What do we mean by ‘the poor’?
The income poor: ‘material lack (<$1 per day), with physical weakness’
The ‘health and education poor’
The ‘quality of life poor’
The ‘housing poor’: slums/informal/illegal areas poor
The ‘powerless poor’: ‘insecurity and vulnerability, bad social relations, low self-confidence and powerlessness’
Remembering the particular characteristics of poverty: unemployed, underemployed, randomly employed, daily income employed, over-borrowed; disabled, single parent, chronically sick, pensioners/aged; children/street kids

What can pro-poor regulation achieve?
How can the regulatory process be enabled to incorporate a bias towards the poor?
How can ‘bureaucratic’ regulation maintain the necessary flexibility in service delivery to the disadvantaged?

Developing an evolving Universal Service Obligation

DFID
Knowledge and Research Contract R8320
Incentive based, economic regulation of monopoly water and sanitation providers is a powerful tool for improving services. Regulators determine the maximum water price (‘price cap’) needed to finance a desired level of outputs. Prices in high-income countries have tended to increase faster than inflation as society demands higher standards. Prices in lower-income economies have usually been significantly lower than costs and also need to rise, particularly to fund service expansion. The total revenue requirement (from which the price cap is derived) is determined, using the ‘building block’ approach, by adding anticipated operating expenditure to planned capital expenditure (for capital maintenance as well as for improvements in quality, security of supply, service standards and service extensions), plus an acceptable cost of capital (to service any debt finance for example). Both opex and capex plans need to include efficiency targets derived from comparisons between a number of providers. Water providers are allowed to retain any further efficiency savings achieved within the price cap for a period (five years for example) which is an incentive to achieve even higher efficiency, before the benefits are shared with customers in reduced prices or enhanced standards for the future.

This model has been adapted around the world with varying degrees of success, usually in the context of a Public Private Partnership. Until recently the approach has tended to be reactive rather than proactive regarding early service to the poor. There is now a recognised need for adequate economic regulation of public providers, as well as private companies, in lower-income countries, to deliver similar mechanisms for financeability and efficiency and as a pre-requisite for developing effective pro-poor urban services.

This DFID research project seeks to give water regulators the necessary tools to require the direct providers to work under a Universal Service Obligation, to ensure service to the poorest, even in informal, unplanned and illegal areas, acknowledging the techniques of service and pricing differentiation to meet demand.

Looking to achieve early universal service, the research also considers how the role of small scale, alternative providers can be recognised in the regulatory process. Customer involvement, at an appropriate level, is seen as the third key aspect. The research investigates mechanisms for poor customers, and most importantly potential poor customers, to achieve a valid input to regulatory decision-making to achieve better water services within the context of social empowerment and sustainable development.
Enabling effective pro-poor regulation

There are a number of obstacles to effective pro-poor regulation as identified by the case study research. Part 1 of this Guidelines paper proposes potential solutions. Part 2 outlines the vision for pro-poor regulation and universal service, and Part 3 offers an interpretation of the vision and summarises practical suggestions for implementation in lower-income economies. Further information can be found in the relevant ‘tool box’ summary papers.

PREREQUISITES

Information

Reliable information is at the heart of effective economic regulation. It is not possible for a regulator to determine appropriate tariffs relative to desired service levels without the detailed information necessary to populate the financial model. Considerable effort is spent on balancing the effects of information asymmetries between providers and regulators in mature regulatory systems. In addition to information requirements mandated by licence or contract, incentive systems are used to induce firms to reveal their efficiency potential over time, thus adding to the quality as well as the quantity of available information with the added value of leading to cost reductions for the benefit of customers and society as a whole. Water regulators in developing economies, faced with the challenge of facilitating service provision to a large and overwhelmingly poor proportion of consumers, who are currently excluded from the convenience of networked water services, are frequently constrained by the lack of basic information about who is actually being served, over and above the technical and financial information advantages held by service providers.

