

CWIS LEARNING BRIEF SERIES

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#LB3

A HH from a low income settlement developed on private land with legal recognition in *Sheikpara, Khulna*. People living in these areas enjoy better facilities than squatters and have less fear of eviction.

About the Learning Brief Series

Citywide Inclusive Sanitation (CWIS) Learning Brief Series is part of the Bill & Melinda Gates Foundation funded CWIS Monitoring, Learning and Evidence initiative and is meant to facilitate peer learning, and delve into questions of practice, so that practitioners and implementing organizations can learn from one another. This learning initiative covers experiences from 8 cities namely Lusaka, Kampala, Dakar, Khulna, Trichy, Warangal, Narsapur and Wai. Each of these cities have active investments designed to achieve the CWIS goals of equitable, safe, and sustainable sanitation service delivery. The creation of these briefs will be structured as timely, iterative, on-going presentations of examples of learning-by-doing: this will be a space for empirical observation, and applied analysis, not theories or honorifics. Topics may be repeated, but each will build on the previous. The learnings here are meant to provide a seed for discussions across partners in the CWIS network, but also to engage interested actors outside of the network as well. This brief was developed by Athena Infonomics based on inputs and contributions from Lusaka Water Supply and Sanitation Company (LWSC), Kampala Capital City Authority (KCCA), Office National de l'Assainissement du Sénégal (ONAS), SNV Netherlands Development Organisation (SNV), Center for Water and Sanitation, CRDF, CEPT University (CEPT), Indian Institute for Human Settlements (IIHS) and Administrative Staff College of India (ASCI).

PROGRAM CITY PARTNERS

Bangladesh-Khulna

*SNV Netherlands Development Organisation
(SNV)*

Uganda-Kampala

*Kampala Capital City Authority
(KCCA)*

Zambia-Lusaka

*Lusaka Water Supply and Sanitation Company
(LWSC)*

Senegal-Dakar

*Office National de l'Assainissement du Sénégal
(ONAS)*

India-Narsapur & Warangal

*Administrative Staff College of India
(ASCI)*

India-Trichy

*Indian Institute for Human Settlements
(IIHS)*

India-Wai

*Center for Water and Sanitation, CRDF, CEPT University
(CEPT)*

Objective of the brief

Creating or improving sanitation access for poor and marginalized communities in urban areas continues to be a challenge in cities all over the world. In low- and middle-income countries, poor communities are often located in slums, which are marked by either crowded conditions; temporary or semi-permanent housing; lack of access to improved water and sanitation; or a lack of secure tenure (as defined by the UN).¹ These characteristics often reinforce each other: crowded conditions limit the space available to build individual household latrines (IHHLs) or properly empty the containment units when it is full; a lack of secure tenure creates a disincentive to build or improve an IHHL; water access is needed for washing and flushing after using the latrine.

The interrelated challenges found in their respective slum communities carried similarities across all of the CWIS cities, yet cities adopted a variety of different intervention approaches. **The goal of this learning brief is to review the intervention design process and compare pro-poor interventions and policies across all eight CWIS cities.** In all eight locations sanitation authorities and CWIS projects developed and implemented some program of identifying poor households (HHs) and designing sanitation interventions focused on them. The approaches differed in size and scope, in how they define and engage poor HHs and slum communities, and, ultimately, in the motivations and goals driving their design and implementation. All of these pro-poor policy and programming interventions continue to evolve; many are part of the BMGF-funded CWIS project and are thus relatively new.

Local context

The eight cities included in this brief, the local sanitation authorities, and the local CWIS project partner organizations are listed in Table 1. Each of these locations is part of a larger CWIS investment network, and all are dedicated to finding innovative ways to improve Fecal Sludge Management (FSM) and expand access to safely managed sanitation, through innovative initiatives and iterative learning from each other. Wai is the smallest city, at a population of only 40k; Dakar is the largest, with 2.8 million in the district (see Table 1 for further information). The Sanitation Service Chain (SSC) is in various states of development across these cities. Sewer access is limited in Kampala, Lusaka, Dakar and Trichy and non-existent in the other cities (see Table 1). Collection and transport is done either by manual emptying, which is usually disposed of nearby, or mechanical emptying, using vacutugs, vacuum trucks or other types of mechanical removal and transport. All eight cities have some form of formal treatment available; fecal sludge treatment capacity has either been recently constructed, or is in some stage of construction (see Table 1).

