

Urban framework



This document sets out a framework for the enhancement of water and sanitation services in urban contexts of low-income countries. It is intended primarily to guide WaterAid country programmes as they determine their own context-specific urban strategies, but it is hoped that it will also be of value to other organisations that are involved in improving urban services. The scope of the document includes both water and sanitation, and makes reference to the important subject of hygiene improvement. The latter will be the subject of a future WaterAid framework document.

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The document should be cited as *WaterAid (2011) Urban framework, WaterAid, London.*

The paper can be found in the documents section of WaterAid's website – www.wateraid.org/publications.



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Glossary

Access	People are described as having access to a water supply or sanitation service if they can use a functioning facility of adequate standard (usually as defined by the WHO/UNICEF Joint Monitoring Programme (JMP)) within a reasonable distance of their home.
CBO	Community Based Organisation
CLTS	Community-led Total Sanitation, an approach to the promotion of sanitation that brings about a collective community decision to reject open defecation. Communities strive to achieve Open Defecation Free (ODF) status. CLTS in its ‘pure’ form does not recommend or subsidise specific sanitation technologies.
Coverage	The proportion or percentage of the population who enjoy an ‘improved’ water or sanitation service, as defined by the JMP.
Hardware	The ‘hard’ or physical infrastructure (eg latrines, wastewater treatment facilities, water distribution pipes) that makes sanitation and water services possible.
Hygiene	Personal and household practices such as hand-washing, bathing and management of stored water in the home, all aimed at preserving cleanliness and health.
JMP	The Joint Monitoring Programme of the World Health Organisation and the United Nations Children’s Fund.
Networked/ Non-networked	The style of service provision: conventional pipe networks benefiting from economies of scale in service delivery based upon centralised management and significant capital investments as compared to separate, ‘stand-alone’ systems which have a local abstraction/disposal point with, perhaps, local area distribution/collection pipe networks.
ODF	Open Defecation Free – an aspiration in most total sanitation approaches.

Sanitation	In the narrow sense, the safe disposal or re-use of human excreta. In the broad sense, excreta management together with solid waste and storm water management, otherwise referred to as ‘environmental sanitation’.
Slum	UN-HABITAT defines ¹ a slum household as lacking one or more of the following basic amenities (or ‘shelter deprivations’): (1) durable housing, (2) sufficient living area, (3) access to improved water supply, (4) access to improved sanitation and (5) secure tenure.
Social marketing	An approach that uses marketing principles to achieve social benefits such as changes in attitudes and behaviours that are deemed to be good for society as a whole.
Software	Activities that mobilise households and communities and establish the ‘soft’ infrastructure (especially community level management structures) that is necessary for the functioning of water, sanitation and hygiene services.
SSIP	Small-Scale Independent Provider of goods or services.
Sustainability	Sustainability relates to whether or not WASH services and good hygiene practices continue to work and deliver benefits over time. No time limit is set on those continued services, behaviour changes and outcomes.
Sustainable service costs	The costs of keeping a service running permanently, including the costs of routine operation and maintenance, the capital maintenance costs and the costs of capital. All software and institutional overhead costs are also included. Often referred to as life-cycle costs.
WASH	Water, Sanitation and Hygiene.
(WASH) sector	The arena in which the collective endeavours of governments, donors, the private sector and civil society collaborate to improve water and sanitation services.

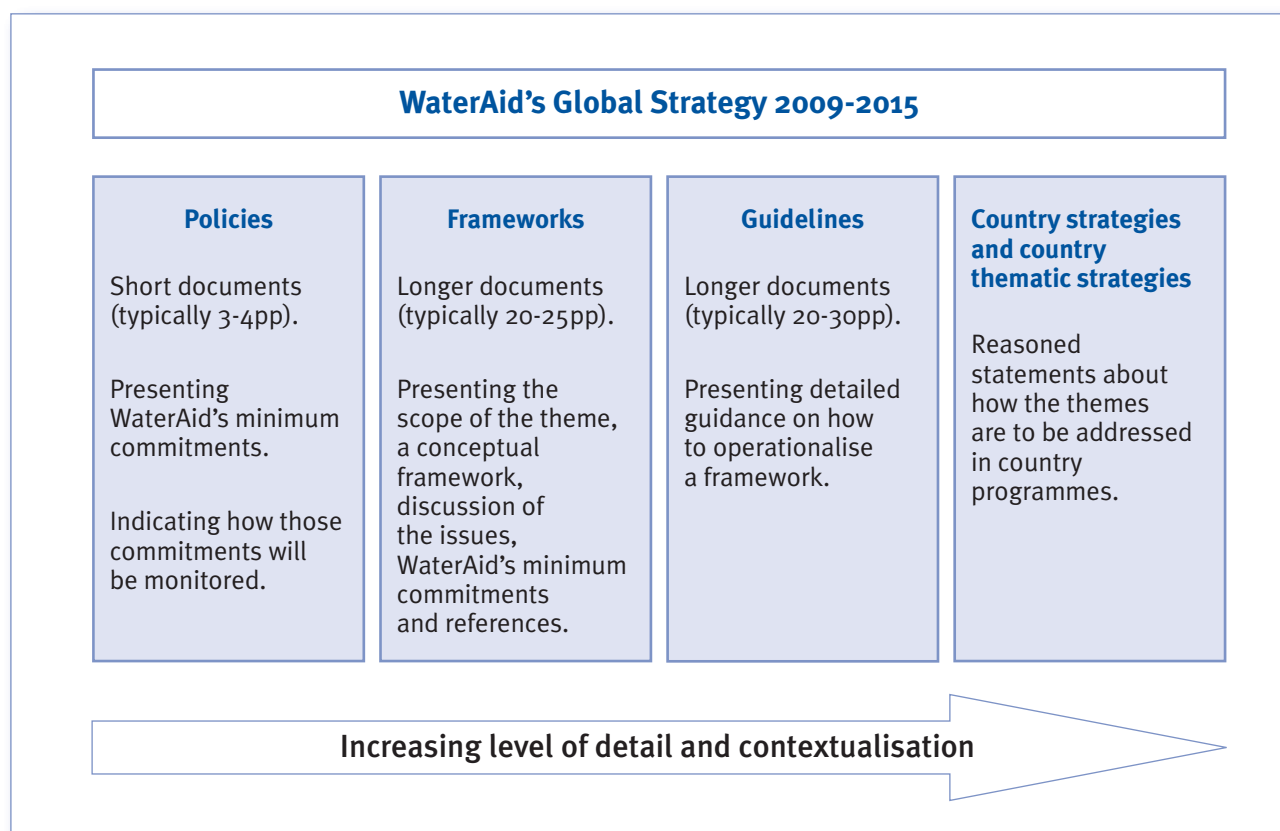
Part 1

Introduction and background

This document sets out a framework to support and guide WaterAid and its partners to develop effective strategies for their urban programmes. The framework is derived directly from the WaterAid Global Strategy 2009-2015² and provides more detail regarding the driving principles and minimum commitments that WaterAid will follow globally with respect to its work in urban areas.

Figure 1 (below) shows how this and other framework documents are situated beneath WaterAid's Global Strategy. The commitments embodied in these frameworks constitute our more detailed policy statements. Further guidance and context-specific strategies regarding the implementation of work in the urban water, sanitation and hygiene (WASH) sector lie 'downstream' of the frameworks.

Figure 1: Frameworks and other WaterAid documents



This document should be used alongside the following WaterAid frameworks, policies and guidelines:

- Global Strategy
- Equity and inclusion framework
- Sustainability framework
- Sanitation framework
- Water quality guidelines and country policies
- Water resource management guidelines and policy
- Hygiene framework
- Water security framework

Where appropriate, specific reference is made to these frameworks in this document.

The urban framework:

- Sets out an understanding of urban poverty and services (Part 2).
- Describes the key urban challenges and opportunities (Part 3).
- Sets out WaterAid's broad principles for urban programming (Part 4).
- Sets out WaterAid's key urban minimum commitments (Part 5).
- Provides guidance for translating these principles and commitments into practice (Parts 6 and 7).

Background

The world is urbanising. Globally we have already reached the point at which 50% of the population lives in towns and cities, although in low-income countries of Africa and Asia this point is only expected to arrive in about 2030³. Total urban populations are projected to increase from 3.3 billion in 2007 to 6.4 billion by 2050, growing at an average rate for the period 2007–2025 of 1.4 million people per week. Most of these people will not live in planned urban centres but in the urban poor communities of 'less developed regions' of the world³. In many low-income and some middle-income countries, between one-quarter and one-half of the total population live in settlements of 2,000 to 200,000 inhabitants (small to medium towns). Within this category, in developing countries, there are currently an estimated ten small towns (with populations of 2,000 to 50,000) for every medium town (with populations of 50,000 to 200,000)⁴.

Urban population growth is occurring for three main reasons:

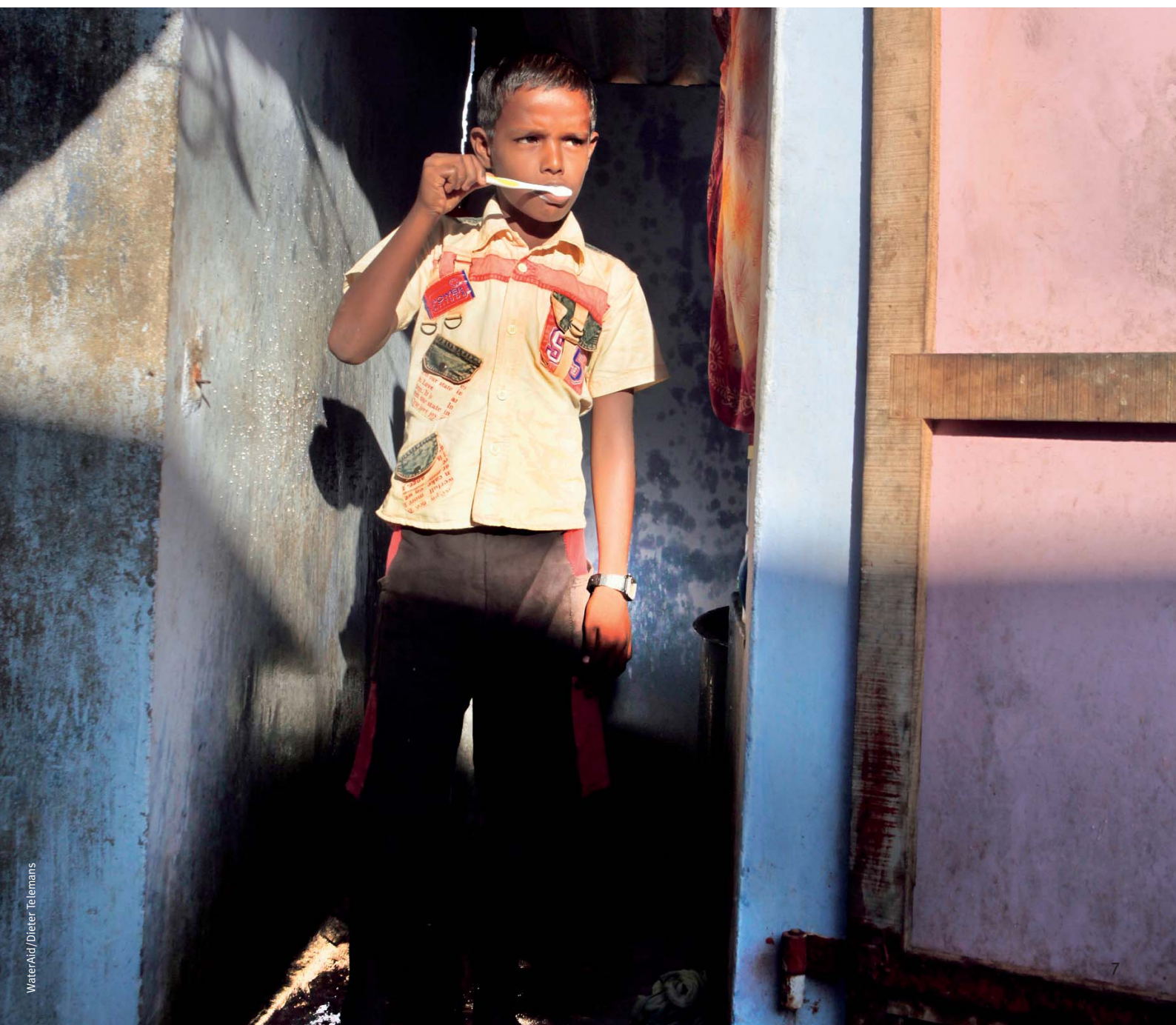
- Natural population growth in cities and towns (50% of the total increase)⁵.
- People moving from rural to urban areas seeking better life opportunities (25%).
- A combination of villages growing until they are redefined as urban, and villages being subsumed by the growth of nearby towns and cities (25%).

