set of propositions or hypotheses about why regulation emerges, which actors contribute to that emergence and typical patterns of interaction between regulatory actors (Morgan & Yeung, 2007).

REGULATORY AUTONOMY: refers to the capacity of regulatory actors to be protected against other powerful groups or entities' interferences.

REGULATORY MODEL (OR REGIME): generally understood as a set of agreements on the division of the respective responsibilities of actors involved in the sector regulation.

REGULATORY ACTORS: used in a broad sense, includes government institutions that exercise regulatory functions (i.e. a department within a ministry) and separate bodies created by the State to carry out regulatory functions (Heller, 2017).

REGULATOR (OR REGULATORY BODY OR REGULATORY AUTHORITY): a public authority responsible for applying and enforcing standards, criteria, rules or requirements – which have been politically, legally or contractually adopted – exercising autonomous authority over the Services, in a supervisory capacity (International Water Association, 2015)

REGULATORY AREAS: the different areas which can be subject to regulation in the water and sanitation sector: tariff setting or price regulation, service quality, competition, consumer protection, environment, and public health.

REGULATORY POWERS: the instruments used by regulatory actors to ensure individuals and operators comply with regulations. The powers are: rule definition and approval granting; monitoring and informing; and enforcement.

1. THE NEED TO REGULATE WATER AND SANITATION SERVICE PROVISION

The Sustainable Development Goal (SDG) 6 Global Acceleration Framework aims to deliver fast results at an increased scale as part of the Decade of Action to deliver the SDGs by 2030. By committing to the Framework, the United Nations (UN) system, and its multi-stakeholder partners, driven by country demand, and coordinating through UN-Water, will unify the international community's support to countries to rapidly accelerate towards national targets for SDG 6. The framework identifies five accelerators (financing; data and information; capacity development; innovation; and governance). Regulation contributes to all of them. Well balanced regulation is an essential component of governance, as it helps to clarify the roles and responsibilities of different stakeholders; it allows for more predictable financing of the sector, by highlighting the performance, and strengths and weaknesses of the service providers; it contributes to data collection and availability of information about the sector, including for the public; it can promote innovation through new standards, and performance criteria; and it can support capacity development of service providers and consumers, through technical support, and peer to peer exchange among operators.

In most jurisdictions, regulation of water supply is significantly more established and well-defined than for sanitation, and 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 this concept note and accompanying methodology is likely to evolve as new experiences emerge.

Regulation aims to address different elements of water and sanitation service delivery. First, water and sanitation are not only services, but human rights that need to be guaranteed. In this regard, regulation is key to monitor and make

course corrections for the compliance of the services provided with the normative content of the human rights to water and sanitation, which call for services to be available, affordable, accessible, acceptable, of quality and safe to all; and to be delivered in a transparent, accountable, participatory, non-discriminatory and sustainable way (Heller, 2017).

Second, the water and sanitation sector is highly dependent on large infrastructural works, which is a reason why water and sanitation service provision becomes a natural monopoly. Without public oversight, water and sanitation service operators could possibly neglect key factors such as the quality of services, certain geographical areas, population groups or simply charge unreasonable tariffs. As such, public oversight is articulated through regulation of economic, public health and environmental elements of services, which is primarily necessary to protect consumers' interests and their rights. On the other hand, since the water and sanitation service might be provided at a loss to ensure full coverage and uniform pricing, the operator needs to be compensated. The governments and relevant authorities can manage such compensation through various modalities. In some cases, operators are reimbursed through cross-subsidization i.e., the areas profitably serviced compensate those served under an imposition. In many urban cases, utilities receive subsidies from the national or municipal budget as well. It is in this context that regulation is set to make service operators more accountable, to establish an independent price-setting process and to bring regulatory expertise into the public sector. There are, however, some exceptions, where water and sanitation services are not considered to be a natural monopoly. In areas where water is provided by trucks, kiosks, standpipes or through any other kind of on-selling arrangement, users might benefit from competition among several operators. This is

also frequently the case in sanitation and faecal sludge management services provision, e.g., on-site sanitation emptying services. In these circumstances the role of a regulatory body is to first ensure free market entry to all interested parties, and second, to play an anti-monopoly role in the case of an abuse of a dominant position by a single operator, or several operators.

Third, unequal access to information between operators and consumers in the absence of regulation could result in severe consequences for the consumers. Information about poor water quality or service interruption are among those where timely notification could prevent potential public health problems or other related and unnecessary damage to consumers. To bridge this gap, a wide range of reporting and monitoring requirements and mechanisms exist that specify the different types and quality of information to be provided.

Lastly, the provision of water and sanitation services may have externalities that can be both negative and positive. Consumption of contaminated water, for instance, that sparks an epidemic disease such as cholera can quickly spread beyond the geographical zone from which the services originate. Over abstraction at a water point or intake could affect a downstream waterbody, its related ecosystems, and limit downstream consumers' ability to access services. On the positive side, an increase of wastewater and faecal sludge treatment in a specific geographical area could improve the surrounding environment and the lives of citizens. Regulating the public health, social and environmental costs of service operator activities are, therefore, important elements to ensure an optimal level of service provision, and adequate protection, when it comes to the impact both within and beyond the area in which the services originate.

2. WASH REGULATORY GOVERNANCE

Regulation is one of the core water and sanitation governance functions and is described as the “legal mechanisms, enforcement processes and other rules to ensure that stakeholders fulfil their mandates, and that standards, obligations and performance are maintained, as well as to ensure that the interests of each stakeholder are respected” (Jiménez et al., 2020).

