



# The 3W approach: WATER



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#### INTRODUCTION

Over the past 150 years urban water infrastructure has brought great public health benefits to billions of people in the industrialised world (and into piped and sewered communities in developing and transitioning nations). However, the impact of these public health advancements has not been felt equally around the world; with millions of urban dwellers living without access to safe and reliable water, sanitation or drainage services.

The majority of cities in the developing world are currently continuing to struggle to provide an adequate water supply system to rapidly expanding urban populations. A lack of reliability in both quality of supply and consistency of supply decreases community willingness to pay, and therefore the utility's funding base, and inversely it increases risks of water borne disease and public health risks.

Additionally, urban water experts now acknowledge the severe economic, social and environmental costs that have been associated with the current reliance on centralised, and expensive, infrastructure. Vulnerable communities have been relocated to make way for large dams. The poorest communities have been out priced, and continue to lack access to proximate systems due to high water and sewerage charges.

## **Urban Water Challenges**

- 1. Inequality
- Service provision: coverage & reliability
- 3. Water quality assurance
- Environmental degradation issues
- 5. Economic burdens: vulnerable priced out
- Social considerations: eviction & social exclusion
- Governance and management

Millions of tonnes of untreated human waste has flowed, and continues to flow, into rivers, lakes and oceans causing downstream environmental and public health concerns.

Less obvious adverse impacts also occur. For example: the environmental impacts associated with using huge volumes of drinking water (often already scarce) to flush away a minimal amount of urine or faeces, which makes it even harder to treat to an adequate standard; or the growing awareness of the impacts of traditional urban drainage on aesthetics, receiving water bodies and social health.

It is now recognise that the traditional approach to urban water service provision is not a silver bullet. In some contexts centralised service provision will be the preferred technology, but in many contexts, and especially amongst the poorest and most vulnerable emergent governance approaches and technological solutions which emphasise on-site, decentralised or semi-centralised approaches are likely to be the optimal systems into the future. This is true, in lesser or greater degrees, for water supply, wastewater and drainage management.



Figure 1: On the left the Beguntila informal community in Dhaka. Built next to a drainage channel this informal community has limited water and sanitation access and is often inundated during rainfall events.

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#### ABOUT THIS PAPER

This paper presents an overview of the emerging trends in the area of urban water management in developing cities. In this paper the term 'urban water' seek to encompass the three interdependent streams of (i) water supply management, (ii) sanitation and wastewater management, and (iii) drainage or stormwater management. Where the term urban water is used it refers to all three streams, and where one particular stream is discussed it will be clearly specified. This paper seeks to provide a brief summary of the current global thinking regarding urban water management, drawing on learnings from community based projects, literature and themes discussed at global urban water events and conferences. It is intentionally conceptual, with only a limited section providing very initial thoughts on planning a way forward.

#### **OBJECTIVE**

With the aim to be informing the discussions in the lead up to Habitat III<sup>1</sup>, this paper seeks to achieve three objectives, two short term (next 2 months) and one medium term (next 12 months):

- Short term: This paper seeks to act as an introductory background paper for participants at the Healthy and Just Cities for Children and Youth urban Thinkers Campus; especially those who do not come from a background in the water sector.
- **Short term:** provide an intial structure into which stakeholder case studies and experience can be easily added to provide a platform for knowledge sharing and evidence building
- Medium Term: it is proposed the following the UTC, the outcomes of this event will be incorporated into this document to provide a widely informed policy paper. This could be a resource to feed into the New Urban Agenda dialogue in the lead up to Habitat III, and can provide policy recommendations for interested organisations and member states.

#### LIMITATIONS

This paper does not claim to be fully comprehensive but rather to provide some preliminary conceptual responses to the question listed above. It is a step forward in providing some high level discussion points. We welcome input and feedback on this paper. We recognise that World Vision is still in the early stage of our urban water thinking and are hoping to keep learning and collaborating with other stakeholders in this sector.