The process of urbanisation can be the conscious choice of either an ambitious person or a desperate individual, or the passive reality for a person living in a growing rural settlement. Large cities are naturally classified as urban in all countries, but towards the periphery of large cities and towards the smaller end of the scale, the definitions become less clear and every country has its own definition of 'urban'

(usually based on population size), which includes further sub-categories such as 'rural town' or '(rural) growth centre'.

Looking ahead, the world's demographers³ predict that:

- Almost all future population growth will be in urban areas in developing countries.
- Most growth will occur in small towns: estimates are that half of the growth will be in urban areas with a population less than one million, one quarter in cities between one and five million, and the balance equally divided between cities with a population of five to ten million and cities over ten million.
- Both the population in, and the number of small towns (population 2,000 to 50,000) are projected to double within 15 years, and then double again within 30 years⁴.
- The number of people living in urban slums in developing regions is projected to increase from 828 million in 2010 to 889 million by 2020⁶.
- The percentage of sub-Saharan Africa's urban population living in slums is currently just under 62% and the rate of reduction of this figure has slowed in recent years⁶.





Part 2

Urban poverty and services

WaterAid's concern in urban contexts is centred on the poor. Poverty is both multi-dimensional and context specific. It includes income poverty, housing poverty, infrastructural services poverty, health and educational poverty – and powerlessness. Poverty is manifested in different ways: ill health, ignorance, discrimination and exclusion, and denial of dignity⁷. It is necessary to recognise these characteristics of poverty along with the likely 'segmentation of poverty' related to both the individual's relative poverty and the type of housing settlement they live in. Both have a significant effect on approaches to developing better water and sanitation services and support.

Segmenting poverty

Poverty is both absolute and relative. In terms of facilitating enhanced service provision, it is necessary to understand the challenge of absolute poverty in relation to possible service charges. It is equally necessary to understand **relative poverty within the group of 'urban poor'** in order to understand how service improvements and any subsidies might best be targeted. With some cities believed to have 60% of their population living in slums there needs to be additional segmentation of this group – it is not possible to cross-subsidise everybody.

Box 1: Segmentation of poverty⁷

Segmentation of poverty	Characteristics
Vulnerable non-poor: lower middle-income households	Often employed at low wage levels by government or the formal private sector; living in more conventional housing, perhaps in, or on the edge of, a slum; susceptible to unexpected financial shocks, particularly ill-health or family expenses; conventional water and sanitation tariffs are normally affordable but may need to be structured in a way that allows for delay in payments in exceptional circumstances, so as not to disrupt household finances and push the family into poverty.
Developing poor	Can be characterised as a household in a slum or informal housing area that has sufficient income to be able to start to invest in permanent or semi-permanent materials for their own housing, with a fairly regular income from at least one semi-skilled member of the family.

Coping poor	Households with perhaps a single daily employed, unskilled earner living in what we could call a temporary shelter (but that might be used for many years), perhaps rented from a slum landlord.
Very poor	Might be characterised as a single parent family, very possibly female-headed, sharing a one- or two-room temporary shelter with other families with very irregular or seasonal employment.
Destitute	Refers to the street sleepers and the street children with no fixed living space.

An understanding of these broad ‘segments’ of low-income households is critical in developing sustainable WASH services. There is an approximate overlap between some of these segments and the settlements described below, but in each housing area type there will be a mix of income levels, some households with stable or increasing incomes preferring to remain in low-income areas, for various reasons.

Understanding poor housing settlements

A country may have several different kinds of urban poor settlements (the definition of these categories varies from country to country):

Squatter communities

- No security of land tenure.
- Often living on marginal land with high physical risk (such as flooding or landslides).
- Includes pavement, drainage line, beach and railway line dwellers.
- Illegal settlements, most at risk of ‘slum clearance’ programmes, therefore requiring ‘temporary’ WASH solutions.

Urban slums

- High density, usually unplanned, non-linear and with limited vehicular access.
- Housing materials can range from non-durable to modern and expensive.
- Most residents in rental accommodation.
- Includes infill dwellings located between elite housing, commercial and institutional buildings, mostly renting.
- Very poor quality of drainage and solid waste management.
- Limited availability of sanitation, water through vendors/carriers.
- Legality of settlement often uncertain.
- Likely to remain for many years, requiring appropriate solutions which minimise risks whilst not ‘over-improving’ to the extent that landlords can increase rents and drive out low-income households who need that low-income housing close to potential work locations.

High-rise tenements/'vertical slums'

- High rise buildings, often built as a 'solution' to slum clearance relocations in a previous generation, now with one household renting per room (eg three households per 'two bedroom apartment').
- Limited maintenance so limited water availability (often disconnected) and very poor quality sanitation access due to overcrowding and lack of water for flushing.
- Legal (though probably illegal sub-letting).

Compound housing

- A type of housing found in some low-income areas (very common in certain parts of the world, West Africa for example) where a plot has been sub-divided by the landlord into a courtyard type design with each room around the court containing a household.
- Typically 10-15 households per compound house (reportedly 99 households in one example). Note that a century ago slums in the UK, for example, were typically referred to as 'courts' with a similar layout but with two or three storey dwellings around the court.
- Typified by a single shared tap and single/double shared toilet for all.

Peri-urban

- Lower density new housing area, some level of street and plot layout and planning, often experiencing significant population growth and in transition to becoming a low-income commuter 'suburb' on the edge of the city ('peripherique').
- Some residents developing their own housing incrementally, many residents in rental accommodation also being developed incrementally by landlords.
- Lacking in water and sanitation services at this stage of development.
- Likely to be legal through 'customary tenure' and/or municipal planning.

Incorporated villages

- Typical informal, though vehicular accessible, village layouts.
- Village style building materials, income levels and services but now incorporated into a growing urban extension area, thus limiting previously manageable access to low-cost non-networked water supply and sanitation services.

Peri-rural

- An invented concept to explain the 'pre-peri-urban' settlement development where housing is beginning to appear in the countryside around a city or town well in advance of formal development.
- Self-served with water and sanitation, appropriately, as housing density is too limited to allow for economic extension of distribution networks.

Box 2: Peri-urban settlements

The term ‘peri-urban’ came into wide use during the 1980s in Europe. Literally, it means ‘around the edges or periphery of a city’. This definition includes (but is not limited to) the following human settlement names from around the world: *barrio*, *bidonville*, *bustee*, *edge city*, *favela*, *gecikundu*, *informal settlement*, *illegal settlement*, *kampung*, *legal settlement*, *pueblo invisible*, *pueblo joven*, *shanty town*, *squatter settlement*, *tugurio*, *villa miserere*, or whatever term may be used to describe persons on the peripheries or edges of the usual, acknowledged official city zones. Such settlements may be large or small. They may be longstanding or of recent origin. They may be officially recognised or ignored⁸.

Note that this framework document does not use the term peri-urban in such an inclusive way, finding that it is more useful to differentiate further between the types of low-income housing.

UN-HABITAT analysis shows that ‘Sub-Saharan Africa’s slums are the most deprived; over 80% of the region’s slum households have one or two ‘shelter deprivations’ (see Glossary explanation), but almost half suffer from at least two shelter deprivations. Approximately one fifth of slum households live in extremely poor conditions, lacking more than three basic shelter needs. Generally, the lack of sanitation and water in the region’s slums is compounded by insufficient living space for families and inadequate, makeshift housing’¹.

Developing the point made by UN-HABITAT, it is likely therefore that only 20% of the urban poor are living in chronic slums such as Kibera (Nairobi), ‘Sodom and Gomorrah’ (Accra) and Dharavi (Mumbai) which outsiders believe to be the main challenge. Many low-income settlements are less obvious, more ordinary, partially meet the needs of a very large number of people and, in reality, are more serviceable by conventional household water connections than most utilities and NGOs may recognise.

Finally, as pointed out in Part 1, urbanisation is increasingly occurring outside large cities and towns, in new and emerging small towns that rapidly evolve into medium towns. Research undertaken by WaterAid⁹ has shown that defining these towns is by no means simple nor uniform and that different strategies are required (in comparison to large urban areas) to ensure appropriate water and sanitation services. Broadly, however, these two categories of towns can be defined as follows:

Medium towns

- Low income areas – varying national definitions but often any settlement between 20,000 and 200,000 people, varying densities from medium to low.
- Often responsible to a district authority, usually rapidly growing.
- Significant areas of very low-income unplanned settlements where residents pay excessive prices for conventional water services where these exist.

Small towns

- Generally have a population of 2,000 to 20,000, low-income overall with poor residents.
- Emerging economic activities beyond agriculture.
- Often lacking in official recognition or having very weak governance structures.
- Accessing both conventional networks and traditional sources that remain within reasonable travel distances.

Water and sanitation

The world's urban population increased by 1.09 billion between 1990 and 2008, while the number of additional urban people using an improved water facility as their main source rose by 1.05 billion and using improved sanitation by 819 million¹⁰. These figures suggest that while the increase in water supply coverage almost matched population growth, the numbers served with improved sanitation have failed to do so. Furthermore, water service levels have declined, with a lower proportion using piped connections in 2008 compared to 1990. In addition, many cities and towns with 'access' do not have 'adequate' services that are sufficient, affordable and easy to access. Generally it is only the high- and middle-income households that have access to piped water and an even smaller percentage have access to sewerage systems. Table 1 (next page) shows percentages of water and sanitation services coverage in urban areas (across the regions in which WaterAid is currently active).

It is most common for the water supply to be intermittent, in that the water flows for perhaps two hours twice a day, or two hours once a day or even, in the more extreme situations, two hours every 14 days. Consumers cope with this limited supply through household storage and, according to wealth, pumps on the water mains (usually illegal), pumps to deliver water to a rooftop tank (so that the wealthy who can afford this lose sight of the limitations in water supply), or private vendor storage tanks for on-selling water. These 'coping strategies' add considerably to the burden of accessing water – particularly in very low-income settlements where the problem can be compounded by any bias in the water cuts rotation towards the richer areas (in exchange for informal payments).

Overall, the access levels reported in Table 1 do not adequately reflect the quality of service most households receive. This service is of very poor quality and delivered in a way that substantially increases the costs to poor households, irrespective of the official tariff. That tariff, by default rather than by design, gives higher subsidies to the rich than to the poor. To improve overall water services to the poor requires significant changes in the way that service providers function.

Table 1: Percentage of urban water and sanitation coverage[Source JMP, 2010¹⁰]

	Sub-Saharan Africa			Southern Asia			South East Asia			Latin America and Caribbean		
Year	1990	2000	2008	1990	2000	2008	1990	2000	2008	1990	2000	2008
Total population	518	675	822	1200	1463	1669	440	517	576	442	521	576
% urban	28	33	37	26	29	31	32	40	47	71	75	79
Urban population (millions)	145	223	304	312	424	517	141	207	271	314	391	455
	Drinking water (%)											
Piped supply to dwelling	43	38	35	55	53	51	41	47	52	87	90	92
Tapstand and other improved	40	44	48	36	40	44	51	45	40	8	6	5
Unimproved	17	18	17	9	7	5	8	8	8	5	4	3
	Sanitation (%)											
Improved	43	43	44	56	58	57	69	74	79	81	84	86
Shared	29	30	31	18	19	19	8	9	10			
Unimproved	17	17	17	3	5	10	10	7	3	13	12	12
Open defecation	11	10	8	23	18	14	13	10	8	6	4	2

Part 3

Challenges and opportunities

The development context within the urban environment is more complex than in rural areas and this creates a number of key challenges for WaterAid and its partners. However, the faster growing urban economy and the potential to access economies of scale in service delivery provide particular opportunities that can be utilised to maximise the impact of our work. This part of the framework highlights some of the key challenges and opportunities that WaterAid's urban programmes will need to take into account when developing their country level strategies and plans. This is by no means an exhaustive review but it is intended to serve as broad guidance, highlighting the need for each country programme to undertake a detailed urban sector analysis, the guidance for which is also included in this framework. For ease of understanding and convenience, these challenges and opportunities have been grouped into five areas: demographics, social issues, economics, technical issues and governance. There are naturally overlaps and linkages between the five areas.

Demographics

Increasing density has advantages and disadvantages. Urbanisation is by nature an increase in density of settled people and although this brings with it a large number of advantages such as better economies of scale, opportunities for cross-subsidisation and enhanced economic development, so too does it bring significant disadvantages or challenges, such as changes in social structures and norms, increased health risks due to closer proximity facilitating rapid spread of disease, and increasingly stressed natural and built environments.