Obstacle 1: Lack of reliable information on existing and potential customers

Whilst modern information management is revolutionising administration in many water companies, the customer data held by formal service providers falls short of meeting the requirements of ‘regulating for the poor’. Census data and independent (e.g. government) poverty assessments, which might complement available customer data, may contain significant statistical errors. Nevertheless, in order to develop an approach to pro-poor regulation appropriate to a particular country (or even city) context, regulators need comprehensive information on existing and potential customers within their area of authority. Background information on social and cultural attitudes, which influence customer expectations and preparedness to take responsibility for certain aspects of the service, are as important as accurate data on poverty incidence and segmentation amongst consumers.

Obstacle 2: Lack of reliable information on water service options for existing and potential customers

Authoritative access data for different water service options can be equally scarce, and inconsistencies between different data sets are not uncommon. While information on formal networked services is most readily available (figures for non-networked services less so), coverage data for formal providers must be viewed with caution. Generous assumptions for the number of persons using a household connection or public standpipes may exaggerate success. The picture is much less clear for alternative service options. Comprehensive databases on alternative providers, for instance, are virtually non-existent.
Likewise, access statistics have rarely been linked with socio-economic data.

**Proposal:**

**Customer differentiation and social mapping**

Target groups for special consideration must be assessed based on their vulnerability and location with respect to existing service areas. The different aspects of poverty other than low income must be taken into account. Vulnerable groups frequently include single parent families, female-headed households, pensioners, the sick and disabled, pensioners, the unemployed or underemployed, larger than average households, slum settlement tenants or groups excluded from welfare assistance on the grounds of residential status. Social mapping can be a useful tool to combine water service and consumer data, which when overlaid can help select priority areas for service improvement, or indeed service extension into new areas.

At the same time it is essential to recognise the limitations of water regulation, as certain groups of society may require a level of assistance that is beyond the capabilities of regulated water service providers. It is therefore recommended to establish the likely candidates for formal, networked water services, whose demands will need to be taken into account in the preparation of future investment programmes. Basic minimum services, closely matched to households’ willingness and ability to pay, should be offered to poor customer groups at the lower end of the poverty spectrum. Due to the delicate financial situation in most cases, those with no means to make contributions to ongoing service provision in cash must be taken care of under welfare programmes so as to not jeopardise service for all. Detailed indicators describing the categories shown in the diagram above are highly context-specific. Care should be taken to avoid demeaning terminologies, which the public may be very sensitive to.

It is not the role of a regulator to collect and continuously update the information required for regulatory decision-making. Accurate water service information, explicitly linked with socio-economic data, should be the responsibility of formal providers as part of good demand management practice and system development projections. Experience in higher-income countries has demonstrated that all utilities need to know who their customers are, present and potential, with information technology available to overcome the challenges faced by larger utilities whose customers otherwise should benefit from economies of scale. As a starting point coverage statistics should be disaggregated by customer categories and/or location. Likewise, monitoring of active connections would shed light on the operator’s efficiency in maintaining customer satisfaction and hence actual success rates in improving access and encouraging water service uptake.

Alternative means of data collection and maintenance must be sought in areas where the utility fails to provide acceptable services, i.e. certain “pockets” within the service area (slums, illegal settlements, etc.) or the peri-urban fringe outside of the contracted service area. Data collection is those areas – likely to comprise the target groups for pro-poor regulation – can be subcontracted, e.g. to NGOs, community associations or other social intermediaries, but could nonetheless remain the responsibility of the main provider: underserved pockets within the service area unquestionably are within its remit, irrespective of the ‘legality’ of settlements, whilst a proactive approach to service area definition (i.e. reclassification once certain conditions are met, such as automatic review in line with municipal growth and adjustment of administrative boundaries, or inclusion of peripheral areas that have reached critical size and/or housing density) would capture fringe areas.

Understanding areas of potential demand sooner rather than later must always be beneficial to utilities’ long-term planning process. The costs of undertaking
A Pro-Poor Regulatory Framework

this work in advance of service provision (and therefore allied revenue generation) can be funded through the regulatory process by adjusting tariffs to suit.