The UN system views human rights norms and standards as its primary frame of reference for everything it does. Following the Special Rapporteur’s (Heller, 2017) interpretation, the ultimate goal of WASH regulation should be to give practical meaning to the normative content and principles of the human rights to water and sanitation. However, there is no single formula on how to best achieve that goal and the mechanisms and processes designed and implemented are different from one country to another. The study of those differences and the implications for regulatory outcomes constitutes what is known as regulatory governance. This chapter unpacks the concept of WASH regulatory governance by presenting the main concepts about regulation theory, models, autonomy, principles, and accountability.

2.1 Regulation theory

While a full discussion about regulation theory is beyond the scope of this note, it is important to understand the main schools of thought that have come with different ways to understand and think about regulation in our society. Public interest theory (Pigou, 1920), also known as the welfare state, presents that markets often fail because of problems of monopolies or other factors, and assumes that governments are capable of correcting those failures through regulation. Public interest theory has been used to justify much of the growth of public ownership and regulation over the twentieth century (Shleifer, 2005).

The contracting theory, associated with Coase (1960), assumes that regulation can happen

if contracts are well established between the parties and impartial courts ensure efficiency through appropriate wrongdoing rules and enforcement of contracts. In this sense, potential wrongdoers are disincentivized by the consequences of breaching contracts if well-functioning courts enforce them, and in this scenario, scholars of the contracting theory argue that only limited regulation can be justified (Posner, 1974).

The capture theory of Stigler (1971) critiques the public interest theory’s understanding that the government is a benign being, because the regulator can be controlled by different group interests, hence a fully independent role of a regulator is almost impossible and instead it is more an arbiter between conflicting interests. Scholars of the capture theory have been very prolific in developing mechanisms to control regulatory activity, ensuring performance of the utilities, creating coordination mechanisms about regulatory activities, and establishing a clear, transparent, accountable, legitimate, and credible regulatory process.

The theories of regulation are not mutually exclusive and policy makers’ choices are the result of a combination of influences from the various theories that impact on decisions about the regulatory model, regulatory autonomy, and the mechanisms to ensure regulatory accountability. In any case, in the last decades, the trend in WASH regulatory reform has witnessed the creation of quasi-autonomous regulatory agencies and an increased application of rules to protect “public services” (Cabrera & Cabrera, 2016; Melo Baptista, 2014; Lodge, 2001; Mumssen et al., 2018; OECD, 2014, 2015; Rouse, 2013).

However, there is a need to acknowledge that current regulatory theory is better suited to service provision through large infrastructure and professional service providers, mainly in urban areas. Regulatory theory does not always apply,

particularly for water supplies in rural areas (e.g., community water supplies), and for sanitation, when the household is not connected to a sewerage network. In this case, service provision can have multiple actors along the sanitation value chain, many of them acting informally. In these cases, regulation needs to balance enforcement measures with support for professionalization and technical support to operators.

2.2 Regulatory models

Regulatory models are generally understood as a set of agreements on the division of the

respective responsibilities of actors involved in a certain sector. There is no magic formula in relation to the models, and the solutions that may have worked for some countries may not work for others (Heller, 2017). In the water and sanitation sector, the most common models are regulation by government, regulation by an agency, regulation by contract, regulation by outsourcing some activities to third parties and self-regulation (Mumssen et al., 2018; OECD, 2015). These five models are summarized below:

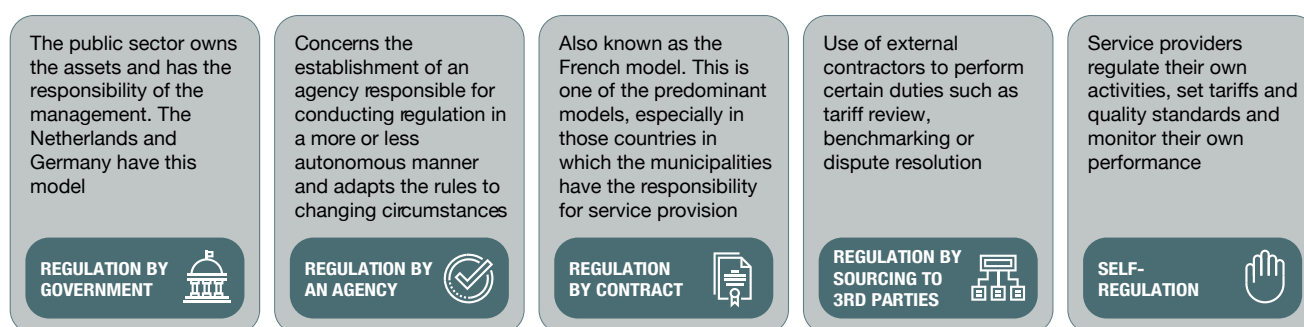


Figure 1: Regulatory models

The most important lesson to bear in mind for regulatory designers is that there is no single international best practice for regulatory models. In fact, the models are not mutually exclusively and tend to adopt different aspects of each one of them. For example, when addressing sanitation, there are different regulatory mechanism options that can be applied across the sanitation service chain (containment, conveyance, treatment, and end use/disposal), as highlighted by WHO in the Guidelines on Sanitation and Health (World Health Organization (WHO), 2018). Although, it is worth acknowledging, that in the past two decades, countries have tended to develop a dedicated regulatory body in the water and sanitation sector (OECD, 2015). The most effective regulatory model depends on a multitude of factors including the country's legal and political system, as well as its governance structure (Mumssen et al., 2018).

2.3 Regulatory autonomy

The human rights framework understands that regulatory actors are at the interface between

policymakers, service providers and users; and they are the best placed to assess whether water and sanitation rights are being progressively met, or are being overlooked. In this regard, it is recognized that although no universal model exists, those carrying out regulatory activity should enjoy some level of immunity, or regulatory autonomy, against pressures from illegitimate interests, so that the main objectives of regulation are aligned with the human rights to drinking water and sanitation (Heller, 2017). Regulatory autonomy refers to the capacity of regulatory actors to take and implement decisions without influence from other powerful groups or entities. It is important to acknowledge though that in some situations, regulatory autonomy is far from present. A starting point in those cases to improve autonomy is to identify authorities with some responsibility for oversight and establish a dialogue to understand the existing degree of autonomy, and to identify feasible avenues for making progress. When discussing regulatory autonomy, it is important to understand different autonomy dimensions: institutional, financial,

managerial, political, and decentralized autonomy.