Lack of urban planning creates problems. As urbanisation draws people into ever denser and often unplanned settlements, the potential negative impacts that lack of safe water and adequate sanitation have in these conditions are severe. Rapid urbanisation brings with it numerous challenges for effective service delivery in our towns and cities. The solutions of the first world economies are often perceived to be too expensive with respect to capital investment and unsuitable for developing predominantly poor cities and towns. There is a need for innovative solutions. In large cities that are already experiencing huge problems with slums and unplanned development, the issues are challenging primarily due to the scale of solutions required. The magnitude of the challenge, and the difficulties of providing the lowest cost (and therefore lowest tariff) services to the poor who are already paying more for limited services, are so large that they are usually avoided. Addressing that challenge often hinges on building relationships between these poor communities, local authorities, politicians and service providers to reach consensus and bring about changes. Beyond the large cities, in the rapidly emerging small and medium

towns, the WASH sector has to develop ways to support capital investment in a weaker economic environment if it is to assist local authorities, providers and residents to pre-empt unplanned and uncontrolled development.

Difficulties for urban planners. For urban service planners, urban demographic shifts can be unpredictable and are unlikely to be stable. Even for well-endowed cities in the developed world, this poses a problem, but these cities have resources to compensate, and their plans and designs can absorb shifts or changes. In resource-poor towns and cities in the developing world, this luxury does not exist and often results in authorities and providers becoming overwhelmed.

Threats to water resources and quality. The increasing concentration of populations and subsequent industrial and commercial activities places high demands on available water resources as well as posing severe pollution threats. In increasingly variable climatic conditions, it will be critical to ensure that our work fully integrates water resource management and water security. The willingness to support the development of large water resources facilities – dams and reservoirs for example – is part of this work. The needs of the consequentially disadvantaged or displaced rural populations (catchment use restrictions, loss of housing/livelihood due to reservoir flooding) require particular attention.

Urban migrants seek better lives. The drivers of urbanisation are numerous, but are usually economic in nature as individuals shift to urban areas in search of better and more secure livelihoods. Other drivers of urbanisation, in different contexts, include conflict or increasingly difficult climatic conditions. Many of those seeking a better livelihood may initially fail to find this in urban areas and end up in a cycle of poverty, often in extremely dense poor settlements such as slums or squatter areas. However, without significant efforts at a national scale to improve the opportunities for the poor, these locations might serve the function of least cost ‘transition villages’, often acting as the lowest rung from which the next generation is enabled to move up the economic ladder. Careful consideration must be given to the implications of any work in slum areas, particularly ensuring that water and sanitation services are provided on a least cost basis for these households, or else the result might be the poor being pushed out to even worse circumstances. This approach recognises peoples’ rights to these essential services, irrespective of where they live, but does not necessarily imply acceptance of their living conditions. Programmes that focus on the provision of essential services might be coupled with advocacy programmes or other initiatives that focus on city-wide planning which is inclusive of the poor.

Understanding the urban demographics. Understanding the dynamics of the demographic changes that occur in urban settlements is important. Long-term population predictions from national censuses do not provide us with enough information to make sound judgments and decisions. In order to be able to plan and provide accordingly, our city and town planners need to delve deeper into the demographic trends and attempt to:

- Understand the major urbanisation drivers and flows.
- Understand the internal demographic transitions that occur as the city expands.
- Understand the additional impacts and consequences that the provision of services has on these flows and transitions, and make them work to the city or town’s advantage.

Building our own expertise. Consequently, WaterAid will need to build its own understanding and ability in this area in order to be able to assist its urban partners successfully. WaterAid and its partners will necessarily need to look beyond the specific WASH sector institutions, particularly linking with the urban institutions responsible for overall planning and development of the town or city. In small and medium towns this might simply be the municipal council itself, but in large cities this is often a specific department or range of departments. The demographic profile of the city or town is closely linked to its spatial development and so too must be the development of the key services of water and sanitation. WaterAid, where appropriate, should play a positive role in bringing together a clear understanding of demographic change and spatial issues as part of the processes towards more coherent urban development planning.



Social issues

The weakening of social cohesion. One of the key challenges with urbanisation and increasingly shifting and dense populations is the change of social cohesion or social structures and processes. In rural areas the WASH sector attempts to tap into the strength of social capital to ensure participation and ownership and to contribute to the sustainability of services. Urbanisation is usually about individuals or families moving, not whole communities or social groups. As a result, the mixing of people from different cultures and groupings brings about a redefinition of social structures. However, from a services point of view, one key impact is that the individual or family unit becomes more important than the collective.

Urbanisation and politicisation. Other social effects of urbanisation include the increased politicisation of populations and shifting roles between genders. Understanding these issues within the specific national and local urban contexts is important for WaterAid and its partners to be able to ensure the appropriate design of any interventions. Not all of these shifts should be seen as negative. Increased political awareness of populations can be tapped into to help create dialogues with authorities and providers to bring about the realisation of people's rights to safe water and sanitation services. On the other hand, this same politicisation can equally result in the de-railing of efforts to do just that, particularly when political leaders and appointed officials change.

Economics

Seeking opportunity. One of the key drivers of urbanisation is the search for economic opportunities. For the individual and family it is about seeking new opportunities to improve their lives and livelihoods. For the country, urban centres are the engine rooms of economic development and growth.

From rural subsistence to urban slum. A key challenge for the individual and family migrating to a town or city is the shift from a mainly subsistence economy to a highly money-oriented environment. The need for access to basic services is no exception in these circumstances and this is a key reason why the poor are immediately at risk in the urban context. Without easy access to natural materials, those making the transition also find themselves in inadequate, often unsafe, housing and needing to share spaces and, more often than not, to rent. When, for economic reasons, pathfinders and then their families move into slums or squatter areas, the situation is further challenged due to their landlord's lack of secure land tenure. For poor tenants, investing in service infrastructure that belongs to a landlord makes no sense. Landlords may not care to invest beyond informal housing structures where tenure is uncertain and if they do, they expect higher rentals. Low-income households have to make the trade-off between rental costs and service levels as well as proximity to employment opportunities.

Economies of scale fail to materialise. On the side of the authority and provider of services, urbanisation brings a mixed blessing in economic terms. Although increasing population densities can lead to economies of scale in service provision, in the developing world context, with conventional urban solutions, such economies

often fail to materialise for the unconnected urban poor. For large urban centres, access to sufficient water resources and management of the large waste streams involved demands huge capital investments. With a population whose profile is predominantly poor, the ability for a government to recoup this investment through conventional tariff structures requires a policy understanding that may not immediately deliver political returns. In addition, the operation and maintenance of these complex service systems is costly and the opportunities for cross-subsidies are limited. Lack of proper urban planning and control also results in large unplanned settlements, further complicating the development and costs of service infrastructure.

Failures in revenue collection and service standards. Even where appropriate solutions and tariffs are achieved, the collection of these tariffs is challenging, leading to finance shortfalls and subsequent system failures. Inadequate services lead to consumers at all levels arranging alternatives. Entrepreneurs often fill these service gaps (mainly for water, at present) providing services at significantly higher prices and often of questionable quality. For the poor, unable to arrange better alternatives, this puts them further at risk and consumes a disproportionate amount of their income. With the unconnected poorest often paying ten times more per unit of water than the connected higher-income groups, there is a clear requirement to rebalance delivery mechanisms such that low-income households can also benefit from economies of scale.

No ‘one size fits all’ solution. Alternative and creative financing solutions are required that are appropriate to the consumer profile of each city or town and the various areas of those towns. Even within informal areas different solutions may be required. This is, of course, inextricably linked with the technical issues discussed below.

Linking at-scale technical solutions with economics. WaterAid needs to better understand the economics of service delivery in the contexts of the urban areas where it works and it needs to link this understanding to appropriate technical solutions. A key challenge for WaterAid in comparison to some of its past experiences is that these proposed solutions will have to be developed with scale in mind, as part of the larger urban development and overall urban services plans. Whether large-scale systems or modular decentralised systems linked to low-cost household technologies are the answer, these services must be financially viable and should, where possible, tap into local economic development opportunities. Any large-scale capital investments (grants or loans) also need to be designed based on the potential revenue capacity of the consumers. Urban WASH service solutions need to be fit for the socio-economic context.

Small towns. The economy of scale argument is less clear in the case of small towns. These towns often do not yet enjoy the economy of scale or the opportunities for cross-subsidisation. They are already too big for rural solutions (in terms of technical, financial and management aspects), and too small for conventional urban solutions. Smaller towns may not yet suffer from the large-scale problems of unplanned settlements and the subsequent challenges. This may provide opportunities to invest early in innovative and sustainable urban development planning for more effective management of growth.

Technical issues

Water resources. Urbanisation brings with it significant technical challenges. Some of these challenges are directly related to the availability of sufficient local water resources to supply not only the human consumption needs, but also the needs of the economic activities of the town or city. The stress that increased consumption places on water resources is huge and is often ignored in the interests of the economic development that is so vital in developing countries. However, by not sufficiently assessing the capacity of the local water resources and subsequently protecting these vital resources, a town or city could very quickly find itself with none or a rapidly diminishing and polluted resource. This will obviously not only impact on the economic development, but also on the health and wellbeing of the town or city's people.

Resource protection. In larger developing cities, these issues have often already been ignored or the development and growth of the city has outstripped the city authority's capacity. In these situations, WaterAid may have a role in highlighting these issues and assisting the authorities, regulators and consumers to take appropriate actions to remedy the situation. Often the scale of these actions may seem immense, but initial high impact actions might need to revolve around the protection of the resource through improved sanitation, drainage and solid waste management systems, including those related to local industries. Again, these actions must form part of larger city/town-wide plans and actions.

Appropriate technical solutions. The large number of water consumers and sanitation users, the volume of water demand and the need to remove waste from the human environment, demand WASH technical solutions of large scale. Economies of scale and the opportunities provided by cross-subsidisation are ways in which large-scale, conventional technical solutions become possible. However, technical biases of external advisors or the expectations of local politicians and professionals can translate into inappropriate systems that would only be appropriate in an economically strong context. So, technical solutions need to match the economic realities of the local context. This does not necessarily imply that levels of service need to be different, just the means of delivery, and this might well vary greatly from one part of a city or town to another.

Small and medium towns. Smaller towns may provide an opportunity to achieve comprehensive solutions with appropriate service delivery options that match the need and economic profile to the town's population and industry. Unlike the larger cities, where retrofitting appropriate solutions has become challenging, smaller towns may provide opportunities to apply innovative and appropriate technical solutions. Appropriate solutions for small towns might not mean single large piped water or sewerage schemes, nor are they likely to be adapted rural technologies, but they may well be adaptive modular/decentralised systems that function together to provide a complete service. The intention should always be that these systems evolve into the larger-scale least cost service. This might require innovative and long-term financing options when the town is still small. The opportunity in small towns is that sufficient land may still be available to earmark for key infrastructure or environmental protection components such as drainage channels, river protection zones, landfill sites, water and wastewater treatment plants and storage reservoirs.