#### WATER AND HYGIENE - ESSENTIAL INGREDIENTS FOR URBAN HEALTH

If there was the universal provision of adequate water supply, improved sanitation and hygiene practices around 2.4 million deaths could be prevented each year<sup>1</sup>. Unfortunately, the majority of these deaths occur in children in developing countries. Inadequate water, sanitation and hygiene practices are also responsible for approximately 6.6% of the global disease burden<sup>1</sup>. Yet there remains an inadequate global commitment to respond and provide improved services to the most vulnerable<sup>2</sup>. The impacts of poor urban water service provision is accentuated by poor solid waste management and drainage failures which increase the pathways for disease transmission and the breeding of disease bearing vectors.

The global situation for drinking water currently sees approximately 15% of urban populations without access to improved water supply systems in least developed countries<sup>3</sup>. In the years since 1990, the number of people in urban centres without access to improved water supply has increased to 156 million<sup>3</sup>. In addition to this increase in unserved population, even larger percentages of urban populations in low and middle income nations are dependent on water supply systems that work for only a few hours each day<sup>3</sup>. Additionally, often supply pipelines become contaminated as polluted groundwater entering the supply pipelines<sup>4</sup>. In approximately 20% of urban

<sup>&</sup>lt;sup>1</sup> Through the UN Habitat Urban Thinkers Campus Healthy and Just Cities for Children and Youth, Geneva, October 2015. The Urban Thinkers Campus is an initiative of UN-Habitat conceived as an open space for critical exchange between urban actors who believe that urbanization is an opportunity and can lead to positive urban transformations. <a href="http://unhabitat.org/urban-thinkers-campus-events/">http://unhabitat.org/urban-thinkers-campus-events/</a>









centres in Asia water quality fails to meet national drinking water quality guidelines<sup>5</sup>. This increases the burden on families who are forced to choose between drinking water of an unreliable quality, or spending money to treat the water within their home.

Safe water provision in homes prevents not only diarrhoeal disease burdens but also the impacts of waterborne arsenicosis, typhoid, cholera and guinea worm<sup>2</sup>. Further intervention to protect water from contamination within the home is also critical – we know that most water collected from communal public sources is contaminated by faeces in the home before consumption<sup>6</sup>.

In developing countries, nearly 17% of our world's population continues to defecate in the open due to the lack of an improved sanitation alternative3. Another 26% rely upon dirty and unsafe sanitation systems or shared communal systems. At the other end of the spectrum approximately 57% of the world's population have access to some form of improved sanitation at home3. Improved sanitation systems are proven to help prevent a plethora of diarrhoeal diseases, along with multiple other globally significant intestinal infections and diseases2. Access to adequate sanitation services is critically important in urban contexts, where diseases can spread rapidly due to the population density and the proximity between places of sanitation and places of children's play, food preparation or other community activities7. Diseases can spread quickly, developing into epidemics in dense, poorly planned and underserviced urban communities (e.g. the 2008 Cholera epidemic in Zimbabwe and the 2014 Ebola epidemic in West Africa).

Access to improved water supply is critical for good hygiene practices. For example, hand-washing with soap dramatically reduces the risks of diarrhoea and skin infections like scabies<sup>2</sup>. Access to clean water for face washing reduces the chances of childhood blindness from trachoma or other eye infections<sup>2</sup>. Handwashing and access to clean water reduces neonatal mortality<sup>8</sup>.

WASH interventions are incredibly cost effective<sup>9</sup>. Hygiene promotion is the most effective intervention for disease control intervention, with a cost effective ratio of 200<sup>9</sup>, with sanitation developments also in the top ten possible interventions.

The benefits of WASH interventions are far greater than simple water borne disease statistics would suggest. It has been documented that for each reduction in typhoid related mortality as a result of WASH actions there were between 2 and 3 other deaths averted from tuberculosis, pneumonia and other causes of child mortality<sup>10</sup>. Reductions in diarrhoea also reduce the impacts of disease that result from childhood malnutrition which account for 29% of global childhood disease burden<sup>1</sup>.

Disease burdens from poor WASH services delays school entry, decreases cogitative development, and increases physical stunting<sup>11,12</sup>. Improvements in WASH in urban areas increase attendance at school, especially leading to increase rates of school completion amongst girls<sup>13</sup>. Providing WASH services in urban communities and schools has real economic benefits<sup>14</sup>. It has been stated that "with the possible exception of malaria and HIV/AIDS in Africa, it is hard to think of another health problem so prejudicial to household and national economic development"<sup>2</sup>.