¹ UN-Habitat, ed. The Millennium Development Goals and Urban Sustainability: 30 Years of Shaping the Habitat Agenda. Reprint. The State of the World's Cities Report 3. London: Earthscan, 2007.

Table 1: Collaborating partners, city size, treatment plant (TP) capacity, including both fecal sludge treatment plants (FSTPs) and sewage treatment plants (STPs), and the percentage of the capacity currently being used.

City	Local Authority ²	Local Partner	Population	Slums/ Informal Settlements	Sewer Access (open or closed)	Functional TP Capacity (volume)	Functional TP Capacity (% of full coverage)	TP Usage
Wai	WMC	CEPT	43,000	3.74%	0%	70 KLD	>100%	50%
Narsapur	NMC	ASCI	58,901	61%	0%	15 KLD	37%	33%
Warangal	GWMC	ASCI	817,959	35%	0%	25 KLD	13.1%	33%
Trichy	TCC	IIHS	9,16,674	10%	45%	58 MLD	>100%	96%
Khulna	KCC	SNV	1.5 mill	7.86%	0%	180 KLD	9.2%	4%
Kampala	KCCA	KCCA	1.5 mill	60%	8%	40 MLD	NA	>100%
Lusaka	LWSC	LWSC	2.5 mill	70%	16%	52 MLD	40%	>100%
Dakar	ONAS	ONAS	2.8 mill	NA	30%	21 MLD	NA	>100%

Designing and implementing pro-poor interventions

Across the eight CWIS program cities, we found that pro-poor sanitation interventions could be categorized in one or more of the following five areas: (i) improving infrastructure; (ii) changing behavior; (iii) building capacity; (iv) creating new policies and regulations; or (v) forming new institutional structures. The first three categories were usually targeted at specific locations or social groups, whereas new policies and regulations targeted systemic changes for poor HHs across the city and new institutional structures were designed to bridge specific locations or social groups with city-wide municipal bodies (see Table 2). While implementing pro-poor interventions, cities also faced a number of challenges and constraints. These center around three categories: (i) space constraints and security of land tenure; (ii) HH behavioral and financial constraints; and (iii) difficulties with service providers. Details of the interventions can be found in Table 3 and the challenges in Table 4. The majority of the interventions were recently initiated, as part of BMGF CWIS project grants, but with the intention of institutionalizing them within the regular practices of the local sanitation authority.

² WMC - Wai Municipal Council; NMC - Narsapur Municipal Corporation; GWMC – Greater Warangal Municipal Corporation; TCC – Trichy City Corporation; KCC – Khulna City Corporation; KCCA – Kampala Capital City Authority; LWSC – Lusaka Water Supply and Sanitation Company; ONAS – Office National de l'Assainissement du Sénégal

Table 2: Summary of pro-poor interventions

Note: CT - Community Toilet; PT – Public Toilet; CBO – Community Based Organization; TP – Treatment Plant; FSTP – Fecal Sludge Treatment Plant

	Narsapur	Warangal	Trichy	Khulna	Wai	Lusaka	Kampala	Dakar
Infrastructure	IHHL; CT	IHHL; DEWAT	IHHL; CT	FSTP	IHHL; CT; scheduled desludging	IHHL; FSTP in slum areas	Dumping points on sewers & micro TPs	Innovative IHHL in flood- prone areas
Outreach (targets of IEC/BCC)	HH	HH	HH	HH	HH	HH	HH; landlords	HH
Capacity Building in Slums	SHGs maintain PTs/CTs	SHGs maintain PTs/CTs	CBOs; sanitation workers	CBO maintain CTs/PTs	[None]	[None]	[None]	Desludging operators
Policy and Regulation	[None]	[None]	[None]	[None]	Council resolution	Mandate expansion, by-laws, standards	Legal & regulatory framework	[None]
New Institutional Structures	[None]	[None]	[None]	Multi- stakeholder working group	[None]	[None]	Multi- stakeholder forum	Direction de l'Assainissem et Autonome