Institutional autonomy: refers to the skills and capacity a regulatory actor needs to secure to initiate or implement regulatory practice. Institutional autonomy also includes the ability of the regulatory actor to ensure capacity building activities for operators and consumer associations around regulation.

Financial autonomy: refers to the ability of the regulatory actor to secure sufficient resources to initiate or implement regulatory practice. Regulatory actors should ideally rely financially on the licenses and fines it issues and imposes on operators as its own and unique revenue, distinct and clearly separated from the state or governmental budget.

Managerial autonomy: refers to the existence of an established regulatory mandate with a clear matrix of roles and responsibilities among the principal actors within the sector. It also includes the ability of the regulatory actor to secure appropriate human resources and respond to the needs of the sector.

Political autonomy: refers to the ability of the regulatory actor to be protected against political interferences. As the regulatory mandate is granted by a state it is a state itself that often tends to control the decision making around regulatory policies, for its own interest. Regulatory actor staff should ideally remain detached from political engagement.

Decentralized autonomy: refers to the capacity of the regulatory actor to delegate and supervise certain regulatory activities to decentralized government levels.

2.4 Regulatory principles

From a human rights perspective, “regulatory actors must ensure that their policies, procedures and activities are compliant with the State’s international human rights obligations in relation to the rights to water and sanitation” (Heller, 2017). In this regard, regulatory actors are bound by certain principles and obligations: progressive realization, equality and non-discrimination and the obligation to take steps

towards the full realization of the rights.

The principle and obligation of progressive realization refers to the obligation of regulatory actors to put in practice regulatory measures to ensure that the State utilizes the maximum of their available resources to move beyond the minimum levels of water and sanitation service provision. However, regulatory frameworks should be appropriate for the existing service landscape and policy goals need to be achievable. As each goal is achieved, and as additional resources and capacity are gained, the regulations can be increased in complexity and/or scope over time. The principle and obligation to ensure equality and non-discrimination is ensuring the same treatment to all consumers without any distinction based on race, political affiliation, origin, religion, gender, age, or other condition. To ensure non-discrimination, regulatory actors must, for example, when regulating prices, consider those who cannot pay for services, or implement mechanisms for their protection. Regulatory actors also have the obligation to identify and monitor possible retrogressions in the realization of the rights, and the obligation to find and remediate the root causes of these violations.

In addition to these three main obligations, there are additional human rights principles that should guide not only regulatory actors and WASH regulations, but the entirety of WASH service provision: active, free and meaningful participation; access to information; and sustainability.

2.5 Regulatory accountability

The principle of accountability, defined as “the democratic principle whereby elected officials and those in charge of providing access to water supply and sanitation services account for their actions and answer to those they serve” (UNDP-SIWI Water Governance Facility & UNICEF, 2015), also applies to the regulatory actors and to the degree to which they are held accountable for their choices and actions. The study of accountability poses an essential question to both regulatory scholars and to theories of democratic participation (Baldwin et al., 2012; Gerber & Teske, 2000; Graham, 1995; Majone, 1997).

WASH regulation is highly complex, requiring significant technical expertise, like other regulated sectors; because of this complexity there is a consequent delegation of substantial policymaking authority to the regulatory staff. Accountability is considered as the other side of the coin to autonomy, and the more autonomous a regulatory actor is, the more accountable

and transparent a regulator should be (OECD, 2014b). Regulatory actors are generally accountable to the three same actors for which they act as referee (Figure 2): the government or parliament (policy-maker), the service providers (or regulated entities) and the users, or more generally, the public.