**Poor solid waste management** exposes urban populations in increasingly unhygienic living conditions<sup>8</sup>. Additionally, solid waste that enters either sewerage or drainage systems leads to blockages and overflows of sewerage into the street or poor drainage performance<sup>15,16</sup>. Poor drainage then results in urban inundation and increased breeding sites for malaria, dengue and other disease carrying mosquitos<sup>16</sup>. Inundation increases the disease transmission potential by connecting poor urban communities with overflowing sewerage or sanitation systems<sup>17</sup>.

Improvements and interventions in urban water service provision will differ from each urban context. However, regardless of context, investments into these sectors will result in improved urban health, decreased disease burden, improved education opportunities and overall improvements in household and national level economic growth.

#### SUSTAINABLE APPROACHES TO URBAN WATER AND HYGIENE

Reflecting on the current public health burden experienced due to poor urban water, sanitation, drainage and solid waste management approaches, and the understanding of an emerging narrative of embracing a diversity of technical and institutional solutions to the water related challenges facing urban centres in the developing world, changes how donors, NGOs, and communities will respond to urban water issues.

This understanding of the changing nature of urban water service provision is explained in Figure 1 as the urban water transitions framework.<sup>2</sup> This framework presents a conceptualisation of the patterns of historical urban water development and suggests future development pathways based around the changing societal expectations and drivers for urban water management. In this framework the initial three phases of city development represent the conventional urban water development paradigm (as discussed above) and are contrasted against the latter three phases which represent increasing degrees of the concepts of sustainable and integrated urban water management.

Recent work has found that the majority of cities in the developing world are currently placed somewhere near the 'water supply city' - maybe with some sewered services and some urban drainage - but without a wellfunctioning urban water service<sup>3</sup>.

World Vision's Urban CoE would seek to suggest that, where and when possible, projects should be developed which equip communities, service providers, local councils, regional and national governments (as well as other NGOs and any other interested stakeholders) to progress as far towards the ideal water sensitive city as possible. This idea is that of an environmental leapfrog – of equipping developing countries to not make the same mistakes as industrialised contexts but immediately implement best practice. While this might seem far-fetched there is evidence that this is not only desirable but also possible. World Vision is currently developing local case studies and pilot projects that can demonstrate how these principles can be implemented in developing country contexts. This approach will allow for ongoing discussion around innovative approaches to water supply, faecal sludge management, rainwater or stormwater capture and reuse, community participation and community based leadership.

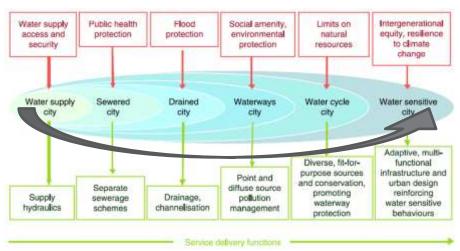


Figure 2: The urban water transitions framework: with an arrow demonstrating the theoretical urban water leapfrog

<sup>&</sup>lt;sup>2</sup> Brown, R.R and Wong T, 2009, *Urban water management in cities: historical, current and future regimes*, **Water, Science and Technology**, 59 (5)
<sup>3</sup> Switch Urban Water









#### PRINCIPLES OF SUSTAINABLE URBAN WATER MANAGEMENT

If a more integrate and sustainable approach to urban water, sanitation, drainage and solid waste management is to be progressed in rapidly urbanising centres in the global south, there will need to be the progression towards the principles of sustainable urban water management, which are presented in Box 1 below.