Regulatory framework

A second important set of constraints arises from the fact that economic regulators, though often expected to deliver socially desirable outcomes, are not policy-makers. Regulators may stretch to imaginative interpretation of existing rules and regulations, but ultimately the ground rules are set by political decision-makers. Unfortunately, this may lead to the regulator being required to perform a delicate balancing act as contradictory demands are placed on service providers and the regulatory system alike.

Obstacle 3: Ambiguous or contradictory strategic sector targets

Unreliable access statistics, especially in informal areas and regarding services catering for low-income customers, represent a first and serious impediment to the formulation of realistic (achievable) and pro-poor sector targets. As lack of knowledge, compounded by misconceptions about ‘the poor’, prevails amongst many planners and decision-makers, targets may exceed what even the most efficient system could be reasonably expected to deliver in the given time frames. Moreover, policy-makers often fail to associate the financial implications of any requested connection targets and below-cost tariffs for low-income customers deemed essential to safeguard affordability. Cost recovery is increasingly recognised as essential for the sustainability of the water industry and thus declared a primary policy objective. However, in few cases are cost recovery objectives synchronised with social protection objectives with the two left to co-exist in spite of mutual exclusivity in their existing form.

Obstacle 4: Conflicting objectives and high risk of interference

An incomplete separation of operator, regulator and policy-making function has been a common observation in the case studies undertaken for this research. Regulators often find themselves in the midst of a power struggle between influential vested interests, which can seriously impede the regulator’s effectiveness in securing support for and compliance with regulatory decisions. Problems are most likely to arise where there is an imbalance between responsibilities given to regulatory authorities (and high expectations are to be met) and the powers available to regulators to carry out their functions. Tariff setting, one of the critical tools of economic regulation, is a prime example. In some locations tariff decisions remain firmly vested in political hands. The consequences of governments’ ‘unwillingness to charge’ for political reasons – service failure and desperate need amongst the low-income population – are the very reasons for water sector reform and the introduction of regulation.

Proposal: Embrace a mediator/facilitator role

As water regulators are facilitating governments’ duty to serve the public, a guiding concept and a supporting set of regulations – not to be confused with the process of regulation itself – need to be provided by the legislature. A mandate providing legal clarity and a mission in the form of a set of clear and achievable objectives allow the regulatory authorities to carry out their work effectively and purposefully. The third supporting ‘m’ on the wish list of regulators, it emerged during the course of this research, was money made available by governments in the form of grants and subsidies where cost recovery and social objectives conflict. As this research has shown, imprecise legal mandates can (to a certain extent) be compensated for by increased accountability on the part of the regulator, and legitimacy gained through special regard to consumer involvement in order to secure public support.

There is a vital role for the expert regulator to facilitate understanding amongst leading decision-makers, especially where governments have failed to recognise links between sector targets and funding required to meet these targets, or where expectations exceed what public or private utilities – even under a demanding regulatory system – can reasonably deliver without the government accepting a share of the financial commitments. Besides, even where they are denied ultimate tariff-setting powers, there can be a meaningful role for regulators. Their expertise enables them to evaluate different technical options

Project Aim: To give water regulators the tools, that is the technical, social, financial, economic and legal understanding or framework to enable them to require, facilitate and monitor the early achievement of the universal service obligation as a primary duty.
The Vision: Universal Water Service

vis-à-vis financial and social implications, making impartial recommendations to (political) decision-makers, who are likely to lack the required level of insight and neutrality.

A VISION OF UNIVERSAL SERVICE UNDER PRO-POOR REGULATION

The vision for water services regulation in lower-income economies includes a pro-poor bias in support of national and international development goals and the achievement of universal service – adequate and sustainable water services for all. A special regard to poor and vulnerable people is deemed justified in terms of the potential public health benefits to society as a whole in addition to the goal of poverty alleviation. That regard is also necessary in view of the high capital intensity of the water business and generally weak governance systems in many target countries, which have led to the failure to meet the most basic requirements of the poor. The proposal is to give regulatory authorities a primary duty to oversee and facilitate a Universal Service Obligation (USO) on water service providers in addition to their primary duty of ensuring the financeability of operations, capital maintenance and capital enhancement.