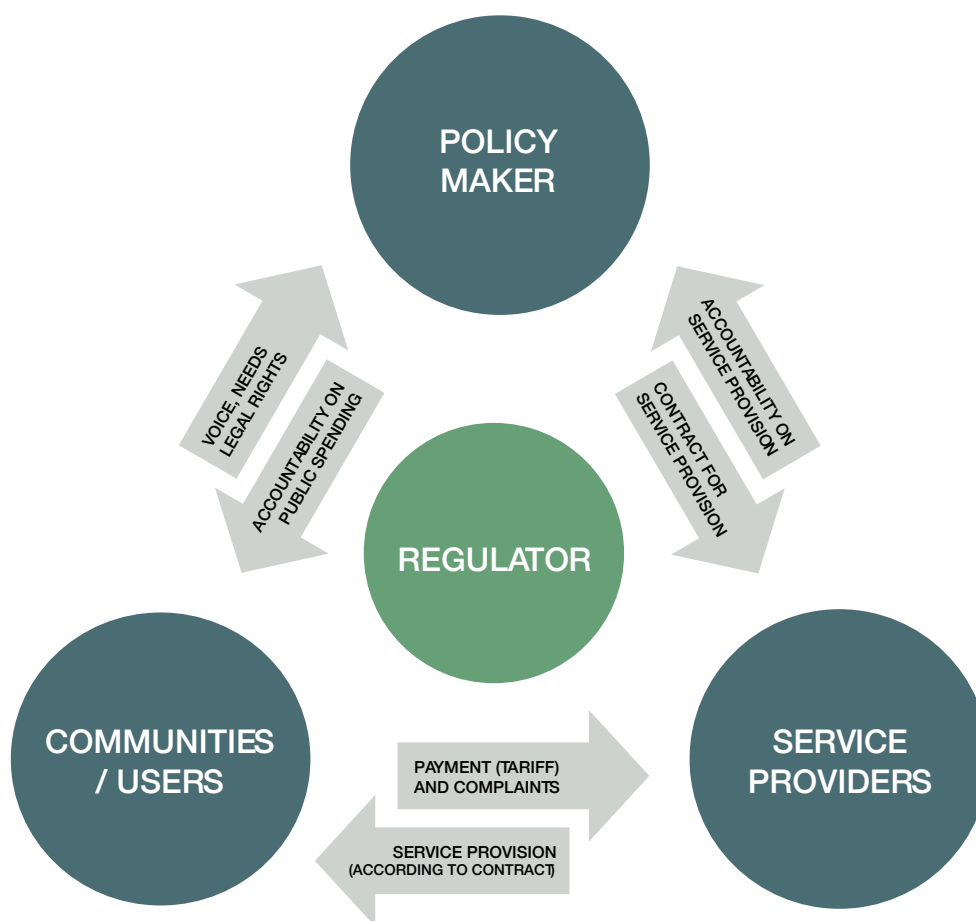


Figure 2: Accountability service delivery triangle (UNDP-SIWI Water Governance Facility & UNICEF, 2015)

The different elements of accountability are often explained through its three-dimensional approach: responsibility, refers to the existence of clear roles and responsibilities of the actors for the variety of processes and the coordination mechanisms between them; answerability refers to the mechanisms whereby the actors provide explanations of, and justification for, their actions, inaction and decisions; and enforceability, refers to the existence of mechanisms to oversee and ensure actors' compliance with established standards, impose sanctions and ensure that corrective and remedial action is taken (General

Assembly, 2018; Jiménez et al., 2018; UNICEF & UNDP/SIWI, 2016).

The fundamentals of regulatory accountability combine these two levels of analysis, with the actors to whom the regulator should be accountable to on one side, and on the other side, the different elements of the accountability dimensions (Table 1). For these accountability lines to be operational, regulatory data and its granularity is of particular importance, to enable accountability as well as to evaluate if the regulatory mechanisms are benefiting sub-groups as intended.

	ACCOUNTABILITY TO POLICY MAKERS	ACCOUNTABILITY TO SERVICE PROVIDERS	ACCOUNTABILITY TO USERS
RESPONSIBILITY	Expectations of the regulator should be clearly outlined by the oversight body and published with the agency's plan.	<p>Clear definition of rules and standards communicated to service providers.</p> <p>Service providers should have a clear process to appeal decisions that have an impact on them.</p>	<p>Users made aware of their rights and obligations.</p> <p>The right to appeal decisions should be extended to the public and a clear appeal process put in place.</p>
ANSWERABILITY	The regulator should report to policymakers on all major measures and decisions on a regular basis and as requested.	Information and access to appeal processes should be made easily available to service providers by regulators.	<p>Users made aware of where and how to find information.</p> <p>Key operational policies and other guidance material should be available to the public.</p>
ENFORCEABILITY	To allow oversight from the policymaker, a regulatory actor should develop a set of indicators to measure its own performance and make the measured indicators and results available.	A mechanism to enforce a decision as a result of an appeal should be available.	The regulator is responsible to ensure the existence of mechanisms to allow the public to complain and seek redress from actions by both the service provider and the regulator itself.

Table 1: Regulatory accountability. Sources: UNDP-SIWI Water Governance Facility & UNICEF, 2015 and OECD, 2014b

3. GEOGRAPHICAL REGULATORY SCOPE

All water and sanitation service operators should fall under the scope of a regulatory authority, regardless of the management model adopted in each context. All service providers should be subject to regulation. This would ensure the same level of protection to any user, regardless of the operator that provides the service to them. However, this might not be feasible in the short term in many circumstances. In those cases, progressive improvement towards reaching this goal will be needed, by using a risk-based approach – i.e., prioritising regulatory aspects and service providers that pose the highest risk to population if not dealt with, and acting on them first.

Regulatory intervention should be geographically bordered, ideally nationally, or regionally in large countries. This allows for a broad view of the sector, whereby a regulatory actor can better harmonize the rules, procedures, and interpretations in an extended territory, with the possibility of benchmarking a more significant number of operators. In general, the bigger the territory it regulates, the larger is the rationalization of regulatory resources and provision of lower service unit costs per user is ensured. At the same time, the geographical regulatory scope needs to be matched with the resources and capacity needed to successfully undertake the regulation.

3.1 Regulation of water and sanitation services in a decentralized context

Theory suggests that a local government's proximity to citizens gives the latter more influence over local officials, promotes productive competition among local governments, and alleviates corruption through improved transparency and accountability. At the same time, decentralisation can generate negative effects, if local political dynamics undermine accountability, or local governments have inadequate capacity, or face weak incentives to act as the theory predicts (Smoke, 2015).

As much as decentralization can promote better and more efficient services through enhanced accountability, it is empirically evident that decentralized regulation is not easy to implement. How is it possible to implement decentralized water and sanitation regulation in countries with limited resources and capacities? To what extent is it possible to rely on local authorities for consumer protection or when challenged to develop sustainable and affordable tariff systems in impoverished areas? Most of the answers to these questions lie within strengthened capacities, legislative reforms, and an appropriate balance between central and local power, and between regulation by centralized and decentralized bodies. This includes an appropriate decentralization legislative reform to strengthen central to local level governance relations; capacities in provision of water and sanitation services, and improved accountability, oversight, and participation of locals in a bottom-top approach. In some countries, such as in Colombia, Mozambique, Honduras, or Zambia, even though water services are decentralized, a national regulatory body has been established.

