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MANUAL ON THE HUMAN RIGHTS TO SAFE DRINKING WATER AND SANITATION FOR PRACTITIONERS

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Water meters have been installed in this community in Yemen outside of Sanaa but, because of the price of water, metered water is only used for drinking. For all other uses women continue to go to the well (2006) © Robert Bos, IWA

Chapter 7 Addressing sensitive practices, dealing with challenges and avoiding pitfalls

SYNOPSIS

Even when the national policy and institutional frameworks for the HRWS are in place, the HRWS-related functions have been defined, the associated roles and responsibilities have been distributed with clear definition of scope and boundaries, and HRWS criteria and principles have been incorporated into essential functions, service providers, regulators and other water and sanitation practitioners will be faced with unexpected challenges, sensitive issues and unforeseen circumstances to deal with.

Communication is critical and central in the search for optimal solutions.

Water is essential for survival, for economic development and to sustain critical environmental services—the provision of drinking water supply and the management of human waste interfaces with the underlying processes in a myriad of ways, usually determined by local contexts. Therefore, progressive realisation of the HRWS is riddled with uncertainty. Moreover, processes within the human rights framework are not operating in isolation—they may encounter policy and legal inconsistencies, unfounded public perceptions and social barriers, contradictions, or even perverse impacts.

This chapter presents several sensitive issues, challenging conflict situations and potential pitfalls, with suggestions how to address them. Acknowledgement of the HRWS is a recent event, and as realisation of the rights progresses, more sensitive issues will come to light, and more experience will be gained on how to deal with them. Challenges, conflicts or dilemmas covered in this chapter include selecting from technical options, affordability mechanisms, service cut-offs, credit control and debt collection, multi-criteria monitoring, setting geographical priorities for network expansion, land tenure, the use of pre-paid meters, derogations to standards and continuity of services.

7.1 TECHNICAL OPTIONS

In the provision of drinking water and sanitation services there are no one-size-fits-all solutions. When considering technical options for the extension of coverage or the upgrading of service levels, public authorities and service providers will use several decision-making criteria. Many of these will be financial and economic: the investments needed for the different options, combined with the financial implications of operating the system and managing the assets, and the opportunity costs of selecting one option over others. Investment in automation technology, for example, may have to be offset against savings in the human resource base. The decision to invest in service upgrades for one set of customers may have as a result that service expansion plans have to be put partly on hold. Yet savings or extra income resulting

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from the upgrade may increase the future expansion potential. The socioeconomic conditions of the target populations will determine the level of feasible cost-recovery, and levels of acceptability or attractiveness of different technologies will influence willingness to pay. Along the value chain of water and sanitation services, there will be more opportunities for cross-subsidising as levels of sophistication increase in the process of service upgrading.

From now on, the HRWS criteria and principles will have to be taken into account in the decision-making over technical options as well. In some cases this may simplify decision-making: certain options will not be compatible with the new criteria. Or, the impact of certain technical options will favour progressive realisation of the rights so prominently that this overrules arguments in favour of other options. In a substantial number of cases, however, the additional criteria may add further complexity to the process of weighing pros and cons—large service providers may decide, therefore, to establish a separate screening office to ensure all proposed plans, projects and activities are given due consideration from the human rights perspective. Small and medium-sized providers may want to rely on consultants or establish a link with national human rights institutions for advice on the human rights dimensions of their plans and projects. In all cases, public participation, and effective communication and access to information are essential human rights principles to be applied. The affected communities should be presented an honest picture of the gains to be had from the different technological options, but also of their disadvantages, costs incurred and opportunities forgone by choosing one over others. This requires a customer-oriented approach from public authorities and service providers; it also requires strong regulation by an independent authority.

The UN Special Rapporteur focused his 2015 report to the UN General Assembly¹⁴ on the different levels of service and their related technologies. He considered connections to a piped network, communal and shared facilities, and individual on-site solutions. His report considers these types of services in conjunctions with different management models, including utilities; small-scale service providers, with or without a mandate from the State; and, self-supply. He found that the realisation of the HRWS is influenced by the way in which these various types of services are delivered and the extent to which the State has oversight of the service provided.

In rapidly expanding cities (particularly in low- and middle-income countries) or in cities where large backlogs exist in water and sanitation service provision, it may not be possible to provide the same level of service to all communities. Population density is a key factor determining the practicality and affordability of selecting service level options for implementation.