Box 1: Principles of Sustainable Urban Water Management in developing country contexts (adapted from Pinkham 1999)

- 1. **Human waste is a resource**. It should be captured, treated effectively, used as a business model and used as soil conditioner or fertiliser for agriculture.
- **2. Manage Demand**. Demand management for urban water presents real and increasing opportunities. Maximise all cost effective options before increasing infrastructure capacity.
- **3. Demand is multi-faceted.** Infrastructure and water service choices should match the water required for different uses: quantity, quality and reliability of water source required.
- **4. Reuse and reclamation.** Water can be used multiple times within the urban system before being disposed of, eg encouraging the use of grey water for urban agriculture.
- **5. Stormwater is a resource.** Harvesting stormwater presents an alternative water supply option. Alternatively, captured rainwater can be slowly released to minimise flooding, support urban waterways and recharge urban groundwater aquifers.
- **6. Small/decentralised is possible, often desirable.** Small scale systems are effective and can be economic, especially when the costs of conventional distribution/collection systems are considered.
- **7. Allow diverse solutions.** A multiplicity of context specific solutions is required in for complex and diverse urban environments, and these are enabled by new management strategies and technologies.
- **8. Physical and institutional integration from the start.** There are important linkages that can and should be made between physical infrastructure for water supply, stormwater and wastewater management. Realising the benefits of integration requires highly coordinated management.
- 9. **Collaboration means meaningful engagement.** Enlisting all relevant agencies and the public from the beginning as we search for effective, multi-benefit, community driven solutions.
- **10. Green Infrastructure.** Besides pipes and mechanical treatment plants infrastructure utilising ecological capacities of soil and vegetation to absorb and treat water should be encouraged.
- **11. All people are customers.** We need to understand that everyone has a willingness to pay for urban water services. Slum dwellers through to the uber-rich are all customers. Economically viable business models can recover costs, support ongoing O&M and provide business development opportunities.
- **12.** Water and sanitation should be marketed not given. The traditional approach of providing free or subsidised water and sanitation systems should be replaced by water and sanitation marketing. Members of the community should be encouraged to purchase the services/infrastructure they need.
- **13. Behaviour change will lead to lasting change.** It is the fact that children practice hygienic behaviours, not whether they know why they do it that actually matters. We should be investing in enabling behaviour change in preference to mass education.
- **14. Innovative Governance.** Urban water management in this century will require a shift away from the traditional approaches to 'siloed' and technocratic governance approaches. Rather innovative governance methodologies for envisioning, decision making, adaptive and reflective consideration, encouraging social learning, and co-design of systems.
- **15. Developing countries present innovation opportunities.** The traditional paradigm has been that developing countries require low-tech solutions. However, in urban contexts, creative opportunities are possible. There are examples of innovative, high tech and reliable solutions for urban water needs in informal communities.
- 16. **Understanding the complexities of governance.** Urban contexts are complex. The power dynamics of decision making, ambiguous roles and responsibilities, political instability and the inability to enforce regulations are all aspects of governance that need to be considered in urban programmes.

#### UNDERSTANDING URBAN WATER CHAINS

Traditionally NGO and donor organisations have, for the most part, focussed attention and reporting on population with access to services – water supply or sanitation – with some, increasing, attention to the quality of the service (e.g. improved/unimproved sanitation differentiation). However, recently there has been a global push for development NGOs and donor to move beyond securing access and ensuring sustainable management of services and waste products. This has resulted in increased attention being paid to the whole 'chain' of both water and wastewater services.

The concept of the sanitation chain is most clearly presented and outlined in the Eawag publication – *Compendium of Sanitation Systems and Technologies 2<sup>nd</sup> Edition* (Eawag, 2015). While traditionally used to consider urban sanitation waste management, (which is one of the greatest challenges for the future of urban water systems), as can be seen in the tables below 'chain' approaches can assist in understanding the strengths and weak links in all urban water and waste streams.

Basically, the idea of chain thinking emphasises that all resources and waste products (which are actually a resource as well) have various steps in their management and that urban water interventions need to ensure that they are adequately addressing each step. While the stages of service delivery differ for each stream, as shown in Figure 1-4 below, the chain approach should be considered for all aspects of urban water and waste management. The tables below are all adaptations from the Eawag Compendium.