3.2 Urban water and sanitation services regulation

Regulation has been historically focused on urban centres, typically determined by many users serviced by a single service provider (a “utility”), with a networked infrastructure providing piped water and a sewerage network for sanitation. However, modern cities face multiple challenges that are not always well addressed by this typical regulation. Rapid increase in urban populations, and lack of proper planning, have led to almost a billion people worldwide living in informal settlements. These peri-urban areas often fall into a responsibility gap between rural and urban authorities, leaving them in a grey zone of unclear legalities, regulations, and administration. Multiple informal actors step in to deliver services (e.g., water vendors), which are typically not covered by regulation.

The challenge for sanitation is even much larger. In developing countries, the proportion of citizens connected to sewerage systems is very low, and it is even lower when considering proper treatment and disposal of wastewater and faecal sludge. Over a billion people in urban and peri-urban areas of Africa, Asia, and Latin America are served by onsite sanitation technologies. And, around 2.7 billion need faecal sludge management (FSM) services for emptying, transporting, treating and safely disposing the waste generated (Strande et al., 2014). FSM is very different from wastewater management. Multiple actors, who often operate informally, are involved in FSM, and these actors might perform different functions within the sanitation service chain.

Hence, regulation needs to cover all actors and each step of the sanitation service chain, including the storage, collection, transport, treatment and end use or disposal of faecal sludge. The actors providing FSM services will require a substantial effort from the regulator in terms of the provision of licenses for qualified operators, coordination across stages of the service chain, and monitoring and follow up of their performance. This also includes the control of discharges to the environment.

3.3 Rural water and sanitation services regulation

In the context of rural areas, it is difficult to identify and introduce regulatory mechanisms due to the number of rather small service providers (or even self-supply arrangements), geographical dispersion, low level of formalization and limited access to information at central level. These service providers often have limited resources to respond to regulatory requirements and penalties. Hence, it is generally necessary to apply a mix of approaches to regulate water and sanitation services, relying on a mix of contracts, national-level regulatory bodies, and in some cases, regulatory attributions at the local level (Trémolet, 2013).

Regulation in rural areas is sometimes very complex, as the service provision can be undertaken by many operators, (e.g., several thousands in many countries), with legal statuses ranging from private to community associations,

or service provision may fall directly under municipal services. At the same time, several rural service operators may perform informally in a legal vacuum. However, more recently these informal service operators tend to formalize their status through signed contracts with local community-based organizations or local governments (regulation by contract).

As much as these contracts regulate their activities, support is still required from regional or national institutions when conducting certain regulatory activities, mainly because regulatory actor and service operator capacity is often low in rural contexts. For this reason, it is common to find regulatory instruments that mostly rely on the dissemination of information and consumer feedback, to increase accountability and minimize intensive and costly monitoring, and application of penalties. For example, the water watch groups created by the Zambian regulator (NWASCO) are voluntary consumer groups responsible for monitoring the performance of the local authorities or utilities and for ensuring that consumer water rights are protected, and that information is readily available to consumers.

An important segment of service delivery activities in rural areas are those that are performed on a voluntary basis in the form of village water committees. In such cases, regulation based on penalties risks being ineffective, as it will only impose a higher burden on the already weak structure and might lead towards discontinuation of service provision activities. Hence, a more “supportive” regulation, which includes capacity development and support for compliance, is often more appropriate in these contexts.

4. REGULATORY AREAS

In the same way that there is no universal regulatory regime implemented by all countries, regulatory actors conduct a combination of very different activities (OECD, 2015) that can be organized around six main regulatory areas: tariff setting/price regulation, service quality, competition, consumer protection, environment and public health (Figure 3). The first four area are

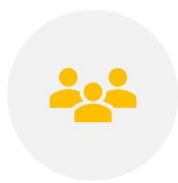
also considered the areas that constitute economic regulation, and in many countries, there exists a dedicated regulatory agency. In contrast are public health and environmental regulation that often fall within the mandate of ministries of health or environment, or a specific dedicated public health or environmental protection agency.



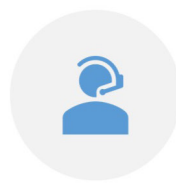
1. Tariff setting/Price regulation: consists of setting overall tariff levels and tariff structures to ensure delivery of services at an affordable cost, while ensuring the long-term financial viability of the sector



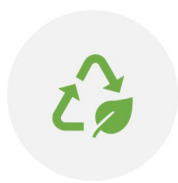
2. Service quality regulation: entails defining levels of service based on certain characteristics such as technical requirements or customer responsiveness



3. Competition regulation: consists of monitoring competition in the market (in the case of a monopoly provider) and of ensuring competition in the market where applicable (in the case of small-scale providers, such as water tankering)



4. Consumer protection regulation: the establishment and implementation of a set of specific rules applicable to the service providers to achieve the protection of users



5. Environmental regulation: entails rules on water abstractions and management of wastewater, faecal sludge and effluent along the sanitation chain, with the aim of protecting the environment for existing and future generations



6. Public health regulation: focuses on rules around compliance with health-based standards and risk management approaches for ensuring drinking water safety and safe management of the sanitation chain, for public health protection

Figure 3: Regulatory areas.

It should be noted that there may be overlap between the different regulatory areas, notably between Public Health and Environment and Public Health and Service Quality. For example, effective catchment management for drinking water source protection, and setting of effluent standards, requires coherence between public health and environmental regulation. Similarly, service quality

regulatory aspects such as water quantity, supply reliability and continuity, pressure, and wastewater treatment and sludge standards are relevant for public health regulation and should be coherent between the two. And in turn these linked service quality and public health aspects also affect the cost of water delivered, and thus the tariffs to be set and charged. Hence the different regulatory

functions are interlinked, and coherence is needed between the different mandates to avoid gaps and overlaps, as well as cooperation among the different institutions involved.

Capacity building and resourcing for implementation of regulatory functions within the responsible agencies is critical for regulation to work smoothly (World Health Organization (WHO), 2018).