In dense informal settlements, access may present a fundamental problem and therefore standard services may only be accessible on their fringes or in particular areas that have been cleared of dwellings to allow the construction of facilities. This means that specific technologies such as flexible overground pipes may be necessary to provide safe drinking water and fulfil the HRWS in these settings.

In sparsely populated areas, a network of sewers may not be a viable option because of the high cost per household served. In that case on-site solutions are preferable. Geographic stratification is necessary to ensure that technologies “fit-for-purpose” are installed.

7.2 AFFORDABILITY MECHANISMS

Applying the HRWS affordability criterion means that responsible water authorities organise water services in such a way that they are affordable for all categories of users. This does not mean that water for domestic consumption should be free of charge. Apart from those who are totally destitute, everyone

¹⁴http://www.un.org/en/ga/search/view_doc.asp?symbol=A/70/203.

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can afford to make a proportionate contribution to help cover the cost of the water and sanitation service they receive. The fact is that the poor who are unserved by a formal private or public provider often pay considerably more per litre of water to informal service providers (water vendors) than those receiving a formal service (and frequently for water of a poorer quality). Where sanitation services are poor or lacking, the underprivileged pay the price in terms of a degraded environment, ill health and high child mortality.

In his 2015 report to the UN Human Rights Council, Léo Heller, the current UN Special Rapporteur on the Right to Safe Drinking Water and Sanitation, strongly pleads for a shift in thinking about the economics and financing of water supply and sanitation services, from an exclusive focus on cost recovery, whether full or partial, to a combination of human rights and economic perspectives applying the principle that services must be affordable to all (see Box 3.6). These two types of perspectives are not contradictory. It is feasible to reconcile them if the service provider can fully recover its costs (with complementary fiscal subsidies if needed) and if cross subsidies and fiscal subsidies targeting the poorest make the tariffs affordable to the different categories of users.

Solidarity with those denied their rights is part of the HRWS and, in the case of formal service delivery, several mechanisms to enhance affordability for all can be put to function: funding by other users through cross-subsidies or from public budgets through direct or indirect subsidies, incentives for providers to focus their investments on the most vulnerable and marginalised, regulation of tariff structures and tariff setting, and the promotion of payment facilities. Mechanisms to optimise affordability will be subsidiary to a broader set of measures aimed to ensure that everybody can have reliable access to a sufficient quantity of safe water and adequate sanitation services.

Affordability is an issue that cuts across all countries, from low-income countries with poor water and sanitation coverage, to high-income countries where access to water and sanitation is close to 100% but where there continue to be poor, marginalised and discriminated population groups and individuals. A range of systems aimed at ensuring affordability are implemented across the world. However, they do not all have the same impact with respect to the progressive realisation of HRWS.

The HRWS requires that all different individual situations must be considered by the responsible water authorities. In particular, they must check the affordability of the following:

- charges for drinking water consumption by water users connected to piped networks;
- charges for obtaining water at a public standpipe, including the part retained by the standpipe operator;
- prices that are charged by official or informal tankers and other alternative vendors, including those who resell water supplied to them by the formal water utility;
- new connection charges to water and wastewater networks;
- charges for waste collection, in particular whether these reflect the inherent value of the waste as a resource.

Experience shows that subsidy mechanisms that are set up with the intent to ensure affordability of services are far more efficient at achieving this objective if they target poor people rather than serve for the benefit all users. The design and implementation of specific, dedicated services for the poor is not recommended—experience shows that services specifically designed for the poor usually turn out to be poor services. In any case, it is essential to check if subsidies work as initially intended and benefit those who are most in need. There are several options for targeted subsidy mechanisms available.

Rising block tariffs are used both to provide ‘lifeline’ tariffs to help the poor, with top band tariffs aimed at managing demand. Lifeline tariffs are difficult to set: if they are too high the payments for the highest block are insufficient to subsidise the lifeline amounts. In South Africa a block tariff approach has been shown to be successful by limiting the first tariff blocks for free water to those on a register of low income consumers.