Urban governance, institutional issues and the management of WASH services

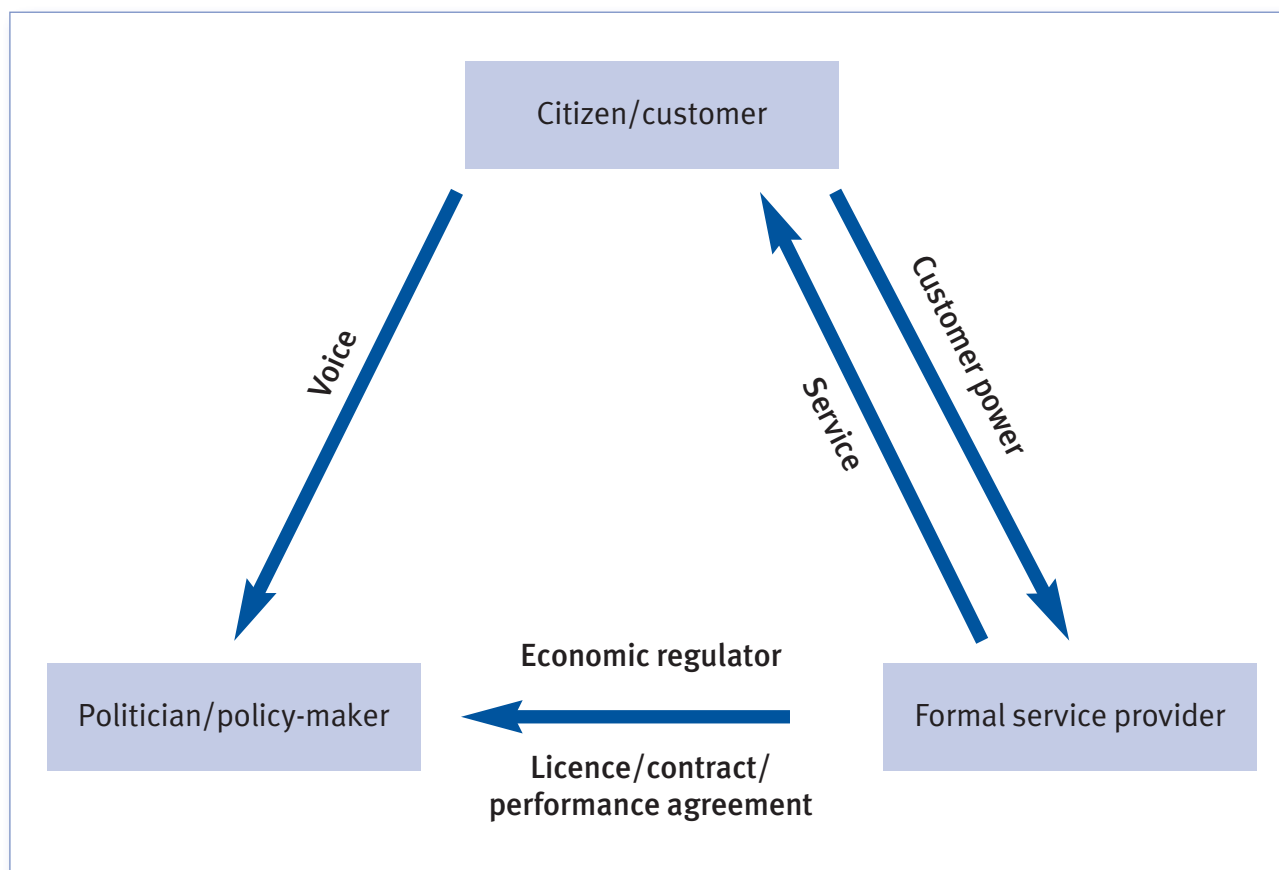
Urban governance. The complexity of urban services from technical, financial, environmental and social perspectives naturally results in more complex governance and management arrangements. These are necessary to ensure the efficient and viable provision of these services, but can become equally burdensome and inefficient and distract government and their service providers from achieving the goal of universal service provision.

Notwithstanding the apparent complexity, there is a significant advantage in urban areas, as compared with rural areas, in that the more sophisticated arrangements almost always include an organisation that is clearly responsible for delivering water services. This is a local government department, part of the municipality, or, in larger cities, a stand-alone water utility. These service providers are the entities that have the societal mandate to deliver the human right to water. However, they are usually relatively weak in their performance, often delivering what can be called a ‘just enough’ service. ‘Just enough’ to avoid a major societal and governance challenge, a challenge that is usually diminished by the ‘coping strategies’¹¹ that higher-income households put in place as the accepted norm for achieving an acceptable supply¹². To enable these organisations to develop a ‘good enough’ service (not perfect, not world class but good enough to deliver potable water with a bias towards the poor) is a challenge for the whole development community. There is a role for WaterAid to support elements of this challenge.

The ‘contract’ for universal service provision. Figure 2 (next page) depicts the basic structure of governance and management relationships. The consumer (citizen/customer) has an assumed right to services provided by an authority (municipality). This service provider has the mandate via the electoral process for the overall policy development and supervision of the provision of services. The authority, through its service provider department, or a separate public utility (rarely a contracted private provider), ensures the provision of these services. The direct provider, in turn, should have a service provision contract with the consumer, usually with the expectation of payment by the consumer. Together, the authority and provider should be working towards universal services. In larger cities there may be a ‘semi-autonomous’ economic regulatory entity to oversee the contract between the municipal authorities and the service provider, ensuring appropriate service levels at an efficient standard of service delivery, as well as overseeing the targeting of any (cross-) subsidies to the most needy consumers.

These ‘contracts’, not always formal, also have to recognise the role (perhaps temporary) of alternative service providers, both formal and informal. There is a role for external facilitation to empower the poorer customers in their need and demand for a ‘good enough’ service.

Figure 2: Governance/management triangle



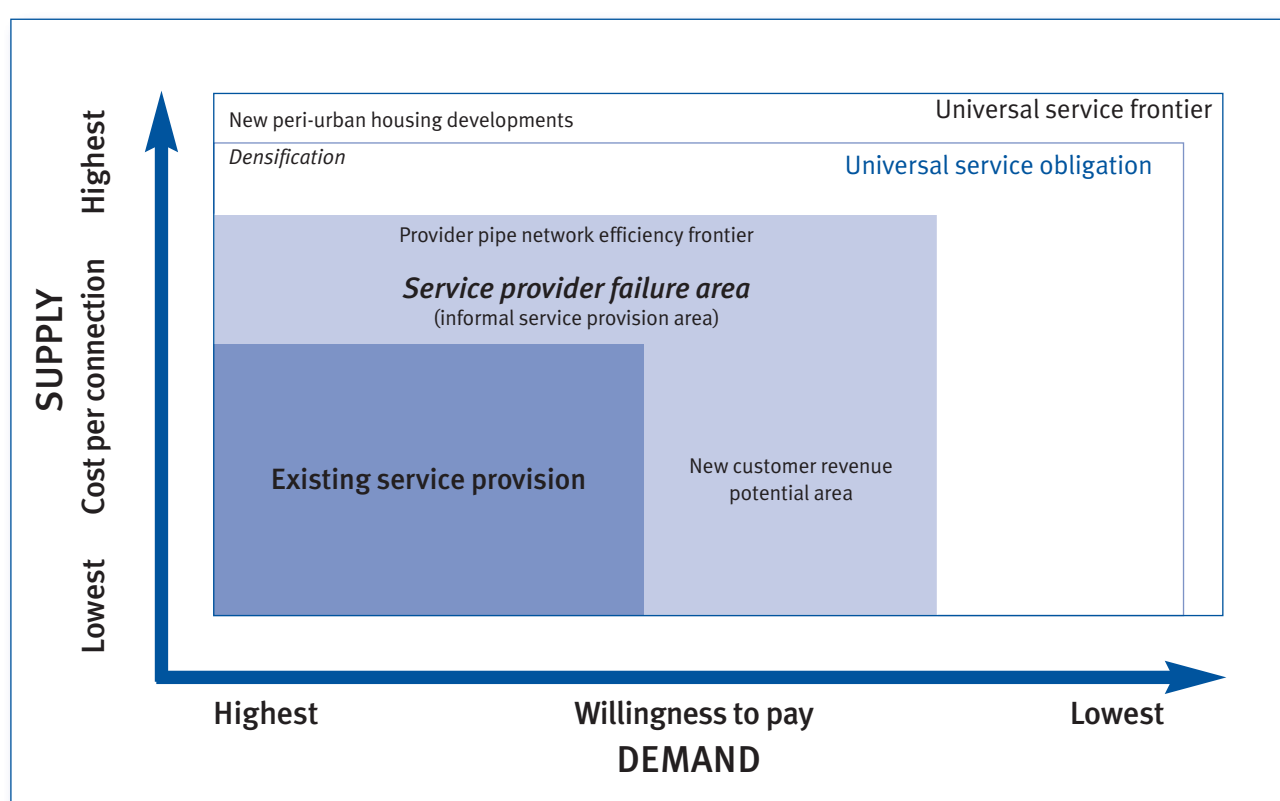
[Source: World Bank, 2004¹³]

The need for innovation and solutions that work at scale. WaterAid has to assist urban partners to find, test and scale innovative solutions to overcome these urban demographic and spatial development challenges. In large cities that are already experiencing huge problems with slums and unplanned development, the issues are centred on the need to access very significant capital investments – in order to deliver least cost services. Solutions to these problems also often hinge on finding ways to incentivise the local service providers to perform at a ‘good enough’ level, in addition to building relationships between these communities, local authorities and providers to help ensure that the rights and willingness of these populations to pay are recognised. Beyond the large cities in the rapidly growing small and medium towns, WaterAid and its partners could take the opportunity of working with the local authorities, providers and residents to find ways to pre-empt the emergence of problems experienced in large cities. As the scale of the issue is so large and shifting so rapidly, WaterAid will need to demonstrate that the solutions it facilitates function at scale, even where focusing upon one or two aspects of the overall challenge, and that key urban institutions have sufficient ownership to take these forward. Close partnerships with government at all levels and across sectors are vital, as are partnerships with other key development actors, particularly the financing agencies.

Multiple actors, complex arrangements, failure of universal service provision.

The type and nature of authority-provider relationships and of the provider itself can vary widely. Other players join the picture in different contexts and include national regulators, national asset management agencies and support service providers, to name a few. Definition of the roles and responsibilities of the multitude of actors, including donors and international agencies such as WaterAid, can add to the uncertainty over governance and institutional arrangements. As a result, universal services can fall out of reach of the government and its failing providers. More often than not it is the poor and marginalised, living in slums or peri-urban areas, who end up not being served. Figure 3 (below) illustrates the gap model as applied to urban WASH services and depicts a ‘universal services frontier’ relative to a ‘universal service obligation’, that is, the obligation of a service provider to deliver the human right to water¹⁴.

Figure 3: A universal services obligation



[Source: Franceys and Gerlach, 2008¹⁴]

The logic of failure to provide. A water provider/utility typically serves planned, formal economy areas with the lowest connection costs and the perceived highest willingness to pay. Low revenues and weak management appear to constrain expansion into what is illustrated above as the ‘service provider failure area’. This conceptual, as well as spatial, area is bounded by what is called the ‘provider pipe network efficiency frontier’, that is the boundary beyond which housing density and potential revenue are insufficient to economically justify the extension of the distribution network (an important point with regards to financial sustainability). As the city or town grows and housing density and wealth creation continually move these ‘boundaries’ outwards, successive peri-urban areas may be served initially by

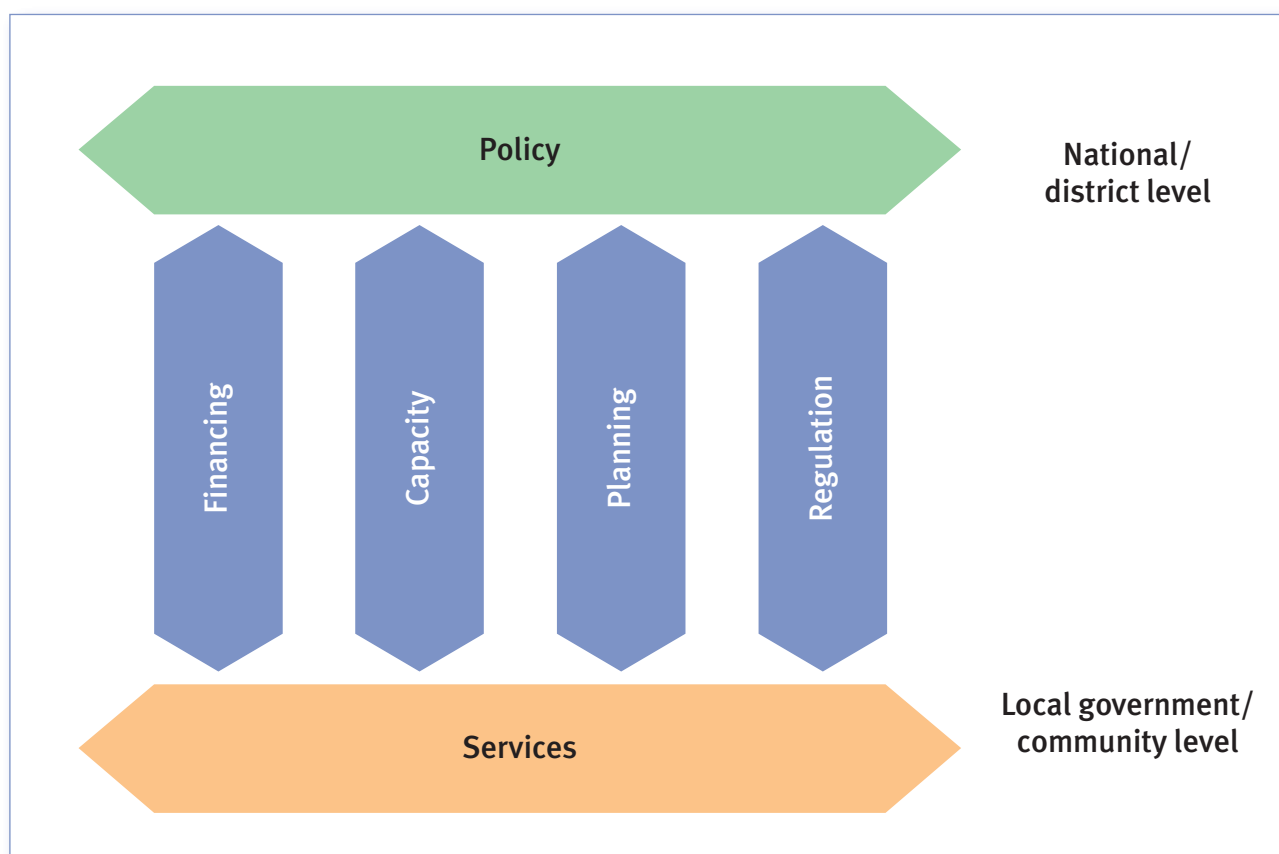
on-selling, temporary tanker services, Small-Scale Independent Providers (SSIPs), community bulk water purchase and in-fill projects supported by Community Based Organisations (CBOs) and Non Governmental Organisation (NGOs) unless and until the designated service provider takes up (is enabled to take up) that responsibility.