Table 1: Example of the sanitation chain components (adapted from Eawag 2015)

User Access	Collection and	Conveyance (semi-) Centralised		Reuse and	
	Storage	Treatment		Disposal	
Dry toilet Urine diverting Pour flush Flushing	Storage tank Single pit Double pit VIP – single VIP - double	Jerry can Human emptying Motorised emptying Sewer	Septic System Aerobic baffled reactor Wetland Sludge drying	Soak pit Drain connection Compost Irrigation River	

Table 2:Example of the water supply chain components (adapted from Eawag 2015)

Source	Treatment	Distribution to community	Storage at community	Distribution to households	Storage in households	Use
Ground-water Surface water Rainwater	None Chlorine UV Sand-filtration Micro-filtration	Pipes Trucks Bottles	Community tank None	Pipes Trucks Bottles Buckets	None (taps) Tank Bottles Buckets	Drinking Food Bathing Clothes washing Garden

Table 3: Example of stormwater chain components (adapted from Eawag2015)

Capture on site	Treatment on site	Conveyance	(semi-) Centralised Treatment	Reuse and Disposal
Rainwater tank Pond	Bio-filters Rain Garden	Pits and pipes Open channel Swales	Bio-filters Wetlands Retarding basin	Reuse in gardens Reuse in house River Infiltration Groundwater

Table 4: Example of solid waste management chain components (adapted from Eawag2015)

Generation	Storage at household	Collection from household	Storage at community	Collection from communit)	Treatment	Disposal
Source separation Reduce Reuse	Bin Bag Outside on ground	Local Govt. Private –truck Private - cycle van Private –hand/walk	Single or divided community storage No community storage	Govt service Private firm NGO	None Compost Recycle Biogas	Legal Illegal Compost Reused Recycled









#### THE IMPORTANCE OF ADDRESSING MULTIPLE SCALES

One key aspect for future water involvement in urban contexts will be to ensure that programs address all scales within the city. This idea has been captured as the 'City Wide Approach', which explicitly states that to achieve the desired long term, transformational outcomes urban water programs will need to act intentionally at the neighbourhood, municipal and city scales.

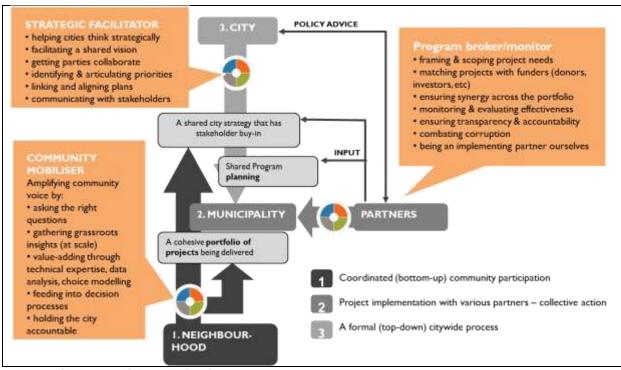


Figure 3: Achieving city wide impact in the urban water sector

#### 1. THE NEIGHBOURHOOD:

The local neighbourhood is the level of engagement that has traditionally been the scale at which both local and international non-governmental organisations have operated with most success. Similarly, it is at the neighbourhood level that community or other local organisations<sup>4</sup> have potential for impact and effective communication within the communities.

Operating at the neighbourhood scale will see urban water stakeholders engage in activities such as:

- processes of community engagement;
- community planning;
- establishing community based organisations and focus groups;
- the delivery of education and behaviour change programs;
- capacity training for local community leaders; and
- the implementation of local infrastructure projects such as community water supply or sanitation projects.

#### 2. MUNICIPALITY:

The municipality scale will see urban water stakeholders at the local council and utility provider level coordinating their programs to ensure that the mid-long term requirements of communities are met, that service providers are increasingly developing staff skills and capacity to deliver services. This scale also includes assisting in the

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<sup>&</sup>lt;sup>44</sup> This could include sports clubs, faith based community groups, interest based community groups such as drama groups.

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development of business models and capacities of private service providers such as private faecal sludge management enterprises.