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Block tariffs entirely based on fixed volumes fail to ensure affordability in areas where several families share the same tap and therefore jointly constitute a big consumer. This difficulty can be circumvented if the service provider is in the position to know the number of individuals that benefit from each tap, which requires detailed housing records. In Israel, where good records are available, large households receive additional amounts at the 'social' tariff. The introduction of a volume-differentiated tariff provides an alternative way of structuring consumption subsidies. According to this type of tariff structure, consumers are charged the unit price for the last block of their consumption, irrespective of the number of blocks. Only households that limit their consumption to the lower blocks are entitled to a subsidy; those consuming above that threshold pay the higher tariff for all of its consumption (Trémolet and Hunt 2006; Wichelns 2013). In the case of large families or several families sharing the same tap, the problem of affordability becomes more acute with this tariff structure. To address this, in Portugal, for example, the regulator has recommended the creation of a specific "large households" tariff, which aims to correct this distortion by allowing for a lower block tariff when the number of people in a household is over five.

General subsidies to water service providers based on consumption help those who already benefit from a public water service and those who use most water, but do not help in any way those who are not yet served. For that reason, policies must differentiate between types of water users and address their respective needs for affordability. People who do not benefit from full formal services tend to pay more for access to alternative services. They should therefore be prioritised for public-funded subsidies. Affordability mechanisms may include income subsidies, regulations and subsidies for tankers, reduced tariffs at standpipes, and subsidised equipment for household storage.

A key challenge for unserved households may be their financial capacity to connect to piped networks when such services are extended into their neighbourhood or settlement. New customers are generally charged a connection fee usually reflecting the real cost incurred. This is not a realistic option in poor areas, particularly in informal settlements and slums, where a connection fee is not affordable for the inhabitants. As a result, not only do these people not benefit from network extension, but they remain in a situation with high consumption costs and poor services. Subsidising new connections assists the poor directly and reduces the equality gap.

Beyond subsidies, operators can take other measures to enhance affordability. Efficiencies such as economies of scale can help lower the cost recovery threshold. Legal and administrative boundaries can be removed. Billing and payment systems can be designed to match the cash flow patterns of the poor. A business plan with clear coverage targets and differentiated services levels will help support the drive towards greater affordability.

Affordability is not just related to the cost itself but also to methods of payment. The poorer members of society are unable to save. They require methods of payment which do not involve large sums of money at any one time. Consideration should be given to the use of frequent small payments with low transaction costs. This can be through pre-paid metering systems (see section 7.7), by creating payment facilities in supermarket chains or by mobile-phone-based accounts such as those that are used extensively in parts of East Africa.

Both the affordability and sustainability criteria of the HRWS must be combined when deciding tariff structures. Indeed, subsidies to users that are not compensated by other revenues threaten the economic sustainability of the service provider, thus creating a risk that the subsidised service loses its viability or its quality.

7.3 CUT-OFFS, CREDIT CONTROL AND DEBT COLLECTION

Non-payment of drinking water supply and sanitation services poses providers with the challenge to distinguish between those customers for whom the prevailing tariffs are truly unaffordable and those who

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are simply unwilling or forgetting to pay—making this distinction is a delicate matter and needs to be done in a legitimate and non-stigmatising way.

The loss of revenue because of non-payment impacts the provider's capacity to ensure network extension and proper operation and maintenance. Raising tariffs to make up for lost revenue creates the risk of entering into a vicious circle and of expanding the group of customers for whom the service is genuinely unaffordable.

Whenever a customer falls into arrears, providers should attempt to contact the user to understand the reasons for his behaviour. If the user has financial difficulties in coping with payments, the service provider should facilitate the payment of the amount outstanding for such a customer. In some cases this can be achieved by allowing the debt to be paid off in instalments over an agreed period of time. If a family falls significantly into debt such an arrangement may not be feasible. It can create a situation of hopelessness and in those cases the customer may give up paying altogether.

Total disconnection of the water supply should be viewed as a measure of last resort. Rights-based laws, policies and regulations must describe the steps of consultation, recourse and rectification in a process that eventually leads to restrictions of services or disconnection. If at all, absolute disconnection should be reserved only for those customers who deliberately tamper with the water connection to access more than the basic quantity required for meeting essential needs. In some settings, this challenge has been addressed by the use of flow restricting devices that allow a pre-determined quantity of water to be supplied each day. This may, however, not be authorized in some countries.