The perception that the poor are less likely to be willing or able to pay seems to be contradicted by the fact that they are often forced to pay significantly more for their water, through alternative providers, due to the lack of formal services. These increased costs for the poor, due to service provider failure, are a key area of concern for WaterAid. Enabling service providers to take up their full responsibilities as and when they become economically viable is a key strategic opportunity for WaterAid.

There are also examples of best practice that demonstrate how it is possible to extend the ‘provider pipe network efficiency frontier’ at relatively low cost in favour of those with lowest willingness to pay. This is described in further detail in Part 5.

Understanding the institutional landscape. For WaterAid to be able to provide strategic support and input to ensure that services reach unserved populations, there is a clear need to understand the complexities of the institutional landscape – the multiple actors, their roles, responsibilities and areas of expertise, and their relationships. Apart from the governance and management triangle presented above in Figure 2 (p22), another useful framework for analysis of the institutional landscape is the ‘six arenas of service delivery’¹⁵. The premise here is that ensuring efficient, sufficient and equitable WASH governance and service delivery requires broad participation of all stakeholders across the six ‘arenas’ depicted in Figure 4 (below).

Figure 4: Six ‘arenas’ of service delivery



Part 4

Principles for designing and implementing urban programmes

After considering the place of urban work in WaterAid's Global Strategy (2009–2015)², this part of the framework draws out a set of five key principles for the design and implementation of WaterAid's urban programmes. It is intended that these principles form the foundation on which our approach to urban work at country level is built, linked to detailed country and city or town contextual analyses.

WaterAid's Global Strategy provides clear recognition that the organisation needs to find new ways to ensure universal access to basic water and sanitation services within the increasingly complex urbanising world.

Strategic aim 1 (*We will promote and secure poor people's rights and access to safe water, improved hygiene and sanitation*) talks about WaterAid's work, through partners, to deliver equitable and sustainable access to WASH services. This aim also focuses on empowering communities to call for appropriate services. The supporting text specifically recognises the challenge of rapid urbanisation worldwide and the need for WaterAid to be active in this arena. Specific challenges of the urban context are highlighted, namely poverty and exclusion, and effective water resource management.

Strategic aim 2 (*We will support governments and service providers in developing their capacity to deliver safe water, improved hygiene and sanitation*). Recognising the scale of the challenges, this aim also recognises that WaterAid's work should influence and build the capacity of others to replicate and take effective solutions to scale. This aim deals with the need to create a better understanding of the challenges or barriers that prevent poor people from accessing WASH services equitably and sustainably. The aim clearly defines the need for WaterAid to help build and strengthen national and local institutions to overcome these barriers. Specific challenges highlighted in the supporting text include governance issues, lack of sector capacity, inadequate data and weak sustainability of actions.

Strategic aim 3 (*We will advocate for the essential role of safe water, improved hygiene and sanitation in human development*). Linking the essential role of water, sanitation and hygiene to the development concerns of other sectors, such as health, education and livelihoods, is the focus of the third aim. The need for these linkages in the urban context is critical. Effective urban services depend on joint planning processes and close collaboration. Challenges to be tackled under this aim include the neglect of sanitation that is so critical in dense urban settlements, better coordination across sectors and a lack of commitment to provide a higher priority to WASH financing.

Strategic aim 4 (*We will further develop as an effective global organisation recognised as a leader in our field and living our values*). This aim focuses on WaterAid developing its own capacity to be able to deliver on the objectives under the first three aims. For urban WASH programming (service delivery, policy reform, research and capacity building) WaterAid will need to develop relevant urban experience and skills at all levels. One of our specific objectives is to be a global leader in these issues and we will therefore need to commit to finding and developing high quality skills, expertise and approaches.

Overarching principles for WaterAid's urban work

WaterAid's urban work should be built on the following five principles. Our urban programmes must:

- Strive to ensure services are delivered in an inclusive manner.
- Make conscious strategic choices according to local need or context.
- Focus on facilitating relationships and collaboration between diverse actors.
- Give high priority to sanitation and hygiene.
- Closely integrate our policy advocacy and implementation work.

Principle 1: Inclusive – services for all

Water and sanitation as human rights. WaterAid believes that water and sanitation are human rights^{2, 16}. Securing human rights, including the right to water and sanitation for all, contributes to ensuring an improved quality of life, including better health, greater productivity and expanded educational opportunities. Promoting the right to water and sanitation, with its attendant principles of participation, access to information, equity, inclusion and accountability, finds resonance with the work of many urban-based organisations across all sectors.

Where the poor live. Informal settlements are often referred to as 'illegal' settlements. This can be a significant obstacle to ensuring that people living in such areas achieve their rights, including access to water and sanitation.

How the poor and marginalised cope. It is crucial to understand the dynamics of discrimination of vulnerable groups in towns and cities, and the mechanisms such groups use to access water and sanitation services. With this understanding, WaterAid can play an important role in supporting the urban poor to articulate their situation more effectively. It is necessary to identify which groups constitute or include the urban poor, to know where they live and to understand how they currently decide which water and sanitation facilities to use, and how much they pay for them. Issues such as lack of security of tenure, the impact of eviction or resettlement on urban residents, the patterns of employment and family structure, and access to other services also need to be explored.

Affordability. A particularly important aspect of access to WASH services by the poor and marginalised is the affordability of such services. This is especially relevant in urban informal settlements where pricing of water, particularly connection fees, is a significant barrier to the access and use of basic services¹¹.

Finding solutions that can serve the poor. The conventional approach to urban service delivery often results in the development of large-scale piped water networks, with private connections and communal tap stands, the commercialisation of services, communal sanitation blocks, and centralised water and wastewater treatment plants. Alternatives to this paradigm that can minimise negative impacts on the poor need to be explored, while improving their access to services in an affordable and viable manner. Ultimately we have to remain aware that many alternatives inadvertently act as mechanisms to transfer the costs of conventional service provider failure on to the poorest consumers. It is difficult to bypass the economies of scale available through an efficient centralised service provider. If, for whatever reason (governance, politics, vested interests), it is not possible for the poor to access least cost networked services then we have to be alert to the inequitable sharing of costs and benefits, and do everything possible to address such inequities.



Principle 2: Fit for context

Solutions appropriate to specific context. The solutions we and our partners seek need to be appropriate to the economic profile of a town or city. In the highly diverse cities and towns in many developing countries where there are huge gaps between the affluent and the poor, multiple systems or other strategies such as poverty tariffs and cross-subsidisation (possibly even across service sectors eg electricity) will need to be explored. Big city contexts and profiles are different from small towns⁹ and therefore require different approaches to planning, financing and management of services in the short to medium term. Modular or ‘unbundled’ service options might make sense early on in a town’s development, but should still form part of a master plan for the town or city such that, as it grows and economies of scales improve, elements of the modular or ‘unbundled’ systems can be readily incorporated into a larger scheme or system.

Urban solutions for urban contexts. The urban context is very different to the rural. Urban service delivery requires institutions, approaches and technologies that are not often found in or are relevant to rural areas. In the urban setting, water utilities deliver services by means of large-scale infrastructure in a commercial manner that treats service users as paying consumers. The most significant difference between the urban and rural context is that services are provided (for a tariff) rather than requiring a high level of community management. Density of habitation, higher demand, availability of space, water resource constraints and complexity of management are the main causes of this difference. In addition, the need for creating ‘return-flow’ services or systems that collect, remove, treat and dispose (or preferably reuse) wasted water, faecal matter and solid waste becomes critical in this urban built environment¹⁷.

Water resources. Urban water resources are under great stress and WaterAid needs to encourage better environmental practices such as protecting urban wetlands and the local watersheds, encouraging the monitoring of water resource levels and quality, arguing for proper licensing of abstractions at a fair price, and encouraging urban planners to seriously consider the limits of water resources when considering the overall development of their urban areas¹⁸.

From poverty focus to city-wide solutions. A focus on the poor can result, in some cases, in localised solutions for the poor and vulnerable. The urban context demands that even where these localised approaches might be able to demonstrate success, that they can be translated into a complete master plan of solutions serving all urban residents.

Principle 3: Facilitating relationships and collaboration between diverse actors

Making the links. Successful urban interventions often hinge on building relationships between service users or customers, the authorities and providers (see Figure 2, p22) to reach agreement on the appropriate levels and costs of services. A weakness in many developing countries is the lack of appropriate division between the functions of policy development, service provision and regulation. This can hamper effectiveness and accountability. The clarification and streamlining of roles and responsibilities between authorities at national and local level and service providers in policy setting, implementation and regulation of services is of prime importance but potentially difficult to bring about.

Working with all urban stakeholders. WaterAid country programmes must endeavour to work with and understand all actors, including service users, service providers (both public and private sector), water utilities (where they exist), government agencies and local authorities tasked with providing the policies and strategies for the delivery of services.

Supporting service providers. There are many areas in which WaterAid can engage with governments and service providers to improve understanding of the needs of the un-served population. WaterAid can assist in providing opportunities for mediation and dialogue between utilities and un-served urban communities, as well as lobby for and support utility reforms that strengthen utilities' governance, autonomy, professionalism and financial performance, including tariff and subsidy reforms and appropriate regulatory frameworks. Gaining access and the trust of service providers, particularly larger utilities, can sometimes be challenging. Offering them expertise and the assistance that they need may be a way of opening the door to engage around more sensitive issues such as how to provide services to the poor. Water and Sanitation for the Urban Poor (WSUP)¹⁹, of which WaterAid is a founding member, has significant experience in this area and WaterAid's country programmes should work in collaboration with WSUP teams where they are active and take full advantage of each other's comparative advantages.

Working with regulators. Where national regulators exist, WaterAid's country programmes should also endeavour to work with them to develop simple and effective regulatory mechanisms, fair and equitable tariff structures and simple consumer-regulator communications systems as part of a customer voice arrangement. Where possible, such mechanisms should work towards encouraging providers to proactively self-regulate through direct feedback mechanisms with their customers. However, where a national regulator is non-existent or ineffective or where providers prove to be unwilling, such feedback mechanisms can be supported by local WaterAid partners to kick-start public debate on the issue. Examples of these approaches can be found in *Our Water, our waste, our town*²⁰. This is a guidance and training manual for Civil Society Organisations (CSOs) showing methods and approaches that can be used in taking action to reform urban water and sanitation utilities.

Many players, wide collaboration needed. The delivery of water and particularly sanitation services in urban areas is complex and requires correspondingly complex institutional arrangements. While governments hold the ultimate responsibility for the delivery of services to all, this is often delegated to municipalities and service providers. Surrounding these key actors are numerous others, including on the side of the government, the health, education, finance and environmental sectors and key players such as urban planning and housing departments. Beyond these there are often many CSOs in urban areas working in housing, education, disability, health and other vulnerability issues, where access to safe water, improved hygiene and sanitation are an essential part of reaching their goals. Working with organisations with a wider mandate than water, sanitation and hygiene will require, and engender, a deeper understanding of urban planning, land tenure and social structures. Where formal service delivery options may not be performing well, the delivery of water and sanitation services can often be achieved through community activity, perhaps funded through micro-credit or savings schemes (for example, Shack/Slum Dwellers International²¹ advocates for the needs of the poorest through the direct involvement of the poor in their own service provision).

Urban advocacy. Advocacy and pressure groups are also often more active in urban areas than in rural, and WaterAid can support these groups with information and resources relating to the WASH sector or form collaborative partnerships on specific issues. In some contexts, it might be necessary to understand why government departments and institutions with responsibility for housing and urban development do not put sanitation and water at the centre of all urban upgrading programmes and plans.

The local private sector. The local private sector also often plays an important role, for example in providing out-sourced services to water utilities, as independent service providers, as latrine constructing masons, and excreta and solid waste removal services. The private sector can only function effectively and to the benefit of those served, if its provision of goods and services is financially viable. Breaking up services into component parts or modularising them and opening up the market to the small-scale informal private sector can provide opportunities to deliver services in a viable and affordable manner.