4.1 Tariff setting or price regulation

Price regulation can be defined as the establishment and implementation of a set of specific rules for the definition of tariffs and prices, inducing operators to achieve optimum results in terms of the prices adopted, the quantities produced, and the standards of quality offered. It is considered one of the most important regulatory areas, and whether services are outlined through public or private ownership and irrespective of the actual regulatory model, tariff setting is necessary and essential for the sustainability of water and sanitation services.

Tariffs should be sufficient to cover the costs of providing the service. Various definitions may be used, depending on how far the existing tariffs are from full cost-recovery levels and how challenging moving to cost-recovery levels may be in the short term. In general, legislation would require that tariffs cover at least the operation and maintenance costs, plus the costs of investments (that is, depreciation and a fair return on capital), but this might not always be implemented in practice.

One of the most common approaches to price-regulation is the rate-of-return price, also called the American approach, that allows an operator to set a level of remuneration based on the investments preapproved by the regulator. Within this approach, a regulatory body defines the prices and facilitates the definition of tariff systems that motivate the accomplishment of non-economic objectives (e.g., contexts involving the extensive creation of infrastructure in less mature sectors), and, especially, cross-subsidization between users, or between the services supplied. However, if under-regulated, the operators do not have incentives to reduce the costs and have a remuneration regardless of the operators' actual performance.

Other common approaches are price cap regulation, revenue cap regulation or yardstick competition, which are approaches based on performance incentives which introduce the component of productivity to motivate operators to improve their efficiency and increase innovation. Price cap regulation consists of establishing an average limit or cap for the prices of the water, wastewater and FSM services during a given regulatory period, between three and ten years. The regulated operators retain the profits coming from the reduction of costs that happens during the given period, along with those gained through improved productivity. At the end of each regulatory period, the benefits of the cost reductions are partially transferred to consumers through the reduction of prices during the next regulatory period. In revenue cap regulation, operators are limited to a maximum average value for their revenues. The revenue ceiling is established through a consumer price index and a factor that translates variations, in terms of productivity. The gains achieved are transferred to consumers within the next regulatory timeframe. Yardstick competition is price regulation by comparison, between a given operator and its peers through a benchmarking exercise, that is in turn translated into financial consequences. The key element of this regulatory model consists of redirecting incentives to improve efficiency for a given operator through information extracted from other operators. In consequence, this constitutes an artificial form of competition between the regulated operators. The yardstick approach also serves against asymmetry in information among the operators and tends to set a fertile ground for transparency and access to information. However, a sufficient base of comparable service providers is required for this approach to work (Rouse, 2013).

4.2 Service quality regulation

Service quality regulation is defined as the establishment and implementation of a set of specific rules to achieve a certain level of service in relation to certain characteristics such as technical requirements or customer responsiveness. Service quality regulation can be direct or indirect. In direct regulation,

a service quality parameter is included in the service contract, with the operators being rewarded or penalized following their level of compliance at the end of a regulatory period. The indirect approach penalizes and rewards operators occasionally and periodically during the regulatory period for shortcomings in their performance (e.g., a failure to address consumer complaints), according to the minimum standards of quality that had been defined. Operators are not audited randomly under the direct approach, and enjoy more freedom to manage the quality of service (Rovizzi & Thompson, 1992).

Both direct and indirect service quality regulation can use the benchmarking approach, which consists of the application of comparative and quantitative methods that are used to assess and measure the performance of operators over the course of time, for instance in monitoring sustainability through sustainability checks or other monitoring mechanisms. The use of benchmarking indicators results in continuous pressure on the operators to improve the quality of service, whilst also increasing the sharing and transparency of information, and minimizing the asymmetry of information that exists between regulators and operators. Another approach in service quality regulation is the sunshine approach, which obliges operators to make available all relevant service information and actions for public observation, participation, and/or inspection, and it is through the exposure to media and the public that this approach has proven to have a competitive impact on the sector.

As mentioned earlier, there can be quite a blurred line between service quality and public health regulation. For example, technical requirements and protection of sanitation workers' standards, are both integral to service quality and public health protection.

4.3 Competition regulation

Competition regulation is defined as the establishment and implementation of a set of specific rules to prevent the abuse of a dominant position by one or several operators through oligopoly (e.g., water trucking). If abuse is found, the regulatory actor is duly bound to

further investigate such abuses and to take concrete actions to resolve it. Depending on the nature of the abuse, a possible range of actions may include breaking of the oligopoly through financial penalties, enforcement of asset sale to break a dominant position, or imposition of an obligation to supply.

Competition is also important in the provision of sanitation and faecal sludge management (FSM) services. The sanitation service value chain might be fragmented, and different operators can be working on on-site sanitation emptying, transportation, treatment and discharge, or eventual re-use of by-products. To learn about the market dynamics, the competition regulatory activity must first seek to obtain all the available data and information to assess the existence of anti-competitive abuses. On many occasions, the first step will be to provide licenses to the operators that might be operating in the informal sector. At the same time, it is important to oversee quality of service and public health regulations when trying to establish competition in the market- for example, by avoiding a situation where services providers limit the equipment for sanitation workers to reduce costs. Similarly, as for water, when an abuse is found, sanctions will be imposed, for example, when a few operators in an area have created an oligopoly and agreed to charge an unreasonable tariff to consumers.

4.4 Consumer protection regulation

Consumer protection regulation is defined as the establishment and implementation of a set of specific rules applicable to the water and sanitation service providers in order to achieve the protection of the users. Regulatory actors are due to audit all the available mechanisms for consumer protection, to assess to what extent they are relevant, and to help consumers identify and claim their own standards and requirements.