Before taking action to cut the water supply or sanitation service in reaction to non-payment, customers should be given the right to enter into an administrative process that allows them to discuss their situation with the utility and agree on a course of action to address the repayment of the debt. Options may include the following:

- pay the outstanding water and sanitation charges in arrears plus all current charges in full;
- enter into a credit agreement to re-pay the debt over an agreed period of time;
- in the case of truly entitled families, enter into an agreement where the volume of water supplied is limited to a basic daily amount and the current amount due is paid in full each month, with the arrear amount being written off in monthly instalments as long as the current account is paid in full and on time each month.

Examples of such procedures can be found in the Flemish part of Belgium, where a local administrative committee invites customers with payment arrears to explain and justify non-payment before making a cut-off decision, and in France where a 2004 law (updated in 2013) requires a procedure where the right-holder requests assistance from an administrative committee (Fond Solidarité Logement) in case of inability to pay—this procedure has to be completed before any cut-off decision can be made.

Customers who tamper with a restricted supply on more than one occasion even though they can afford the service should have their water connection removed altogether. Customers would then have two options to facilitate the re-instatement of the water supply:

- pay the outstanding debt in respect of water services charges in full (including all charges) plus the prevailing costs of a new water connection and penalty charges;
- apply for the installation of a flow-limiting device and enter into a credit agreement. In this case, the connection costs and penalty charges would have to be paid immediately.

All illegal connections that are found should be removed and owners and or occupiers of the property may be prosecuted in a court of law. The reasons for their lack of regular access should be investigated. Sanctions or disciplinary measures in relation to non-payment of sanitation services are more difficult, as customers may revert to other ways of disposing of their waste, including open defecation. Such

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undesirable practices may be outlawed, but in reality the capacity to enforce such laws may be poor or non-existent.

In the event of a major family event (birth, wedding, funeral), it must be possible to make an application for temporary relief whereby the flow-limiting device may be removed for a specific period. The application should be supported by a community leader or local political representative. It is advisable for an administrative charge to be applied to cover the cost of restoring the supply temporarily.

The legal capacity to perform cut-offs after completing due diligence procedures is essential for public services, rather than the actual cut-offs; it is a matter of perception by the customers that the threat of a cut-off is real. This perception has an important preventive impact.

In some countries, a cut-off of water and sanitation services can result in serious other repercussions for families. In extreme cases, parental responsibilities may be considered not complied with and children may be taken from their families to foster homes. It is important for providers in their management of customer relations to bring such consequences to the attention of households who are in arrears; but it is equally important to be extremely cautious about cutting off services in situations where this may initiate a down-going spiral in the family situation.

Some countries have adopted legislation that bans disconnection as a reprisal for non-payment altogether. This may lead to abuse which, if substantive, in fact undermines progressive realisation of the enjoyment of rights by all. The costs incurred to service providers by court cases or debt write-offs affect their capacity to invest in operation and maintenance, and in service extension/upgrades. The unfairness of having the costs incurred by those abusing the rules passed on collectively to those conscientiously paying their bills will eventually translate itself into inequalities and lead to a general decline in willingness to pay. Rather than adopting a draconian approach to dealing with non-payers, a balanced policy of service restrictions will benefit service providers and customers alike, with optimal consideration of the HRWS.

7.4 SIMULTANEOUS PROGRESSIVE REALISATION AGAINST VARIOUS CRITERIA

The principle of progressive realisation foresees tangible progress against all criteria. Public authorities have to set targets for each of the criteria, and look for synergies between actions to attain them. Clearly, if, for example, availability of safe drinking water is improved, it makes sense to build on this and invest in improving accessibility—the two would be mutually re-enforcing.

There are, however, also situations where it is more difficult to weigh the positive outcomes of efforts towards achieving a specific target against their inadvertently adverse impact on achieving targets related to other criteria. Investment to guarantee 24/7 operations of a water supply system will have immediate spin-offs for the improvement of water quality, but it is often argued that this implies short-term opportunity costs: ensuring 24/7 operations will need resources that cannot be used for a further expansion to extend coverage to unserved groups or may negatively affect the level of affordability of services. This is a false argument. Without 24/7 operations, systems cannot be extended because of high losses and low pressure. Unless this is recognised and the necessary investments are made, existing systems will deteriorate, regression will occur and there will not be sufficient water available to expand the coverage.