WaterAid – one player in a strategic approach. The complexity of the urban WASH sector clearly demands that WaterAid get its analysis of the sector right in each context in order to focus its work for maximum positive impact. However, we need to be pragmatic about what we are able to bring to the table and we should participate in collaborations that can maximise the overall impact. Towards this end, WaterAid will need to map and analyse the urban WASH sector at a national, city and town level. This process should be done to inform WaterAid's country level urban strategies and should be updated regularly. Some broad guidance for this process is included in Parts 6 and 7 of this framework. Successful urban programmes require experienced staff and partners. Beyond providing experience, all small-scale urban WASH projects should be stepping stones towards a more strategic programme covering all the principles in this part of the framework.

Principle 4: Prioritising sanitation and hygiene

Past neglect of environmental sanitation. Sanitation has been severely neglected in most urban areas, particularly within the poorest urban communities. Water- and excreta-related diseases will still prevail in the urban built environment even when adequate safe water is available if environmental sanitation services do not exist. The scope of environmental sanitation services includes the management of excreta, solid waste and wastewater, as well as surface drainage. WaterAid should therefore prioritise sanitation as an issue from implementation through to policy advocacy. See also WaterAid's *Sanitation framework*¹⁷.

The sector, including some WaterAid programmes, is beginning to explore the applicability of Community-led Total Sanitation (CLTS) approaches in the urban context in order to rapidly decrease open defecation. In dense urban settlements, a complete excreta management cycle is vital for public health and any CLTS approaches must be designed to fit within appropriate city or town-wide environmental sanitation management strategies and plans.

Sanitation brings benefits to all. Sanitation should be considered not only as a delivered service, but also as a private good (providing dignity, privacy, safety, and 24/7 access), a public good (health and environment), and a provider good (livelihood and income), thus implying that users, public agencies and the local private sector need to be involved and supported in solving the sanitation crisis.

Sanitation and hygiene – social marketing. Hand in hand with sanitation comes household hygiene promotion that requires specific urban approaches to be effective. Standard approaches that might be used in rural areas are not wholly suitable for urban contexts that feature a denser, dirtier environment, inadequate management of solid, industrial, medical and human waste, greater use of street vendors for food, less space for household latrines and difficult access for pit latrine emptying. WaterAid in Bangladesh, as an example, has tailored hygiene promotion materials for its urban communities. In a more highly market-driven economic setting in urban areas, additional hygiene promotion or marketing strategies might be tried involving the private sector. Marketing approaches shift the emphasis from an exclusively health-focused approach to recognition of other drivers that may motivate people to pay for a product or a service. WaterAid will be publishing its *Hygiene promotion framework* in 2011.

Principle 5: Integration of implementation and advocacy work

Joined up urban programmes. For WaterAid's urban work to have the maximum impact, our urban programmes should be designed to fully integrate our direct implementation and capacity development work with our policy advocacy. In this way we will achieve the wider sector influencing which we seek. The policy advocacy work should draw from the lessons and experiences in our implementation work and our implementation work should be designed to demonstrate and test the solutions and good practices for which we are advocating. Each country programme will need to design these two complementary halves based on the national and local contextual analyses, drawing guidance from this framework and other WaterAid frameworks and guidelines and linking, where possible, with emerging global and regional sector policy and programme movements.



Part 5

Urban programme minimum commitments

This part of the framework summarises a set of core minimum commitments that should be implemented as part of all WaterAid urban WASH service delivery and policy advocacy work.

Situation analysis

- 1 Each country programme will carry out and maintain an up to date detailed urban contextual and situational analysis (see Part 7 for guidance). This should be carried out by WaterAid programme staff, with specialist support as required, and should exist at national level as well as for each urban context within which WaterAid is working.

Country programme urban strategy

- 2 The urban situation analysis will form the basis for a WaterAid country programme urban strategy. The urban strategy can either be incorporated as a separate chapter in the overall country strategy or can be a stand-alone document.
- 3 There is the expectation that country urban strategies will focus on:
 - Universal services for all urban dwellers, which recognise the rights of the urban poor, vulnerable and marginalised groups.
 - Management of human excreta and wider environmental sanitation, in light of the deficit in such services.
 - Hygiene promotion, recognising the particular approaches required in the urban environment.
 - Understanding the stresses on water resources imposed by heavy abstractions, pollution and climate variability/change.

Collaboration

- 4 We will work to bring about collaboration and networking among all urban stakeholders to build more holistic and integrated urban development approaches that focus on providing access to water and sanitation services as a first step in improving the lives of the urban poor in low-income settlements.

- 5 Within this collaboration, we will support urban authorities to develop WASH services development frameworks in order to guide detailed planning and implementation by all role players and specifically by providers.

Service delivery, capacity development and policy advocacy

- 6 In regard to pro-poor reforms (at both authority and provider levels), we will work to ensure that urban water and sanitation sector reforms and investments target the urban poor and result in universal services for urban residents.
- 7 We will strive to influence and improve urban water and sanitation sector investments and monitoring.
- 8 We will work to strengthen urban citizens' voices and participation in policy design, implementation and monitoring.
- 9 In regard to environmental sanitation, we will work to enhance the visibility, clarity of roles and strengthening of sanitation governance structures and institutions and their ability to facilitate sustainable sanitation management systems and deliver improved public hygiene and health.
- 10 We will work to ensure that public hygiene programmes are integrated within national and local health and education plans and institutions.
- 11 We will work towards the effective recognition, integration and regulation of pro-poor small water enterprises, where these are deemed to be appropriate.
- 12 We will develop our own staff and partners' capacity to analyse, learn, communicate and participate in pro-poor urban WASH policy and practice.
- 13 With regard to learning, we will illuminate and disseminate principles, approaches, experiences and lessons drawn from innovative ways of providing equitable and inclusive urban water and sanitation services to low-income people in urban and peri-urban areas and small towns. We will attempt to create an iterative learning culture where failure is part of the process of learning and equally valuable to share.

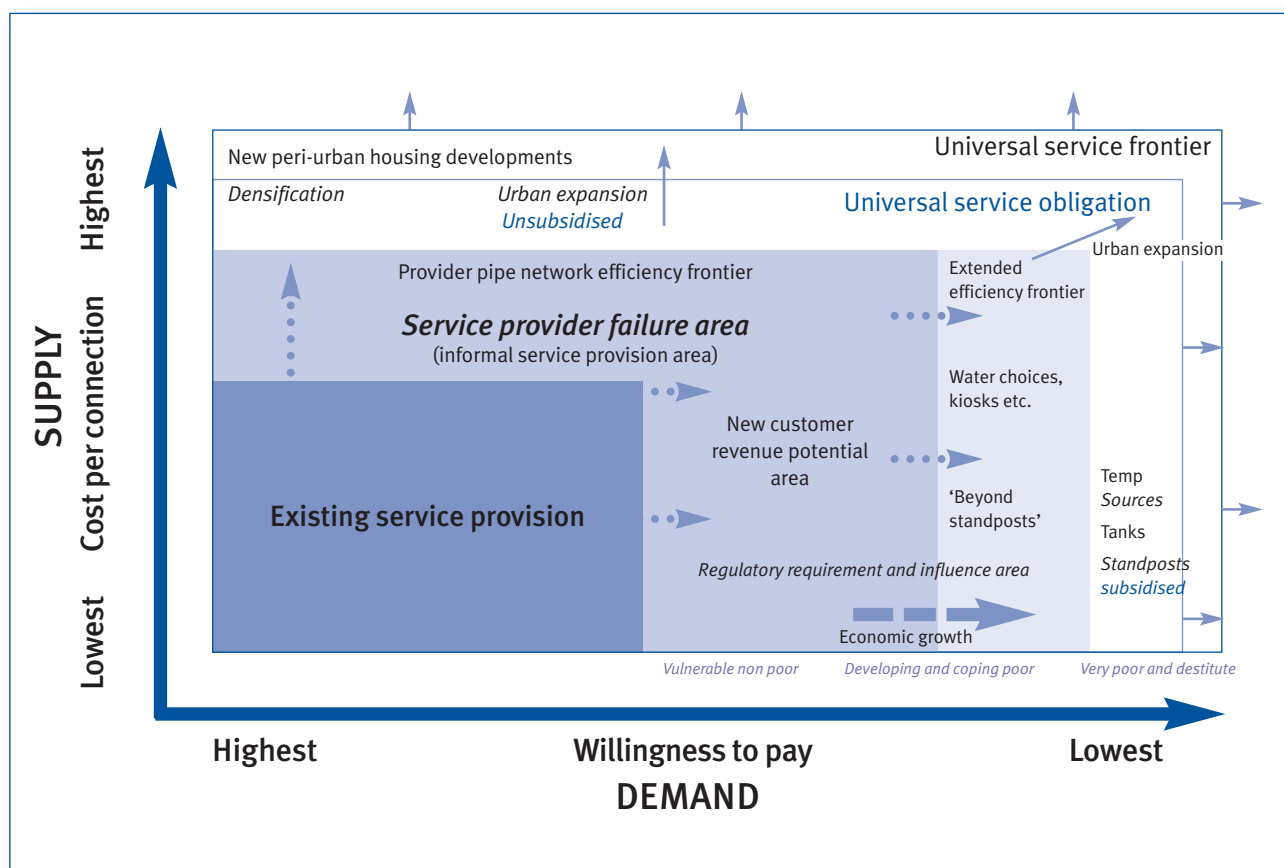
Part 6

Making strategic choices

Helping all people in urban areas enjoy the right to water and sanitation requires inputs to a wide variety of stakeholders and situations at all levels, from national through to local, from technical through to policy. WaterAid will never be able to be involved in all these areas, but the strategic choices we make should be understood and considered by country programmes and partners. Developing a strategy for any organisation requires choosing between alternatives and then investing in the chosen areas in order to achieve the greatest return. In WaterAid's case the return is a social one rather than a financial one.

The range of choices, summarised in Table 2 (p40), can be explained by considering in further detail an expanded version of the Universal Service Obligation diagram (Figure 5, below).

Figure 5: Expanded universal service obligation diagram – for water services



[Source: Franceys and Gerlach, 2008¹⁴]

Water supply

To serve poor communities at least cost, it is necessary to enable the existing utility or local service provider to extend its service coverage to the limit of the pipe network efficiency frontier. This will not only extend coverage to some urban poor but will also deliver a viable revenue base to ensure sustainability of the water provider and to facilitate cross-subsidies for further expansion. Delivering that extended service coverage requires advocacy and capacity building not only with the service provider but also with the government (as policy-maker and standard setter) and with the economic regulator. The Change Management Forum in India²² is one example of providing a platform for such advocacy.

The direct service provider will require technical assistance, capacity building and incentives in order to deliver the improved service necessary to support enhanced services to all urban consumers. For example, a reduction in non-revenue water (representing physical and commercial losses) to presently served consumers will deliver additional water resources and funding to extend services to the poor. Better management of the distribution system can prioritise supplies towards poorer areas where consumers cannot afford the household tanks and pumps by which higher-income consumers cope with intermittent services. The National Water and Sewerage Corporation²³, Uganda, and the Phnom Penh Water Supply Authority²⁴, Cambodia, are good examples of public utilities that, having ensured a viable service for 'ordinary' consumers, have then been able to extend sustainable services to the poor. Engaging with price-setting bodies or regulators delivers appropriate subsidies to the poor as and where required, rather than the present situation of subsidies for all which drains the utility of the resources to extend and enhance services. Subsidising the connection cost may be even more important than subsidising the consumption costs in removing the barriers to access. Enabling any regulator to understand the potential for requiring utilities to extend services to the poor as part of the 'contract' during price-setting is another key tool. The National Water Supply and Sanitation Council²⁵ in Zambia is a good example of an economic regulator supported in the requirement to improve services to the poor.

The lightest blue area in the universal service obligation diagram above represents the possibility of extending the pipe network efficiency frontier through innovative techniques to lower the cost of conventional distribution systems whilst enhancing revenue collection capabilities (both of which are factors used in defining that frontier). The use of group or street meters, remote meter banks, surface and community labour for the laying of pipes, can all reduce the cost of extending the pipe network. The use of community water boards, delegated private management, tap stand vendors and pre-paid meters can all enhance revenue collection (though usually at additional cost which is passed on to the poorest) relative to the conventional systems that do not employ intermediaries. WaterAid and WSUP¹⁹ have been investigating and employing such approaches in more detail.

These alternative techniques have to be 'differentiated' according to housing characteristics and may well be appropriate for a more limited area than sometimes supposed (ie conventional services can be extended to poor areas much more easily than is sometimes assumed). The Veolia work in four towns in Karnataka, India²⁶, is an interesting example. The difficulty of pipe laying and revenue collection in hyper-dense illegal slums requires different solutions (for example, Maynilad and Manila Water, Philippines²⁷) from low-income un-served new development areas, where

group or street meters (for example, Aguas Argentinas²⁸, Buenos Aires) may be all that is required²⁹ in exchange for lower connection charges.