The concept of universal water service

As the Literature Review has shown [3], the use of the term ‘universal service’ frequently confuses its economic and social meanings, ignoring its historical development with reference to competitive markets rather than through regulatory intervention and deliberate social policy. Within the water sector the notion of ‘universal access’ is underpinned by an ambition to promote socially desirable consumption levels based on strong public health and social welfare imperatives. However, a clear definition of ‘universal water service’, crucial for pro-poor regulation, is needed – though precise indicators may differ depending for individual regulatory systems.

The concept of ‘universal water service’ underpins household water security, which refers to a reliable and safe water supply of sufficient quantity accessible for use within the home. It encompasses notions of access, adequacy, sustainability as well as equity and fairness in the guise of affordability. There continues to be a widespread overemphasis on technical aspects of ‘adequate access’, mis-interpreting service levels (i.e. available water source, such as springs, public taps, household connections etc) as ‘access to water services’. The sustainability criterion of universal water service links with the financeability requirement in that finance must be secured to make services available and ensure their continuing availability, and stresses the fact that any universal service obligation must not destroy the financial sustainability of the service provider. It also touches upon the need to consider natural resource availability and protection and wider governance issues. Sustainable, universally accessible and affordable water services cannot be achieved simply by stipulating a USO for providers and instating a regulator to oversee its implementation. By demanding universal water service, society – government and individual consumers – must accept responsibility and strive to meet the complementary obligations arising from the USO on the provider. This is why USO should be harmonised with other sector targets, or else it will descend into bureaucratic irrelevance as ‘just another sector target’. To some extent this reiterates an earlier point; the regulatory framework, including legal provisions to this effect, is critical to the success of pro-poor regulation and the achievement of universal water service.

Defining universal water service and USO

A definition of universal water service must recognise the corollary of the ‘adequacy’ requirement: If the aim is to encourage an acceptable consumption level, the emphasis must be on water use, not simply access. It is worth noting that equity considerations do not necessarily require ‘same services for everyone’. Case study research has shown that under certain

Considerations for ‘adequate access’:

- Facilities must be convenient and responsive to actual needs to as to encourage optimum water service uptake/use
- Ideally, the need for consumers to adopt coping strategies would be eliminated - benefits will accrue predominantly to the poor and vulnerable
- Equivalent, not identical, services should be available to customers within the same category
- Service levels should be matched to customer needs
Universal Service Obligation: A ‘Moving Target’

Dimensions of the ‘moving target’ USO for the main provider

Space – service area
Initially, this will account for failures to provide adequate (or any) service in certain parts of the service area – alternative arrangements (e.g. partnership with NGOs/community associations, sub-contracting to other operators/alternative providers) will need to be sought. The space dimension would also capture natural growth/expansion of the service area relative to housing density as well as need.

Time – deadlines
The precise definition of the USO will necessarily change with time: (1) in recognition of the fact that the goal of 24/7 potable household service and high-specification sanitation facilities take time to achieve. (2) Further changes will occur in response to spatial adaptation (changes to the contracted service area) and the evolution of service options in line with the gradual improvement of network capacity and customer preferences as well as, eventually, technological innovation and ecological demands. For the USO to have tangible and long-term benefits for low-income households it is critical to recognise standpipes, for instance, as only temporary solutions.

Service types and levels – targets
With respect to service levels it is important to recognise the wide spectrum of service options that can be provided by a network, ranging from public standpipes to yard/shared connections to private direct household connections. It should also take into account quality of service aspects, not simply the physical availability of service options.

conditions equivalent services would be the rational choice. For instance, in remote corners of a provider’s service area, a regular tanker service in combination with sound household storage facilities could provide a more economical service in that technical problems associated with long pipelines (e.g. physical losses, low pressure, high chlorination levels) can be avoided, ultimately to the benefit of the customer.