With respect to sanitation, it may be more feasible to expand a sewerage system gradually, by linking to decentralised treatment plants in a modular way rather than make a one-time massive effort around a single centralised treatment plant. The question then arises: what is the cost of offering acceptable interim sanitation to the communities that are waiting for a connection?

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It is in such situations that the cross-cutting HRWS principles need to be taken into consideration. Choices between different options will need to be seen in the light of their impact on reducing inequality and discrimination. This will require a sound mapping of inequalities and discrimination, so that the decisions can be evidence-based.

7.5 SETTING GEOGRAPHIC AND INVESTMENT PRIORITIES

The legal framework does not prescribe the rules governing priority setting. Priority setting, in the end, is a political or a management process. This process can now benefit from the transparent inclusion of human rights principles, in particular equality and non-discrimination. Progress towards the HRWS targets cannot be uniform, equally balanced between all criteria and all parts of the population. Any significant action or investment will benefit a specific part of the population and probably not for all the criteria simultaneously.

As the process towards achieving the agreed targets takes its course, the priority setting may be challenged by people who have interests in seeing alternative combinations of criteria or principles being pursued. Furthermore, improvements by addressing one criterion may be to the detriment of efforts addressing another. For example, improving “access” through building a piped water network in a slum may result in decreased availability of water to those who are already connected to the existing network unless additional inflows of safe water from the source can be guaranteed. Having reliable distribution network models is essential for a reasonably accurate prediction of the impact of changes on how water is distributed.

Examples of challenges in priority setting follow.

- Extending the water service. When funds are available to extend the public water network, there may be dilemmas in the selection of target areas. How to select which unserved area should be connected first? The outcome may differ depending on whether criteria are applied from a strictly socioeconomic development perspective or from a human rights perspective. One approach might favour extending services to a new industrial zone to promote jobs and the economy, while the other might seek to provide services to an existing slum. Having a master plan in place for the medium- to long-term may help overcome these short-term dilemmas.
- Upgrading an existing system. When trying to restore a degraded system in a big city, it may be decided that it is more important to concentrate on repair of a leaking network than to invest in improving water quality management at the water treatment plant. This would make sense from a sustainability perspective because of the waste of resources that the loss of water from a network with extensive leaks and subject to inflow of polluted groundwater represents. Also, without maintenance of the existing network, its further expansion is hard to envisage. Others may argue, however, that rehabilitation of a network requires considerable capital investment, and that improving treatment and prioritising continuous disinfection will contribute significantly to the progressive realisation of the HRWS at a lower cost.
- Maintenance and/or improvements. A very common challenge results from the need in many cities to maintain, renew and possibly upgrade existing water networks and to create, simultaneously, new networks to supply taps or standpipes in unserved areas. Both are necessary from a human rights perspective. The people who already benefit from a public service should have this service maintained without degradation to respect the principle of “non-retrogression”. Those who do not benefit from a public service may live under such precarious conditions that providing even a mediocre service would be a relief to them. The allocation of financial resources to either existing

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public systems or to unserved will always present a challenge. The critical human rights indicator will be which of these two actions contributes most to the reduction of inequality. From a practical perspective, however, it may be more realistic to improve the reliability of water supply to existing served areas before embarking on extensions of the coverage, which could result in reduced service reliability for a greater number of people. Yet it is unacceptable for service providers to use this argument to postpone the process of extending coverage to the underprivileged indefinitely. The aim should be for those already enjoying a service to pay for any improvement in service level through the tariff. For the service provider this may imply the need to borrow capital. The cost of borrowing (i.e. the interest payments) should be met by those receiving the service through the tariff and should not disadvantage the unserved.

Making the appropriate decisions in these situations will be a challenge and usually requires letting human rights principles weigh in heavily while balancing a combination of technical, social, economic, public health and political considerations.

In differentiating between areas or population groups, it is necessary to have a clear policy that sets out the parameters that will determine the levels of service that are acceptable in any given area, as well as the manner in which these services could be upgraded in future. This 'ladder' concept of progressive realisation will make it possible for public authorities and service providers to develop a medium- to long-term development plan for upgrades over time, as affordability levels and the density levels within an area gradually increase.