Enabling the water service provider to take advantage of these techniques might be termed ‘indirect’ support options for WaterAid to consider. Before such improvements can be implemented, and in the ‘white’ area of the diagram where there is low ability and limited willingness to pay, there is a role for a support entity to make direct services provision to fill the gap until the utility is able to achieve its universal service obligation. Such temporary ‘direct service in-filling’ could be through support to local community based or non-governmental organisations or to SSPIs.

Beyond the utility’s universal service obligation boundary are the poorest of the poor, the destitute, the street dwellers. Opinions differ as to whether the provision of free street fountains, perhaps a reasonable minimum level of service, might be included as a task or social responsibility of the direct service provider or of a social welfare agency or NGO. The reason for questioning any such choice is that it is necessary not to overburden a weak utility too soon – local service providers have to be enabled to strengthen their resource flows and thus their service areas in a way which gradually builds up financial resources and technical capability. If too much is expected too soon, such organisations tend to ‘give up’ and make no improvements at all.



Where there are particular hydrogeological conditions and/or spatial considerations, a ‘modular system’ can be considered which will likely not be part of the city-wide network. A modular system can be developed in two ways. The first is a joining up of a number of sub-service components in order to make a complete service. If any one of these modules does not exist or fails, then the entire system does not function properly. The second is a joining up of complete mini-systems, each of which is able to provide a complete service over a smaller area. If one does not function, then a limited number of consumers will not receive a service. However, most such systems incur additional unit costs per volume/person supplied and care has to be taken to ensure that the poor are not carrying those costs. Such systems should, where possible, form part of a city-wide/town-wide strategy with clear guidelines on incorporation into the main systems once the utility managed network reaches these areas.

Sanitation and hygiene

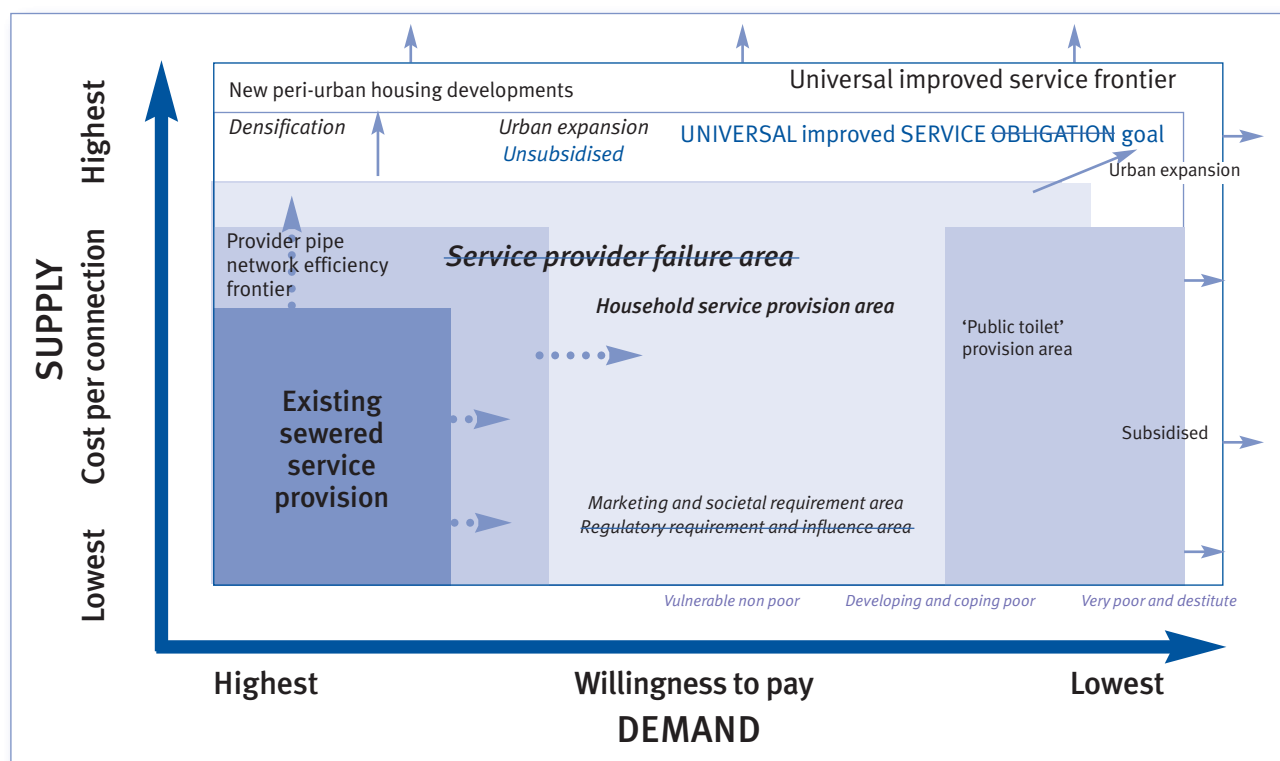
The strategic options with regard to sanitation can be seen differently in Figure 6 (next page). The ‘provider pipe network efficiency frontier’ for the expensive piped sanitation solution known as ‘sewerage’ is much more limited than that for water. The potential advocacy role to improve service delivery by a utility might be more limited as it is unlikely that in the near future such services will be affordable by the lower-income households. It is important to ensure that only those receiving an expensive sewerage service are paying for it and that they are paying for it at a ‘cost-reflective’ rate. Too often the cost of sewerage is recovered through an increased tariff on all water consumers (including those that can least afford it) and is often not actually cost-reflective, resulting in other resources being diverted to support that service. In fact the reverse might be more appropriate, with these revenues providing cross-subsidies for alternative systems for the poor. Such advocacy approaches reflect again an indirect support to low-income consumers.

Direct support can be through what the diagram refers to as a ‘marketing and societal requirement area’ – those middle- and lower-income urban areas which need support to access components to construct household level improved on-plot and on-site sanitation facilities and to access tank/pit emptying capacity when necessary. In these cases, sufficient strategies must be in place to ensure the safe removal, transport and treatment of faecal waste. This might include the unbundling of the service into smaller economically viable tiered services (primary, secondary and tertiary) providing ideal opportunities for local entrepreneurs or well managed CBOs. A number of WaterAid country programmes³⁰ have begun work in this area and a good additional resource is Sanitation Entrepreneurs research by Building Partnerships for Development in water and sanitation³¹. The provision of condominial sewerage and/or decentralised wastewater treatment systems may also be used to extend the network efficiency frontier in a cost-effective manner or in particular areas where ground conditions (eg shallow water table or hard rock) make on-site solutions impractical.

The societal responsibility concept reflects CLTS approaches in an urban setting – requiring and enabling urban areas to achieve Open Defecation Free (ODF) status. A self-service approach to sanitation provision, constructing on-plot systems for example, is less viable for one room tenant households. More appropriate in high density informal areas is the development of pay per use toilet and wash blocks – communal, NGO or private provision, with which WaterAid has some experience, being a good source of examples. Other examples include Sulabh³², IkoToilets³³ and WSUP³⁴.

As with water, all attempts should be made to ensure that these alternatives form part of city-wide or town-wide strategies and plans.

Figure 6: Expanded universal service obligation diagram – for sanitation services



[Source: Franceys and Gerlach, 2008¹⁴]

Drainage and solid waste

Adequate greywater ('sullage') drainage along with rain ('storm') water drainage are key requirements to maintain health protection in squatter and high density informal housing areas. Adequate disposal of solid waste is a complementary and contributing challenge. Solid waste often blocks whatever drainage channels are available but also poses serious health and environmental risks within dense urban settlements. There is a role for external facilitation in better managing those services through community involvement, avoiding initially any hardware approach which can lead to increased rents.

Effective drainage systems can be extremely expensive to develop and it is an area in which WaterAid has only limited experience. An example case from Maputo, Mozambique, has achieved some success. Neighbourhood drainage channels were constructed with local labour and cleaned and maintained by a community group. These channels lead into secondary channels into the main city drainage channels maintained by the municipality.

A parallel model to that of the entrepreneurial approach for faecal waste management, as mentioned above, can be used for solid waste removal and management. The Maputo example is also relevant here, where local entrepreneurs or CBOs provide the primary collection function (paid for through municipal environmental sanitation tax) and the municipality provides the secondary collection from the edge of the neighbourhoods. Once again, city-wide and town-wide strategies and plans should form the basis for these approaches.

Table 2: Strategic urban programme options and choices

Urban focus choices	Low-income housing area choices (recognising poverty segmentation choices within each of these housing types)	Sub-sector choices	Activity choices	Partners/ stakeholder choices
- Metropolitan cities - Cities and towns - Secondary/small towns	- Street sleepers  WaterAid/Jon Spaul - Squatter areas, railways, beaches  WaterAid/Jon Spaul - Hyper-dense, low-rise informal (illegal?) housing areas/slums  ©Corbis - Tenements/vertical slums  WaterAid/Erik Harvey - Very low-income un-served new development areas  WaterAid/Eva-Lotta Jansson - Urban incorporated villages	- Water - Sanitation - Hygiene promotion/hand-washing - Drainage and solid waste	<i>Indirect</i> - Advocacy/influencing policy, practice and approaches. - Technical assistance to local service provider in policy and practice. - Capacity development in policy and practice. - Social intermediation/low-income consumer representation with stakeholders. <i>Direct</i> - Temporary 'direct services' to the street sleepers and squatters before they are re-housed/relocated. - Temporary 'direct service in-filling' for the poorest until utility service catches up. - Working 'beyond the universal service obligation' – the destitute and street sleepers. - Supporting displaced rural populations due to the necessity to expand urban water resources.	- Water utility/local government department - Utility 'pro-poor unit' - Low-income consumers - CBOs and NGOs - Alternative service providers/SSIPs - Economic regulator - Ministry of local government - Ministry of water resources etc

The choices illustrated on the previous page are of sufficient scope and complexity to make any organisation uncertain as to where to target scarce financial and human resources. The key issues for making these strategic choices are discussed in the section above. Clearly, WaterAid will not be able to address all of these issues in each location. Table 3 (below) shows an approach to use when analysing these choices.

Table 3: Prioritisation matrix tool for urban programme options

		Relative ease of implementation	
		Easier	More difficult
Potential impact on WASH access for the urban poor	Low	Option 5 – Capacity-building of water utilities.	Option 6 – Sustainable sanitation for condominium housing. Option 10 – Strengthening local sanitation markets for household latrines.
	High	Option 3 – Support to WASH services in Addis Ababa. Option 4 – Sanitation focused intervention in four towns with urban water supply projects. Option 6 – Selecting the best urban sanitation technology options. Option 9 – Preparation of urban specific health and hygiene Information, Education and Communication materials. Option 8 – Urban School Health and Hygiene Promotion and Education (SHHPE) programme.	Option 1 – Urban WASH sector monitoring, networking and innovation dissemination. Option 2 – Support for the development of a national urban sanitation strategy and manual. Option 7 – Testing the use of CLTS in urban Ethiopia.

[Source: Example from WaterAid in Ethiopia, 2009]

From principles to programmes

The complexity and variation of urban WASH contexts and situations means that WaterAid cannot prescribe a common set of urban strategic objectives for all countries and for all urban areas within a country. What can be done, however, is to suggest a process and useful tools for helping each country programme to decide the shape of its urban programme within each context.

The country programme will need to first bring together the four strategic aims of the organisation and those of the country strategy, and combine these with what they have learned from their situation and stakeholder analysis, the relationships between stakeholders and the features and barriers of the urban WASH context. This will help them decide what to focus on, perhaps using a mind map³⁵ or similar tool, preferably in a workshop together with partners or other organisations working in urban areas. The goal is to arrive at the most appropriate urban strategic objectives.

Within each of these objectives, various barriers to universal urban services may be identified. Identifying which barriers exist in a specific urban situation helps to suggest what detailed interventions are required and thus to be considered by the country programme.

Inevitably each country programme will identify more urban issues and barriers than it has the capacity to address and will therefore have to choose. This may be broken down into three stages:

- Identify strategic issues and basic barriers of urban WASH.
- Decide strategic focus – which issues and barriers could WaterAid address and how could it do so?
- Generate programme options based on barriers, opportunities and what others are doing and plot each in a simple matrix of probable impact (ie upon expanded coverage for poorest groups) and difficulty of implementation.

Table 3 (previous page) shows the results from just such a process in WaterAid in Ethiopia during June 2009.

Once these decisions have been made, it is possible to select the portfolio of activities that will make up the urban programme. Indicators for monitoring progress should be developed with reference to WaterAid's *Planning, Monitoring and Evaluation guide*³⁶.