Nevertheless, the ultimate aim should be to provide household-level services, which equates to a private household water connection with a 24/7 supply of potable water. [While a ‘first world standard’ is entirely reasonable, i.e. both desirable and achievable in developing economies, as far as water supply services are concerned, the sanitation equivalent, water-borne sewerage, is arguably not the right solution in many locations.] No doubt this appears to be a distant goal for many urban low-income communities in the developing world. For this reason, the definition of a universal service obligation should reflect the evolutionary nature of its constituent targets: space, time, and service types and levels (see text box).

If universal service is thus to be regarded as a dynamic concept, policy-makers are called upon to set the direction of evolution, whilst regulators drive the pace, relative to costs and potential revenue. The USO on the service provider therefore does not exclusively refer to any specific point within the spectrum. It will at first have to be set to an initial set of parameters, but will subsequently be continually adjusted in pursuit of the next incarnation of ‘universal service’.

Such a definition acknowledges the fact that ‘100% coverage’ – a common assumption – cannot constitute the single criterion for achievement of a USO, as it does not account for service quality aspects, such as reliability of supply, which this research has confirmed to be equally important to existing and potential customers. Equating ‘universal service’ with ‘100% coverage’ also creates difficulties with small minorities that simply cannot be served under conventional service models (as discussed above).

GUIDELINES FOR PRO-POOR REGULATION: IMPLEMENTING AN EVOLVING USO
In highly simplified terms, the process of pro-poor regulation entails driving the continuous evolution of a universal service obligation towards higher - but realistic – goals, so as to accrue progressively the benefits of improved water services to disadvantaged households and communities. The regulatory problem, implementation of the ‘moving target’ USO, can be divided into three main aspects: (1) defining and redefining/adjusting the USO, (2) allocating USOs, and (3) sustaining/ funding universal service.
1a) Defining USO

With tariffs very rarely approaching cost reflectivity, creating universal access, not affordability, will be the priority concern in the majority of situations. Though, of course, improving access can create affordability problems if cost allocations do not account for potential customers’ ability to pay. Choosing the right initial set of parameters for a USO is closely related to the information problems discussed earlier.

Consumer involvement at a level appropriate to the various consumer groups identified is an appropriate regulatory response. Identifying and involving all existing and potential customers, especially the low-income communities labelled ‘hard-to-reach’ and unserved by conventional water service providers, requires a level of skill that may not be readily available amongst technically oriented regulatory staff (and indeed amongst many operators). ‘Tool box’ summary paper [17] and [18] outline lessons from worldwide experience and suggest strategies to develop effective two-way communication and direct links between regulators and protégées. In defining and developing the USO, regulation must recognise the vital role of civil society as well as the explicit and implicit contributions it can make to empowering the poor by formalising arrangements at an appropriate level. Consumer involvement can also help with assessing real demand for services and match the right service with specific customer groups and/or areas. The idea behind service differentiation, as outlined in ‘tool box’ paper [18], is to allow some flexibility in meeting minimum service targets (that is, bypassing the tight bounds of conventional, ‘first world’ technical service standards) and reflecting the savings in lower prices for the poor whilst achieving the desired convenience of service.

The challenge lies in aiming high enough to make significant improvements, but low enough to make the USO achievable – the latter primarily to avoid disappointing unreasonable expectations, be they held by customers or governments. Whilst exact definitions will necessarily have to be context-dependent, so that no generic standard can be
Regulating

suggested at this point, a USO should be specific and indicators measurable. Of course, close cooperation will also be required with service providers and other (government) agencies. Targets are not simply ‘good’ if they are socially responsive, they must also recognise external constraints, such as situational water resources.

1b) Adjusting USO

If continuous improvement is the aim, the question then becomes how and when to adjust USOs. For example, a challenge in capturing the ‘space’ dimension is the problem of fluid and ill-defined administrative or municipal boundaries, which may rapidly outgrow contractually agreed service areas. Likewise, the USO should encourage transitions from ‘good enough’ to ‘better’ services, i.e. differentiated service standards are not to be understood as permanent solutions. [However, in some cases they certainly could be; an example would be condominial sewerage as piloted in Latin America. Certainly within the water supply sector, the goal of individual access to safe and reliable water within the home should not be compromised.]