In addition, regulatory actors collect consumer and operator views through different consultation processes, review the results, and potentially amend regulatory policies. Typical forms of consultations are informal consultation with selected groups, public meetings open to any

user, consultation with other sector regulators, public notice of regulatory intentions, open calls for commenting on policy documents, or preparatory public commissions or committees.

4.5 Environmental regulation

Environmental regulation is defined as the establishment and implementation of a set of specific rules applicable to water abstractions and sanitation chain management, in order to protect the environment.

Environmental regulation of water abstractions may involve a variety of options, with various levels of effectiveness and cost. Generally, a regulatory authority would establish a registry of existing abstraction points and require all new applicants wanting to develop a new water abstraction to obtain authorization in advance. Authorization would include a fee, typically aimed to cover administrative costs. To grant an abstraction license, a regulatory authority would need to assess the impact of the planned abstraction on the environment, and on the existing usages and availability of water resources; as well as to assess whether the water quality of the source matches the intended use. The licensed abstractors may be required to monitor their abstractions (in quantity and quality) over time and report on compliance with an issued license.

Environmental regulation along the sanitation chain (including for both “off-site” networked sanitation and on-site sanitation) can be done in different ways. Commonly, a regulatory authority regulates the quantity and quality standards of discharges and the treatment/use/disposal of wastewater, effluent, and faecal sludge, to prevent heavily polluting substances from being released into the environment, and to ensure minimum environmental water flows in receiving waterbodies (in the case of urban wastewater discharges). The licensed dischargers or users/disposers may be required to monitor their discharges/uses/disposals over time, and report on compliance with an issued license or standard. In the event of a serious non-compliance event, the regulatory body may coordinate an investigation and instruct the

offending operator to remediate and compensate for the environmental damage.

4.6 Public health regulation

Public health regulation is defined as the establishment, monitoring (surveillance) of implementation and/or enforcement, of a set of specific rules to ensure drinking water safety and safe management of the sanitation chain, in order to protect public health.

Regulations should include requirements for monitoring priority substances and for preventive risk management, such as Water Safety Planning (WSP). Often the term “standard” is used to describe the mandatory numerical value in a table of parameters and limits. These standard requirements are usually established at the national or sub-national level and often in alignment with the WHO Guidelines for Drinking Water Quality. Operators then monitor and report to the regulator on compliance against the standards and norms. Support for such monitoring activities may be provided at the national level, especially for carrying out more expensive testing activities. The regulatory body should gather, assess, and publish drinking water safety and WSP compliance data. Other activities to be carried out by the regulator should include auditing WSPs, where WSP are required or promoted, carrying out sanitary inspections (particularly where WSPs are not required), conducting water quality testing to complement the testing carried out by the water supplier, and monitoring and investigating drinking water safety failure events and consumer complaints. In the event of a drinking water safety failure event, the regulatory body may instruct the service provider to remediate the damage, compensate for damages, or to strengthen operations, including introducing or improving WSPs. Detailed guidance has been developed by the WHO on “Developing drinking-water quality regulations and standards” (WHO, 2018)

Public health regulation for safe management of the sanitation chain is an emerging area of regulation. Relevant legislation and regulation and elements may be found under local

government public health, occupational health and safety, environmental, water resources, amongst other areas (WHO, 2018). The regulation of the safe management of the sanitation chain should use risk-based approaches to set health-based standards at each step of the chain. Multiple regulators may be involved in deploying a variety of regulatory mechanisms at each step of the sanitation chain such as planning and building regulation standards for toilets and on-site treatment technologies, licencing of faecal sludge emptying and transport service providers, occupational health and safety regulations to protect workers, and minimum standards for wastewater and

sludge treatment and specific standards for safe use of wastewater and sludge according to the use type. There is hence a strong interconnection between public health, service quality regulation and environment in sanitation regulation.

Regulators may establish a requirement for local authorities to carry out Sanitation Safety Planning (SSP) to ensure risk-based improvements are monitored and coordinated among service providers at the local level. Finally, incentives or sanctions may be imposed on sanitation chain operators and end users of sanitation products, for actions that infringe the health-based standards.

5. THE REGULATORY CYCLE

Whichever regulatory area is analysed, regulatory activity can be divided into three main regulatory powers, that can be organized in a cyclical process (Figure 4). First, Rule definition and Approval Granting is about defining and setting the regulation rules, as well as granting the approvals required for operating water and sanitation related services. Secondly, Monitoring and Informing is about collection of the information and data needed to regulate, and making the information available to the service providers and public. Thirdly, Enforcement is about the mechanisms developed to enforce compliance with the defined rules. The results of the assessment of the information gathered through monitoring, as well as results of enforcement, should inform updates of the regulations and supporting programmes,

with the aim for progressive improvement. These regulatory powers apply to each of the regulatory areas defined in section 4- Tariff setting, Service Quality, Competition, Consumer protection, Environment and Public Health.