The entire urban programme from policy advocacy through to service delivery should be built with the express purpose of influencing change. From an implementation perspective there may be no 'division' of activities between service delivery, capacity development and advocacy, though alternatively country programmes could focus on one aspect only. Whatever that choice, for budgeting, reporting and staffing purposes, such distinctions have to be made.

Financial and human resources

Having determined the objectives and activities of the country urban programme, it is necessary to assess what financial resources are available for planned interventions, considering not only WaterAid resources, but also resources over which WaterAid may be able to exert influence (eg government or municipal budgets, other sector players such as the Water and Sanitation Programme of the World Bank or UN-HABITAT, donors such as the European Union, the Department for International Development or others, or international financial institutions such as the World Bank, the African Development Bank or the Asian Development Bank).

In a similar manner, it is necessary to assess what human resources are required and available, or what needs to be acquired, either as WaterAid staff, partner staff or consultants, to achieve the strategic focus and objectives. A robust response to urban WASH issues and barriers requires urban expertise among country programme staff and/or partners, programme and advocacy staff that are dedicated to urban activities.

Ideally this requires at least one WaterAid staff member who has worked in a utility and understands something of the challenges which service providers face in meeting the needs of all consumers, both at the investment and project planning level, as well as at the day to day operations management of distribution systems level.





Part 7

Guidance for urban situation analysis

This final part of the framework suggests a number of processes that a country programme can use to undertake a detailed analysis of the urban WASH sector as a basis for its country specific urban strategy.

Note that a situational and contextual analysis can be heavily influenced by the ‘eyes’ through which the situation or context is viewed. It is therefore important to ensure that the team undertaking such an analysis contains the right expertise and is as balanced as possible.

Looking back

This is a reflection exercise, to assess what has been done by WaterAid, partners and other actors in the previous five years to improve access to water, sanitation and hygiene in urban areas. This includes examining achievements and challenges, as well as considering what has changed both for WaterAid in terms of its strategy and goals, and also in government policy or the external environment, which may have had an impact on how WaterAid continues its work in urban areas. This is relevant even where WaterAid has not done a significant amount of work in urban areas. Looking back should also include attention to policy advocacy, where a robust analysis of previous work carried out by the relevant agencies is recommended with, at a minimum, a workshop to review earlier initiatives and map their strengths and weaknesses.

Situation analysis

The preparation of the country strategy should have included a national analysis that will have, at minimum, made some reference to issues such as urbanisation and urban WASH coverage trends. The urban strategy can build upon this, focusing on the specific towns and cities where the country programme may work. This should include the city/town structure, its institutions and political climate, current access to water and sanitation services, and levels of poverty.

National analysis areas

- Relevant national strategies, policies and legislation (directly WASH-related, water resources, shelter and housing, non-discrimination including disability, HIV, women, minorities, health, education, environment).
- Incidence of human rights mentioned in policies and legislation, particularly recognition of the right to water and sanitation.
- Specific understanding should be sought on how sanitation sits within the policy and financial resourcing arena and how this might link to levels of service. In the same vein, understanding should be sought on what strategies and structures are in place to assist rapidly growing and emerging towns to deal with their specific issues (refer to WaterAid's *Small town water and sanitation delivery: Taking a wider view*⁹ for further guidance).
- Overarching national institutional structure (also looking beyond just WASH issues), systems, structure and norms.
- Other key players active in the national context.
- Financial planning procedures of the city/local authorities, and identification of the adequacy of financial resources available to be sourced from the city/town authorities for WASH service provision.
- Existence and effectiveness of regulatory authorities.

Profiling the cities/towns

- Contextual profile of city/town (political structure, main economic drivers, settlement patterns/demography, degree of autonomy, interconnectedness with surrounding areas, geography and available water resources) for understanding the city/town and its WASH service needs. For specific guidance for small towns refer to WaterAid's *Small town water and sanitation delivery: Taking a wider view*⁹.
- City/town governance structures, how water and sanitation services are currently delivered, levels of responsibility (including a service provider capacity and performance analysis).
- Mapping of existing infrastructure.
- Current estimates of levels of service provision and assessment of the quality of this data.
- Existing service delivery systems, including SSIPs.
- Tariffs, subsidies, cost recovery, prevalence of meters, levels of non-revenue water.
- Location, size and nature of the urban poor (as per Part 2) and particularly:
 - Where people access water and for what purpose.
 - Where people go to the toilet.
 - What costs are incurred by households for construction, maintenance and service tariffs.
 - Hygiene practices, where it is feasible to gather information.
 - To what extent existing WASH facilities are accessible and suitable for all, including women, older people and people with different types of disabilities.
 - Livelihoods, social processes and structures.

Analytical tools

Ensuring universal access to water and sanitation is undoubtedly a challenge, requiring strong institutions and significant resources. WaterAid is also clear that the ultimate aim is that these services be adequate, affordable and accessible and that the needs of the marginalised and vulnerable are met in a non-discriminatory manner.

In our situation analysis we should identify the sector institutions in the town and assess their capacities to fulfil their roles. This section suggests three tools to assist this analysis. One useful tool is the governance/management triangle (Figure 2, p22). The analysis should examine the relationships and barriers between these key actors, and the opportunities for collaboration among them. Generally four separate different triangles should be analysed (water, faecal waste, solid waste and drainage) in recognition of the distinct delivery processes.

A second common and useful tool is a SWOT³⁷ (Strengths, Weaknesses, Opportunities and Threats) analysis. In this framework, the major features are organised under one of four headings, which combine together to present a succinct statement of each town's water/sanitation supply or utility. For a typical town it may appear as shown in Table 4 (next page).

Table 4: Hypothetical (but typical) SWOT analysis of a town water supply system

Strengths	Weaknesses
- Two new tube wells sunk five years ago that increased bulk water supplies by 30%. - People have mostly accepted the tariffs after they were increased two years ago. - The community and water network is now mapped. - Some staff are helpful and well motivated. - Our water utility has some flexibility to propose its tariffs (but they must be approved by the regulator, which takes many months). - About 55% of connected households have a working meter. - Two new utility offices make it easier to pay bills, report leaks and make complaints.	- Estimate of non-revenue water is 40%. - Only 35% of households have a piped connection. - Revenues to the utility only cover salaries and electricity. - Some 60% of poor people report using unprotected water sources. - Existing public facilities inaccessible for people with reduced mobility. - Only two civil society members on the Utility Board and unable to convince Board to adopt pro-poor policies. - The utility has no leak detection equipment. - Only 40% of the customers pay their bills regularly.
Opportunities	Threats
- National government has publicly committed to meet the water and sanitation Millennium Development Goals and increased budget allocations to urban water. - Two or three donors or International Financial Institutions are reported to have visited the town and may be interested in granting or lending us funds to expand the network and reform the utility. - Some wealthy citizens might invest in the utility or other water service businesses.	- Declining ground water levels. - More boreholes will have to be drilled, some farmers are angry and suspect that we are taking their water. - The catchment areas are deforested and rain run-off increasing.

This SWOT analysis can be used in various ways. It can provide a structure for discussions with utility staff to confirm issues. It can be used with the media to disseminate the findings of the situation analysis and increase citizen awareness. It can be used with citizen groups to discuss action steps. And it can be used with regulators, politicians and donors to argue for changes in practice and policy.

A third possible tool is an ‘agencies and functions matrix’, which maps the categories of all stakeholders (from consumer groups to service providers and government actors) against activities (from policy, planning and financing to operation and maintenance) providing cells in which to describe roles and assess capacities. Within this analysis it is also then possible to propose or assess WaterAid’s role if any, with respect to each stakeholder and function.

These three analytical tools should be discussed in a workshop by WaterAid staff and its main partners, where applicable, to create a complete picture of the situation relating to access to urban water and sanitation service provision within the country or specific areas within the country.

Identification of barriers

The situation analysis should then lead to identification of the barriers to access to water and sanitation in a specific town or city, such as in the typical example shown in Table 5 (below).

Table 5: Hypothetical barriers analysis for a typical town

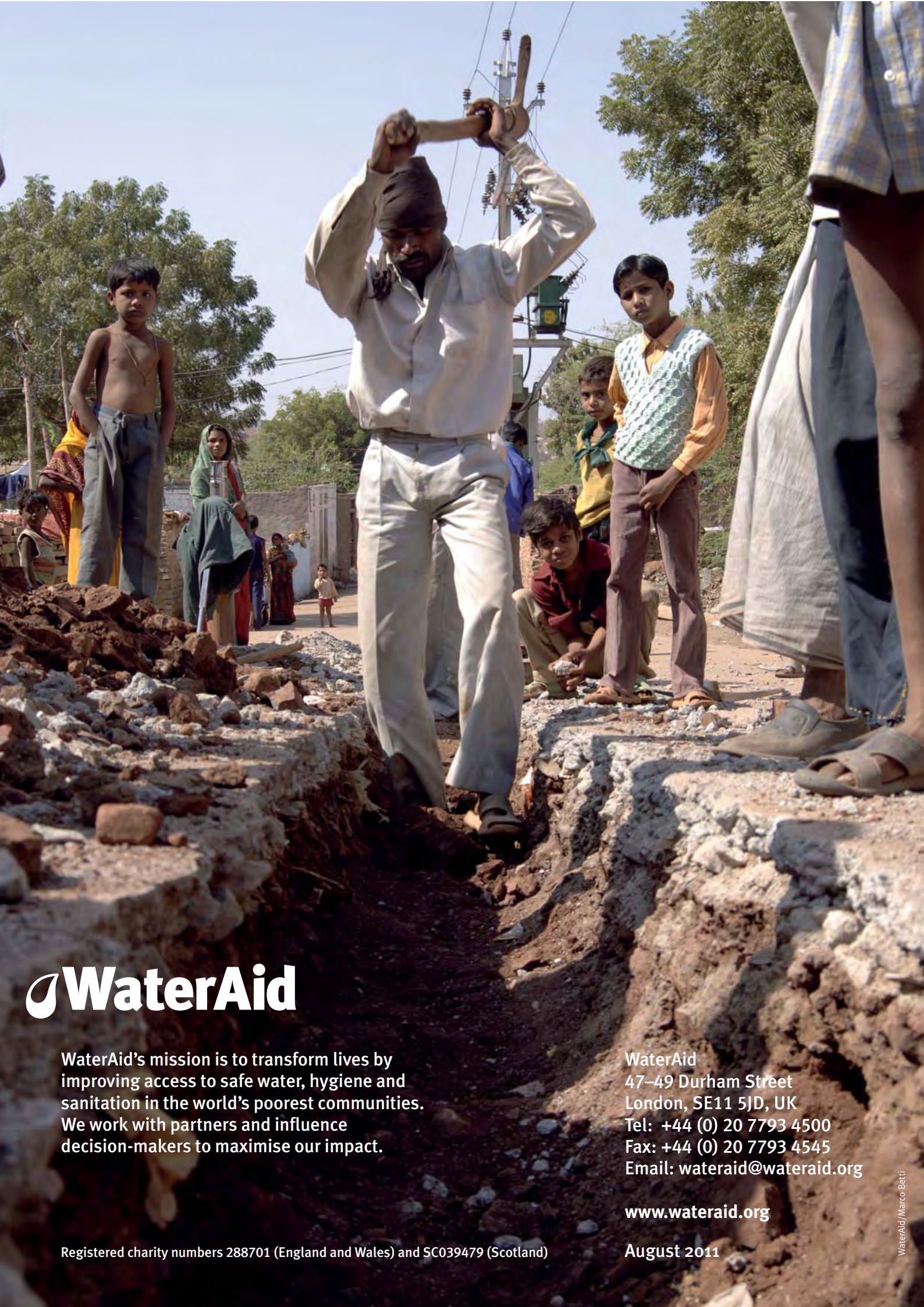
Barriers to universal water
• Low levels of information/understanding about issues and context. • Lack of clarity in roles and responsibilities relating to water and sanitation services within government and relevant institutions. • Lack of voice for poor people, including marginalised and vulnerable groups. • Poorly performing water and sewerage utilities. • Unsound economic decisions/inadequate financial revenues. • Significant technical challenges. • Civil society lacks information/experience/collaboration. • Water scarcity/water demand competition.
Barriers to universal sanitation
• Sanitation is an institutional ‘orphan’, with minimal funding available in comparison to other sectors. • Inadequate coordinated planning. • Weak demand. • Weak supply/lack of delivery options. • Inappropriate technical options in use. • High/inappropriate expectation/biases related to the level/type of service. • Inappropriate hygiene promotion.



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WaterAid's mission is to transform lives by improving access to safe water, hygiene and sanitation in the world's poorest communities. We work with partners and influence decision-makers to maximise our impact.

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