While this may not be a problem, at least initially, in low-income communities, customers’ expectations can be generally expected to rise with increasing economic wealth. Again, customer involvement will remain a crucial tool for distinguishing between (individuals’ and society’s) needs and expectations and managing demand and expectations. [In the initial stages of pre-poor regulation, objective needs may actually exceed subjective expectations, and issue that regulators need to handle with sensitivity, negotiating affordable minimum service standards in support of public health.]

Transparency in the evolution and redefinition of USO is paramount, or the regulator could be justifiably exposed to the criticism of continuously ‘moving the goalposts’. Adjustment could be conveniently incorporated in a process similar to the ‘rolling incentive mechanism’ used by regulators such as OFWAT (England & Wales) to promote the early achievement of greater efficiency. In terms of timing of adjustments, the process might be similar to tariff adjustments, for which there are basically three options: periodic reviews, partial or ‘extraordinary’ reviews and automatic adjustment. Contrary to preferred tariff setting procedures as observed in the case studies, a ‘periodic USO review’ based on wide consultation with consumers and providers might be the better choice.

2a) Allocating USOs

As outlined above, USOs will necessarily have a spatial component. Under conventional contract arrangements, performance indicators usually refer to a specified service area. However, as the prevalence of various types of alternative provider indicates, utilities or main providers often fail to provide the required service in all parts of the service area (notwithstanding the fact that there might be a mismatch between service areas and actual settled areas), as illustrated in the diagram above.

This failure must be recognised in allocating USOs to providers – by acknowledging the role of alternative providers and the various possible partnerships (e.g. between the utility and community associations, NGOs and/or small-scale providers) and incorporating them into the regulatory framework – practical considerations can be found in summary paper 17. Depending on the situation (level of organisation of the alternative water services sector, monitoring capacity of the regulator, management capacity of the main provider, etc.), two basic options can be envisaged (see illustrations on page 10):

(1) A USO is imposed on the main provider. The responsibility for achieving the set targets rests this with the main provider, who is encouraged to subcontract service delivery in ‘difficult-to-serve’ areas, taking advantage of alternative providers’ (including NGOs’ and communities’ own skills in working with the poor).
Implementing an Evolving USO

(2): The service area is divided into sub-areas and different operators assigned to achieve a USO in their respective service areas. This practice would be consistent with contractual clauses allowing operating licences to be revoked in case of default. However, in order to fully exploit the economies of scale achievable by one major service provider, licences for sub-areas may be time-limited.

It is proposed that periodic price reviews should automatically consider and re-define the service areas appropriate to each utility, in addition to negotiating prices and investments.

2b) Facilitating, monitoring and enforcing USO

Meeting the universal service obligation is going to be a tremendous challenge for providers and will require skilful facilitation on the part of the regulator. As intimated in the ‘prerequisites’ section, facilitation may need to extend beyond direct interactions with service providers and their customers. Expert regulators may need to press policy-makers to supply the policy instruments that will enable the acceleration of service to marginal areas. A tangible tool would be a set of service obligations and connection targets specifically designed to prioritise formal service provision to poor households. Where the poor and vulnerable are most likely to be found in informal housing areas where land title cannot necessarily be proven, or slums where settlement has occurred illegally, regulators need to be empowered to negotiate – and eventually require – utility service coverage. The affordability imperative almost invariably requires some form of subsidy mechanism to be employed. Special care must be taken to refine targeting mechanisms and maintaining efficiency incentives on the provider. Particular challenges arise when regulating the public sector, where incentive mechanisms are less well defined.