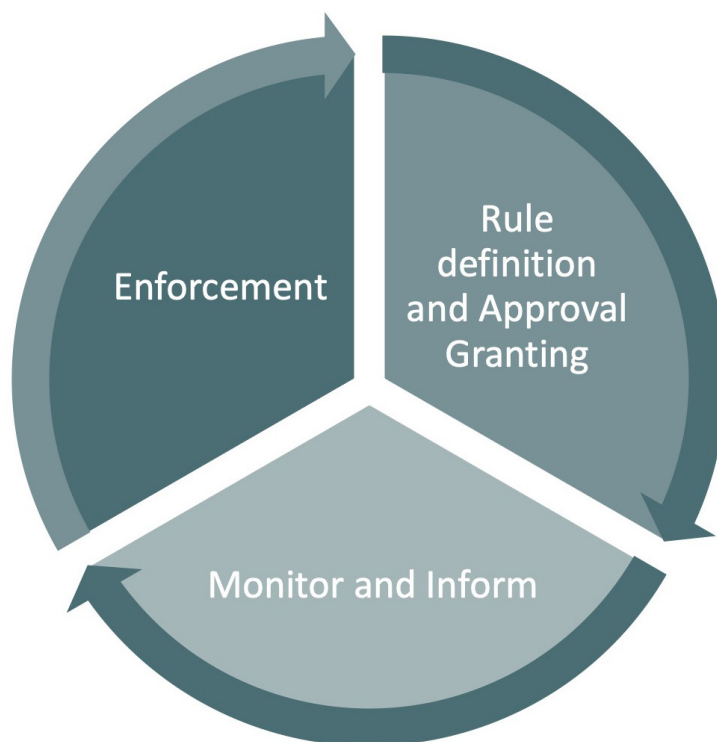


Figure 4: The Regulatory Cycle

6. WORKING WITH REGULATION: THE WASHREG APPROACH'S METHODOLOGY

As previously explained, there is no single model for a good regulatory framework, or for its implementation. Every country has its own institutional and legal settings, each facing a wide range of different challenges. Hence, there is the need to have a structured analysis of each situation, in order to be able to assess and improve the performance of regulation in a given country.

The WASHREG Approach's Methodology is a multi-stakeholder diagnosis, proposed to identify national regulation gaps and challenges in water and sanitation services provision. It is a

systematic approach structured in line with this concept note (see Figure 5), to help decision-makers and practitioners better understand the challenges and different approaches, and help them to implement regulatory objectives. Once conducted, the WASHREG Approach's Methodology results in a set of actions and practical solutions conceived to initiate a process of developing, strengthening, or aligning regulatory roles and responsibilities. The WASHREG Approach's Methodology and Annexes provides a detailed description of the process, and how to facilitate it.

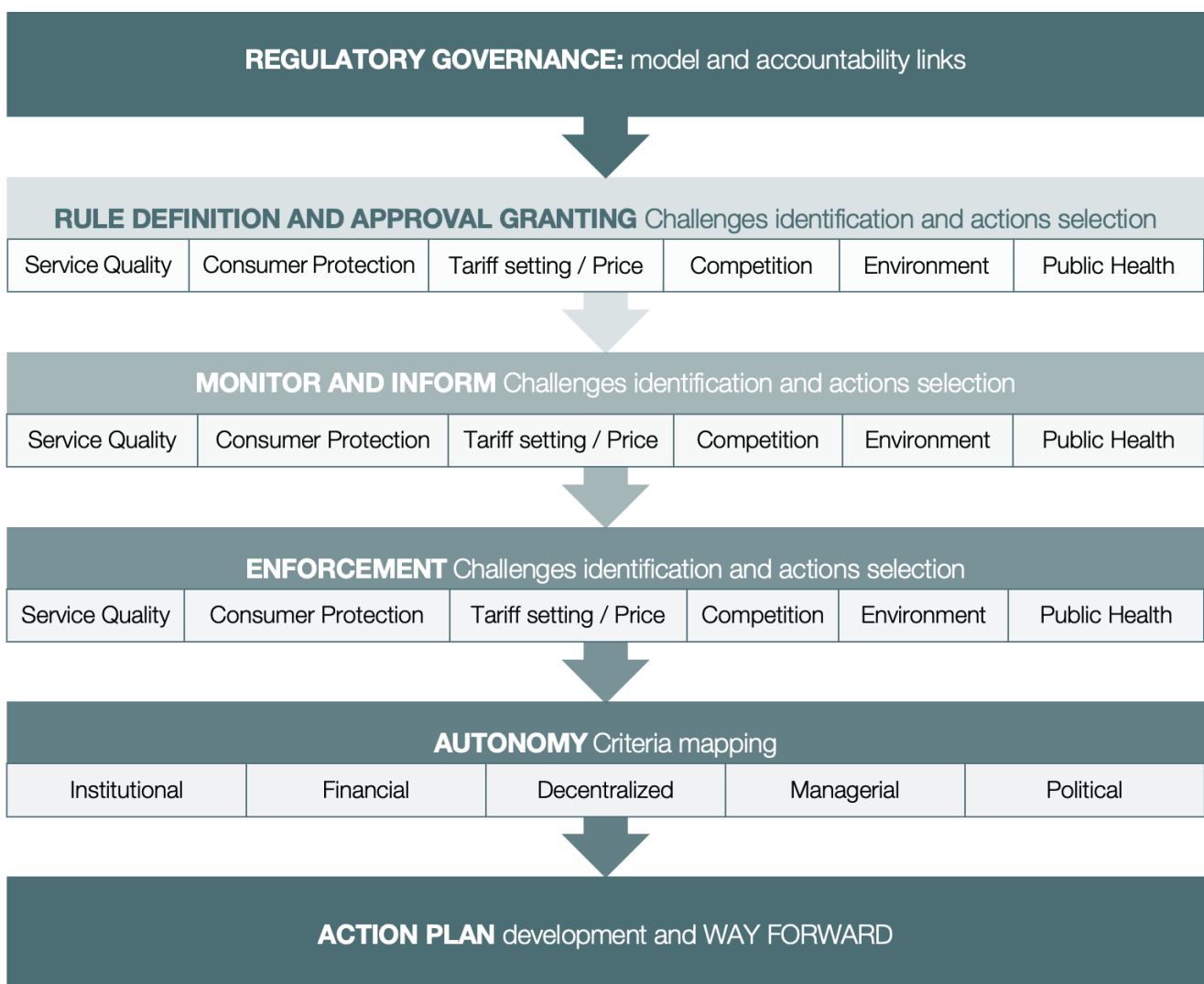


Figure 5: WASHREG Approach's Methodology

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THE
WASHREG
APPROACH

AN OVERVIEW

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