Assessing the needs of the 'poor'

The first step in creating a pro-poor sanitation intervention is to define who is 'poor.' All of the sanitation authorities and CWIS grant projects used HH surveys for both identifying which HHs / slums to target, as well as gathering information on the sanitation needs and particular challenges found in the targeted communities (see CWIS Learning Brief #02 – 'Identifying poor HHs and slum communities' for more information on identification of poor HHs). ASCI conducted a HH survey which included a mapping of sanitation access and FSM practices to assess the attitudes, behaviors and specific sanitation needs of HHs. Similarly, in Trichy, IHS conducted a GIS-based baseline survey in 2020 (see learning brief #02 in this series for more about SES indicators), an enumeration of sanitation workers, a survey of Community Toilets (CTs) and a social mapping of communities (a separate exercise from the baseline survey). In Wai, CEPT conducted a baseline survey in 2015, and qualitative interviews with city officials to get an overall understanding of the city and understand the sanitation situation of vulnerable groups. This was complemented with a mapping exercise where the team geospatially mapped all BPL card holders for a better understanding of the sanitation needs of the vulnerable groups. They triangulated HH survey data with transect walks, to gain an understanding of topography and assess the current sanitation situation.

The KCCA has worked with BMGF and DFID to implement a sanitation mapping study in 2016/17 to understand the sanitation service types and coverage in the informal settlements in Kampala. This process helped KCCA to understand the number of toilet facilities in the informal settlements,

(although it did not collect Socio-Economic Status (SES) indicators). KCC implemented a similar study in Khulna, which focused exclusively on collecting GIS mapping data of sanitation access, but did not capture prices paid for pit maintenance, sanitation behavior or SES information.

Engaging local stakeholders

In addition to HH surveys and GIS mapping exercises, partners used local relationships to inform their interventions. In Narsapur and Warangal, ASCI's interventions were tailored to the specific settings found in slums. What is applicable to the entire city might not be applicable to the slums either because of the location (for example, low lying areas), or physical characteristics (narrow roads, crowded conditions), in addition to financial constraints. Similarly, IIHS designed their intervention in Trichy in part through the strengthening of ties with local CBOs, targeting youth as change agents (dubbed 'sanitation champions') and working directly with sanitation workers. Likewise, SNV partnered with a local NGO, called Nabolok, to work with toilet management committees, and with the Livelihood Improvement of the Urban Poor Communication (LIUPC), to share experiences.

Most of the interventions designed and implemented by CEPT were developed in consultation with the officials from the Wai Municipal Council (WMC). CEPT conducted both interviews and Focus Group Discussions (FGDs) with elected municipal officials, in order to understand the existing situation and local practices. The solutions proposed are also cross validated from the community or from the elected representatives.

In Lusaka, LWSC conducted interviews and FGDs in slum areas and discussions with CBOs in order to assess the sanitation needs of the slum communities and create interventions that were designed based on those needs. LWSC also learned through failure. Community toilets were constructed using an eco-san design in a few slums in Lusaka. But a bathing area was not incorporated. Since there were no bathing areas, people took bucket baths inside the toilet stalls. This compromised the treatment process, which led to HHs eventually abandoning the toilets and refusing to use the 'composted' waste. This was owing to limited engagement with users at the start of the project. This taught LWSC the importance of participatory practices and local input early in the process of designing any intervention intended for slum areas or poor HHs.