7.6 LAND TENURE

In many low- and middle-income countries, the situation of land tenure adds a layer of complexity to efforts of progressive realisation of the HRWS. Yet, millions of people have set up home in informal settlements, without a legal entitlement to the land.

Governments will struggle against such situations, either because they aim to protect vested interests or areas reserved for public investment, or because the areas are prone to natural hazards. In either case, governments need to contain a situation that could further run out of hand. As a result, several countries have legislation prohibiting the extension of services to families living in informal settlements or who are squatting. Such legislation is incompatible with the HRWS, because it denies the individuals' rights to access to safe drinking water and sanitation. In such situations, service providers are only left with the option to work with government on legal and policy reform. Frequently, there are conflicts between rights, like property rights or safety regulations. The HRWS must, however, be respected. This may imply temporary solutions with specific technical options to make water and sanitation available to the inhabitants until the land tenure situation is resolved or they move elsewhere. Some governments may be reluctant to provide drinking water and sanitation services on a temporary basis because it may be perceived as a settlement right. In Morocco and Bangladesh, for example, this obstacle has been circumvented by adding a clause to user contract in which the users recognize that temporary access to services does not imply any settlement right whatsoever. Such contracts are signed before the service is actually provided.

At the other end of the spectrum, countries where the HRWS has been incorporated into the Constitution, or where laws and strategies have been adopted that *de facto* support progressive realisation towards the rights, service providers willing to extend their services may find themselves in a complex legal situation with land owners and inhabitants of informal settlements. Legislation on land tenure may include measures to counteract speculation, overturning ownership if original destination plans are not complied with within a given time frame. In such cases the informal settlements may be formalised, opening the way to "legal" provision of water and sanitation services. The legal proceedings may be long and

Box 7.1 Access to water, land tenure and human rights in Mumbai, India

A recent report in the *Bulletin of the World Health Organization* (Subbaraman and Murthy 2015) illustrates the fact that legal, institutional and policy barriers are often greater obstacles to expanding access to drinking water than monetary or technical challenges.

In 2012, the global population of urban slum dwellers amounted to over 860 million people. In India, a distinction is made between notified and non-notified slums. In some cities in India those living in notified slums (i.e. slums that are recognised by government authorities) are entitled to land tenure, as well as access to city services, including drinking water supply. In 2012, 59% of slum settlements were non-notified.

Mumbai, with arguably the largest slum population of any city in the world (over 6 million of its 12 million inhabitants live in slum settlements), has a policy that bases the divide between notified and non-notified slums on a cut-off date: all slum household who settled on State of municipal-owned land before 2000 can obtain notified status. Those settled on central Government-owned land cannot benefit from this policy and remain non-notified.

Differences in these populations come to expression in community health status, and in the affordability of water: water purchased from water vendors in non-notified slums is over 40 times more expensive than water provided by the municipal water utility to residents of notified slums.

After years of litigation, in December 2014 the Bombay High Court ordered the city government to extend access to Mumbai's water supply to residents living in non-notified slums. The court order uses a human-rights-based framework, holding that the right to water is central to the right to life guaranteed by the Constitution of India. It also states that water access should not be tied to the property rights of a slum, thereby disentangling security of tenure from the right to water.

Source: Subbaraman and Murthy 2015.

cumbersome, and in the process the landowner may take action to develop the land in accordance with the original destination plan—and forcing eviction on the informal settlers. Government should recognize that the HRWS must be satisfied irrespective of whether or not illegal settlers move to another location (legally or illegally). They should not block formal service providers from delivering services to illegal settlers. Often service providers lack the necessary decision-making power, and governments should therefore issue explicit authorisations to service providers to address the water and sanitation needs of illegal settlers at least temporarily, irrespective of the views of the land owners.

An active role for formal service providers in this context is not easy to envisage, if public authorities do not want them to provide any service in informal settlements. Informal service providers and national or international NGOs may be better equipped to tackle these issues and provide some interim solution for drinking water supply and sanitation. There is, however, an important role for drinking water regulators—they can coordinate with the regulatory counterparts on land tenure issues to ensure the framework for regulation is harmonised and informal settlers can enjoy their rights to water and sanitation.