The key role for urban water stakeholders at this level is through activities such as:

- capacity development;
- providing access for small-medium enterprises to skills development, technology and credit;
- assisting with service provision coordination;
- assisting with monitoring or network performance and required maintenance; and
- facilitating meaningful communication between communities and service providers

#### 1. THE CITY:

To enable significant change in the delivery of urban WASH and urban environmental health service delivery the sector will require high level political support and effective leadership. Effective leadership will result in sector champions, who in term will be able to influence policy developers and decision makers through highlighting the critical importance of the urban water sector

Strategic conversations at the city scale will assist in ensuring political support, guiding the direction of policy development and maintaining momentum for change. At the city level there is capacity for involvement from the private sector and business councils, universities and research organisations, international donor bodies, development banks and international NGOs. Specifically they can assist promoting the urban water agenda through:

- identifying and equipping urban water sector champions,
- communicating best practice and new research outcomes
- assisting governments to develop and communicate a desired future vision that politicians and stakeholders own and invest in,
- establishing effective networks and strategic partnerships,
- engaging well with media, and
- improving high level policy development capacity.

Without effective leadership and corresponding high level political support there will be limited opportunities for either replication or upscaling of urban programs to achieve city wide impacts. There needs to be both explicit policies and government objectives to meet adequate water and sanitation service provision, and the resultant support and encouragement programs that are striving to implement change and achieve targets.



Figure 4: An urban community built on a water body in Cambodia









#### PLANNING FOR THE SUSTAINABLE DEVELOPMENT GOAL ACHIEVEMENT

#### STRATEGIC AIMS FOR URBAN WATER

This section sets out the strategic aims that urban water stakeholders might seek to achieve for the water, sanitation, hygiene, drainage and solid waste management sectors. This is set out by firstly presenting five statements that the capture key principles, followed by associated strategic aims.

**Key Statement 1:** All people have the right to access reliable safe water, along with improved sanitation and hygiene. This should be accompanied by urban drainage and solid waste management.

Strategic Aim 1: We will advocate on behalf of urban communities who do not have adequate access to services. We will enable communities to voice their requirements and desires through community based advocacy. We will seek to allow community participation in all stages of the program development and system designs. We will strive to work with partners to provide safe urban environments and urban water services to all people living in the communities where we are working.

**Key Statement 2:** Adequate water, sanitation, hygiene, drainage and solid waste management is essential for ensuring a safe and healthy environment for children's development.

Strategic Aim 2: We will partner with the broader public health and education sectors to provide and promote the development of safe, healthy environments for children's growth. We will seek to develop and implement programs that provide essential services to vulnerable communities. We will seek to ensure that programs are delivered through sustainable, culturally and economically viable models.

**Key Statement 3:** Governments and service providers have a responsibility to strive to provide adequate urban water, sanitation, hygiene, drainage and solid waste management to all urban populations.

Strategic Aim 3: We will work with, support, and equip Governments and service providers in increasing their capacity and ability to provide urban services to all people, especially the most vulnerable. We will follow the lead of governments and assist them in reaching their goals and objectives for providing these services to all populations in urban communities.

**Key Statement 4:** Local businesses within a developing economy play an important role in promoting and supporting developments in the water, sanitation, hygiene, drainage and solid waste management sectors

Strategic Aim 4: We will engage local businesses, communities and individuals to participate in all construction and contracting of services. We see the local economy as a key component of urban water programs and seek to promote, support and replicate innovative models that increase and promote sustainable businesses around urban water services provision.

**Key Statement 5**: All stakeholders require an increased understanding and ability to partner and lead in the water, sanitation, hygiene, drainage and solid waste management sector.

Strategic Aim 5: We continue to recognise our limitations in the urban water sector. We acknowledge our need to increase our knowledge and skills, through global learning, for technical field staff, and staff involved in program planning, monitoring and evaluation. We will seek to increase our level of collaborative learning activities, sharing knowledge, and participate more in the global urban WASH dialogue. We will seek to share our approaches to programming, from design through to evaluation, report on successes and failures, and make our documentation widely available through the internet, along with at WASH conferences and in academic publications.

#### URBAN WATER IN PRACTICE - POSSIBLE ROLES FOR NGOS

In order to achieve the five strategic aims discussed above World Vision, and other NGOs, will continue to seek to increase our ability to be a meaningful contributor to urban water programs. Potential roles that the NGO community can play within the future urban water sector might include (i) attract funding and resources for urban water programs, (ii) training for both NGO and local government staff and equip them for urban water programs, (iii) design, monitor and evaluate the impact of urban water programs. (iv) influence city-level or national-level policy direction for urban water programs, (v) improve partnerships with other organisations, (vi) implement best practice urban water programs, and (vii) improve accountability to sustain service provision.