Intervention types

Often slum upgrading involves conversion to more permanent housing structures, improved access to services and/or official legal notification of land tenure rights. Service upgrades might be focused on water and sanitation, but could also include improved drainage, better street lighting, opening of schools and health care centers or increased access to electricity. Some CWIS grant projects have decided to focus interventions targeting poor HHs on the sanitation systems that they usually use (if any): the construction or upgrade of On-Site Systems (OSS) and improvements in Fecal Sludge Management (FSM).

i. Demand-side interventions

In all of the CWIS grant projects in India there was a focus on partial or complete subsidy of physical infrastructure, capacity building and Information, Education, Communication (IEC)

programs focusing on creating awareness on safe sanitation practices in the community: in other words the focus in these cities was on a range of demand-side approaches. In Narsapur, Warangal and Trichy, CWIS project interventions were designed to encourage HHs to construct new or upgrade old IHHLs. In Wai part of the CWIS project included such interventions as well. These included training gender forums in Narsapur (courtesy of ASCI), training youths as ‘sanitation champions’ in Trichy (implemented by IIHS) and direct household consultations in Wai (so that CEPT can find solutions tailored to each household). But not all HHs were able to construct an IHHL: working closely with communities was essential for learning what the barriers were in each location. For example, in some slums ASCI found that HHs were not accessible by desludging vehicles and the rocky terrain made pit latrines almost impossible: for these households, ASCI designed a shallow sewer to convey wastewater in the place of pits or septic tanks.

In Narsapur and Warangal each slum has a Self-Help Group (SHG), clusters of 40-50 SHGs form a Slum Level federation (SLF) and all SLFs report to Town Level Federations (TLFs) which in turn report to the Mission for Elimination of Poverty in Municipal Areas (MEPMA). MEPMA is a parastatal agency in both Andhra Pradesh and Telangana. In collaboration with the TLF network, the local authorities facilitated the construction of IHHLs, through a central government subsidy program, in addition to the interventions implemented by the CWIS projects. In Warangal and Khulna, decentralized wastewater treatment systems were constructed using either CSR or donor funding including CWIS project funding. ONAS had designed innovative adaptive IHHLs for HHs belonging to seasonally flooded and flood prone areas together with subsidy packages. However, this approach turned out to be very expensive and not as effective as ONAS had expected.

Likewise, all of the CWIS cities in South Asia had Community Toilets (CTs) and Public Toilets (PTs) already built in slums before the initiation of CWIS projects. But in many locations they were not well maintained, falling into disuse and thereby risking a return to open defecation. To address this problem, as part of their CWIS project grants, SNV, IIHS, ASCI and CEPT all had interventions focused on local capacity building, with the goal of improving the operations and maintenance of CTs and PTs. In Warangal and Narsapur, ASCI has engaged the TLF network, providing training and assistance to SHGs. In Khulna, SNV worked with a local partner NGO to revive 200 CTs through the creation of toilet management committees. In Trichy, IIHS created entirely new groups of local women, which they called sanitation, health and education (SHE) groups. They trained the SHE groups to maintain and manage community toilets, and also worked with them to design CTs that provided proper MHM facilities. Likewise, CEPT worked with local elected officials to make sure that sanitary pads were made available in CTs in Wai.

ii. Supply-side interventions

In Dakar, Lusaka, and Kampala, there was a fundamentally different approach to pro-poor sanitation. This approach has some similarities to some of the interventions in Wai as well. **In the African cities, the sanitation authorities approached pro-poor interventions mostly through supply-side interventions**, in contrast to the demand-side interventions found in the cities in South Asia. Instead of augmenting the resources of participant HHs through subsidies and encouragement of IHHL adoption and behavior change, these three cities tried to lower the costs of OSS and FSM services for

all. In Lusaka, Dakar and Kampala, the focus on on-site systems is deemed as pro-poor as this is the dominant sanitation type found in slum areas for all three cities.

In Wai, CEPT has implemented a combination of both supply-side and demand-side interventions. The implementation of scheduled desludging services is a major policy innovation and has undoubtedly made desludging cheaper, more available while also professionalizing and improving emptying services. Although it is not particularly tailored to poor HHs, there is a subsidy provided for all HHs, including vulnerable ones, for the scheduled desludging services. At the same time, CEPT has instituted an IEC campaign encouraging IHHL construction, and implemented efforts to improve CTs.