7.7 PRE-PAID METERS

Pre-paid meters have been used successfully in ensuring that a customer only gets what they have paid for and significantly reduce the personnel cost and human error in reading meters and delivering bills. They provide the opportunity for water users to pay as they go and specific tariffs can be applied. They also make it possible for people to manage their consumption according to their needs. They have a downside in that there is no interaction between the service provider and its customers, and significant

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social issues may arise from time to time. In areas where tendencies to tamper with installations may be prevalent, use of pre-paid meters may result in high unaccounted water use (non-revenue water) through illegal connections. The irregular income patterns of the low-income groups may complicate the use of pre-paid meters. Pre-paid meters have been used successfully, however, among the commercial and middle-income customers with capacity to pay in advance.

7.8 INTERIM STANDARDS

Standards are tools that help to achieve objectives. They should not be confused with the objectives themselves. National standards are often based on international guidelines or performance measures, but how they are set should take into account the current performance situation in that country. It should be recognised and accepted that there will be interim stages before performance according to the “gold standard” can be achieved. This is particularly important in the context of the HRWS since the failure to reach specific standards must not be confused with rights violations. Setting interim national standards is consistent with progressive realisation.

For example, the WHO Guidelines for Drinking Water Quality define recommended guideline values for chemical and biological substances that may be present in drinking water. These values are set to maximise the probability that compliant water is safe for human consumption. The long-term target for all should be for compliance with the standards that have been successfully adopted in high-income countries. In many parts of the world, water is, however, often unsafe to drink and setting and even achieving lower interim standards would already result in significant health improvements for all. In contrast, the high level of investment to achieve the best international standards in countries in which water supplies are currently intermittent, and many people do not receive any level of public service, would have additional health benefits to a few at the detriment of many. This would slow down progress towards the realisation of HRWS. This is why temporary local derogations to standards or, more appropriately, the adoption of achievable interim standards (milestones), are a common approach by authorities responsible for public health. This approach is not only in line with HRWS requirements but provides for more rapid progress towards providing an improved service to all.

The WHO Guidelines themselves suggest this approach, well aware that fixing a global “gold standard” will encourage non-compliance. Sovereign countries are recommended to establish realistic water quality standards and good practice for water quality management, through the formulation and implementation of water safety plans. Such plans start with the establishment of acceptable health-based targets (see Annex A).

7.9 CONTINUITY OF SUPPLY

In many low- and some middle-income countries it is common practice for water supplies to be rationed by hours of supply in sequence across sections of piped water supply systems. From the system’s perspective, this may have two adverse effects. Rationed supplies require depressurisation and pressurisation of water mains in the distribution system. One consequence of this practice is that the pipes deteriorate more quickly, making them more susceptible to bursts, to increased leakage and to greater losses due to non-revenue water. Another consequence is that for periods of time there is no or negative pressure in the system, so there can be infiltration of the system by contaminated water. From the water user’s perspective, in addition to health risks and unreliability of access, there additional costs are incurred since users have to equip themselves with local –private or communal- storage capacity.

Addressing sensitive practices, dealing with challenges and avoiding pitfalls

Both consequences have implications for HRWS related to the criteria of availability, safety and affordability. More importantly, however, this practice initiates a downward spiral of service and has significant implications for the demand on water resources. The downward spiral results in a regressive service and loss of the human right to those affected. The achievement of continuous supplies (so-called 24/7) in the State of Karnataka in India resulted in a requirement for less source water even though the whole population now receives a safe continuous supply¹⁵. This has important implications for investment as additional source water and treatment capacity are not required.

Another experience related to reliability and continuity of service, also from India, shows how dengue fever, originally an urban disease, expanded into some of the rural areas because of the introduction of piped water supplies. As the piped water supply service was highly irregular and intermittent, people started to store water much more intensely as when they had been collecting water from wells, creating the necessary breeding places for the dengue mosquito vectors. As a result of this development, the transmission of the disease gradually extended into parts of rural India.

Although 24/7 can be seen as part of meeting the HRWS requirement of continuity of supply (which can also be achieved through local storage) continuity of pressure is essential to avoid system deterioration, a decline in service level and contamination.

¹⁵The Karnataka Urban Water Sector Improvement project. 24x7 water supply is achievable. World Bank Water and Sanitation Program Field Note. September 2010. https://www.wsp.org/sites/wsp.org/files/publications/WSP_Karnataka-water-supply.pdf.