#### (i) Attract funding and resources for urban water programs

World Vision support offices, regional offices and the Global Centre (Wash COP and Urban COE) will continue to seek out urban water, sanitation and environmental hygiene funding opportunities and then work with national offices to develop grant proposals, strengthen donor-NO partnerships; and strive to make World Vision a recognized influence in urban water and sanitation promotion.

#### (ii) Train World Vision staff and equip them for urban water programs

World Vision regional offices and the Global Centre will seek to increase the capacity of field staff in all areas of requisite skills and knowledge for urban water, sanitation, drainage and solid waste management. Training and capacity development will be offered through face-to-face events, online learning opportunities, and opportunities to join recognized educational courses offered by third party organisations. Additionally, when possible, highly skilled personnel will be employed to fill shortages in urban water, sanitation and drainage programs.

#### (iii) Design, monitor and evaluate the impact of urban water programs

World Vision seeks to continue to improve our ability to demonstrate the impact of urban water programs. We will select causal indicators which can be quantifiably measured to ensure that we can document benefits to the community. We will ensure that the full chain of water supply, sanitation, drainage and solid waste is considered when designing our programs to ensure that there are no adverse side effects to other nearby communities as a result of urban water interventions (especially critical when designing urban sanitation programs). We will ensure that the community, partners and local government are involved throughout the program's design, monitoring and evaluation process. We will encourage and welcome independent, third party research to also monitor and evaluate urban water programs.

#### (iv) Influence city-level or national-level policy direction

We will seek to support urban water 'champions' throughout the partnership who are able to represent World Vision and progress the urban water agenda with politicians, decision makers and academics. This can be via local advocacy channels, at conferences and workshops, at regional meetings, and one-to-one with Parliamentarians. We will provide high-level research and evidence, provide examples of best practice and provide short policy recommendations where needed.

#### (v) Develop behavior change in urban contexts

As in rural WASH projects, the ultimate degree of success is the changed practices in water, sanitation and hygiene behaviours. This is distinct from knowledge. Community focused 'software' components of urban water projects need to focus on behavior change, rather than on mass public education.









#### (vi) Improve partnerships with other organisations

In all programs we will seek to involve other relevant NGO's, community groups and government departments. We will seek to ensure that we are sharing training resources with local NGOs, we will seek to learn from leading thematic international NGOs like WaterAID and Water, Sanitation for the Urban Poor (WSUP). We will seek to partner with research institutions and grow our evidence base for urban programming.

#### (vii) Implement best practice urban water programs

Wherever, whenever, and to whatever degree possible, we will encourage the implementation of internationally recognized best practice processes. This will include assessing and planning for the entire sanitation chain, ensuring that urban water supply programs address water quality, quantity, governance, reliability and ongoing O&M considerations.

#### (viii) Increase accountability of service providers to sustain service delivery

If World Vision successfully partners with local government bodies, utility and service providers as well as community throughout the entire project process then there will be opportunities for using social responsibility and accountability in sustaining service delivery. Social accountability is only possible when there are really clearly defined and delineated lines of roles and responsibilities, and that the responsible authorities have agreed that they are indeed responsible. It will not be effective if the organisation does not believe that they are responsible for the service provision.

But when the organisation is aware of their responsibility and are failing to meet the required standard social accountability can be an effective tool. There are lots of WV specific resources available on Community Voice and Action. One word of warning is that if we want the stakeholders to continue to work together in partnership then 'naming and shaming' approaches should be avoided.

#### CONCLUSIONS

World Vision's Urban CoE seeks to ensure that through robust planning, and an up-to-date awareness of best practice (emerging from both academia and practice), that all urban water project developed and implemented by the CoE will not only improve the access to water and sanitation services, but will strive for holistic, pro-poor, environmentally sustainable practices that led towards integrated and sustainable urban water management. The impact of WV Urban CoE water projects will be demonstrated increases in liveability, well-being and increased community resilience.

#### **REFERENCES**