In Kampala, KCCA has established a Call Centre (CC) that also offers pit emptying services among its other functions to make hiring vacuum trucks easier and create greater competition among service providers. KCCA has also created a high-level steering committee for sanitation projects (including FSM interventions); signed MoUs with private service providers; and created an operational framework for developing service provision and sector regulation for OSS & FSM. For sanitation workers, KCCA and ONAS have both created guidelines for occupational health and safety for the safe collection and transport of fecal sludge, including tools, incentives and penalties for violations. ONAS, like KCCA, has created a CC that fosters competition among the service providers to reduce the cost of desludging in the city. Moreover, ONAS has also created a 'guarantee fund' which facilitates the availability of business loans for entrepreneurs looking to provide sanitation services, such as for the purchase of trucks used in the mechanical desludging of septic tanks and pits. In Lusaka, LWSC created a dedicated FSM unit within their organization, with seven personnel, in order to increase the capacity to run FSM services, including marketing, as well as improve service delivery models. The Lusaka Sanitation Program (LSP)³ includes a sub-component for OSS and FSM. LSP targets three Peri-Urban Areas (PUAs)⁴ for improved OSS and FSM and seeks to support the Lusaka master plan, which aims for 100% coverage by 2035 (50% sewerred and 50% OSS & FSM).

Going forward, KCCA is not planning to provide direct subsidies to HHs but is instead planning to construct new public toilets under the CWIS program. Along with this, National Water and Sewerage Corporation (NWSC) is planning to build dumping points on the sewer networks stations, which is expected to further reduce the costs of pit emptying services. ONAS, KCCA and LWSC have both built up regulations focused on the provision of FSM services, formalizing services in the process, and encouraging their professionalization. Again, these are systemic interventions, focused on a type of sanitation (OSS & FSM) that many poor HHs use, rather than a direct subsidy to HHs for new IHHLs. There are exceptions: for example, Wai and ONAS are both providing a subsidy for mechanical desludging, but on the whole the general approach in Lusaka, Kampala and Dakar is focused on supply-side interventions. However, evidence on the actual impact that these interventions have had on the poor is so far limited; future analysis of costs and impacts is warranted, as these interventions age and mature, and continue to scale up.

³ The LSP is a major sanitation investment under the Lusaka Sanitation Master Plan, with financial support from the World Bank, African Development Bank, European Union, and KfW amounting to \$300 million.

⁴ PUA is the local term used to refer to low income settlements and fall within the administrative boundaries of Lusaka city.

In Khulna and Kampala there was an attempt to create multi-level working groups, allowing for on-going exchanges of information between community groups and sanitation authorities. In Khulna, SNV, the Khulna City Corporation (KCC) and local communities, including slums were organized into on-going working groups. In Kampala, the KCCA joined with CBOs to create working forums. These working groups and forums are expected to create new paths of communication and new opportunities for transparency and oversight in a participatory manner. It is hard to see the direct benefits of such interventions, as the impacts that they have are slow and unpredictable, but it seems self-evident that increased communication, transparency, participation and oversight has the potential to be a deep structural improvement.

Table 3: Categorizing the types of interventions designed by CWIS grant projects and local sanitation authority

<i>Intervention Types</i>	Narsapur	Warangal	Trichy	Khulna
Infrastructure	Town Level Federations help build IHHL toilets in slums <i>Funding:</i> GoI, US\$ 104 / IHHL Municipal salary for SHG members for operating and maintaining the CTs <i>Funding:</i> Local municipality	Town Level Federations help build IHHL toilets in slums <i>Funding:</i> GoI, US\$ 104 / IHHL Decentralized wastewater treatment plant in one slum <i>Funding:</i> CSR funds from WABAG	Construction of new and upgrading of old IHHLs <i>Funding:</i> Micro Finance Institutions (MFIs) Upgrading CTs, with women-friendly designs (like providing discrete MHM facilities) <i>Funding:</i> SNV with BMGF grant	Construction of DEWAT system, connecting 270 HHs. <i>Funding:</i> SNV with BMGF grant
Outreach (targets of IEC/BCC)	BCC campaigns and IEC activities with HHs, gender forums	BCC campaigns and IEC activities with HHs	BCC campaigns and IEC activities with HHs	BCC campaigns and IEC activities with HHs
Capacity Building in Slums	Training of trainers on CT/PT maintenance with SHGs	Training of trainers on CT/PT maintenance with SHGs	Training of masons, Health camps for sanitation workers	Partnership with CBO (Nabolok) to operate CTs
Policy and Regulation	--	--	--	--
New Institutional Structures	--	--	Creation of new CBOs: SHE teams to operate and maintain CTs, and Youth for Sanitation clubs to create awareness	Working groups including KCC, KWASA, CDC, LIUPC and local partners