Asset management planning assumes new dimensions in the context of the pro-poor, universal service goal. The economic regulator needs to demand viable Asset Management Plans (AMPs) within Strategic Business Plans that include early achievement of USO. Whilst. AMPs must emphasise and even prioritise service coverage to the poor, regulators must seek to retain a suitable balance of those pro-poor objectives with maintaining (or improving, where appropriate) quality of service.
Regulating conventional services to all, such that a sustainable revenue flow can be maintained. Reasonableness vis-à-vis demand and sustainable outcomes must be a guiding consideration in evaluating providers’ technical and financial proposals. The definition of ‘reasonable expenditure’ much depends on local circumstances, but incentive mechanisms need to ensure that ‘reasonableness’ is constantly challenged in line with the evolving universal service paradigm. Any required utility efficiency improvements must uphold the affordability principle, i.e. regulators must ensure that tariffs, though necessarily cost-reflective for sustainability reasons, are least cost. Research findings indicate that appropriate low-income customer payment facilities and differentiated connection charges are readily implementable solutions to facilitate universal service.

3: Sustaining/funding universal water service

Without going into the details of the financing problem, a subject on which a substantial literature exists, there are a few points worth mentioning in view of funding universal water service. As it is imperative that any USO must not destroy the financial sustainability of providers, regulators will be using a mixture of tariffs and subsidies to fund service extension to the poor. Subsidy allocation must be optimised to ensure benefits are indeed delivered to the poor and vulnerable, minimising errors of inclusion and/or exclusion. International best practice shows this is possible. At the same time, the public needs to be sensitised to appreciate the cost of the water service, that is home delivery of what may otherwise be perceived as a ‘free
Achieving and Sustaining the Vision

The sustainability of universal water service, however, does not solely depend on financial matters. Although good financial management (under an efficient and effective regulatory regime) is a significant initial driver towards serving the disadvantaged groups, the case study evidence shows that good governance is key to its long-term sustainability. Good governance entails every party accepting responsibilities that arise from society’s goal of adequate water services for all. As such, there is not only a universal service obligation on providers to adequately serve all customers imposed by the regulator. There is a whole range of corresponding and complementary obligations on the remaining key actors, customers and policy-makers, as summarised in the diagram below.

Contributions to universal water service/USO

Customers

- High and middle-income customers are obliged to:
  - pay cost-reflective tariffs
  - make their views heard in the regulatory process
  - surrender rights to opt out of networked services in favour of cheaper alternatives (and loss of cross-subsidy)?
- Low-income customers are obliged to:
  - act as a ‘community’ (at some appropriate level) to reduce costs of mains extension/house connections
  - accept and take responsibility as a ‘community’ for differentiated service standards (eg above ground pipes, vulnerable household connections to distant meter banks, fair sharing of group/street metered bills; reporting of leaks
  - unite against vandalism and unfair illegal use
  - pay cost-reflective differentiated tariffs where differentiated service standards/reduced connection charges etc are available
  - seek adequate representation of poor customers views in the regulatory process, emphasising views of women and vulnerable groups

Govenment

- accept the financing implications of aiming for sustainable USO
- recognise the trade-off between tariffs and subsidies
- accept that sustainable USO has a longer planning horizon than the political ideal–but demand that its achievement take a shorter time than the direct provider might prefer
- recognise the necessary bias towards the poor in monopoly provision of a basic need, recognising the public health and social welfare imperative relative to monopoly rights
- therefore emphasise the Universal Service Obligation, ie service to the poorest over and above the demands of technical standards, ‘gold-plating’ and ‘professional hobbyism’
- recognise the trade-off between Technical standards, Environmental standards, Water Quality standards and Costs (all relating to affordability and equity)
- accept the unlikeliness of achieving Universal Sanitation Service through conventional sewers and wastewater treatment

Regulator

- demand viable Asset Management Plans within Strategic Business Plans that include early achievement of USO
- require demanding efficiency goals from the main provider to promote affordability of cost-reflective tariffs
- listen to customers, particularly poor customers, women and vulnerable groups customers
- acknowledge and incorporate alternative providers

- accept cost-saving contributions towards USO by customers and civil society
- accept the (temporary?) role of alternative providers by renouncing exclusivity agreements

Service Providers

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