<i>Intervention Types</i>	Wai	Lusaka	Kampala	Dakar
Infrastructure	<p>New and upgraded IHHLs</p> <p><i>Funding:</i> Micro Finance Institutions (MFIs)</p> <p>Construction of CTs, with women-friendly designs</p>	<p>Build 2 FSTPs and have future plans to construct DEWAT system in PUAs</p> <p><i>Funding:</i> LWSC</p>	<p>Plans for dumping points on sewer network and construction of micro treatment plants</p>	<p>Designed innovative IHHLs for flooded and flood-prone areas, and provided subsidies for HH to install the IHHLs</p>
Outreach (targets of IEC/BCC)	<p>BCC campaigns and IEC activities with HHs on use of individual toilets, containment systems, scheduled desludging</p>	<p>BCC campaigns and IEC activities with HHs on safe sanitation</p>	<p>BCC campaigns and IEC activities with HHs on safe sanitation</p>	<p>Campaigns to promote mechanical desludging and using innovative flood-adapted latrine technology (acquisition facilitated via financial benefits)</p>
Capacity Building in Slums	<p>Collaboration with local officials to bring MHM to CTs</p>	--	--	<p>Trained desludging operators</p>
Policy and Regulation	<p>Council resolution passed for subsidized, scheduled desludging by a private operator</p> <p>Planned council resolution for making community toilets more gender inclusive</p>	<p>Mandate for LWSC to provide sanitation services to peri-urban and rural areas, including OSS/FSM</p> <p>New OSS/FSM regulations in Lusaka By-Laws, Code of Conduct, and official Zambian standards</p>	<p>KCCA passed a Sewerage and FS Management Ordinance in 2019</p> <p>Legal framework, regulation of sanitation (containment, collection, transportation and disposal of FS)</p>	--
New Institutional Structures	--	--	<p>Multi-stakeholder forum including KCCA and CBOs</p>	<p>Creation of the Direction de l'Assainissement Autonome to focus on interventions related to FSM</p>

Outputs and outcomes

In Narsapur and Warangal, there has been a conversion of slums from insanitary to sanitary conditions, using government subsidies. Community Toilets (CTs) and Public Toilets (PTs) are being maintained through a municipal subsidy. Gender forums in Narsapur (such as self-help groups) have been trained by ASCI to conduct trainings and do outreach in the targeted slums to ensure people understand that they are residing in insanitary conditions. In Trichy, six pilot slums have each moved one step up the sanitation ladder (from open defecation to CT, or from CT to IHHL), through a participatory process including both bathroom construction and behavior change. IIHS has also increased local capacities in CBOs, especially for gender sensitive 'Sanitation, Health and Education' (SHE) groups, and youth sanitation champions. Over 100 CTs have been upgraded and made more gender friendly by providing gender specific facilities and entrance; privacy minded stall layouts, doors and sides; safe lighting provisions; discrete MHM facilities like washing stations and pad dispensers and smaller, child friendly seats to support women's role as caretakers⁵. Moreover, gender-friendly toilets cater to the needs of the aged, physically challenged, transgender and pregnant women. IIHS also assisted sanitation workers in accessing government schemes for pensions, education grants for their children, health camps and government IDs. Similarly in Wai, CEPT increased the coverage of IHHLs by linking HHs to MFI credits, and upgraded CTs while making them more gender-friendly. In Khulna, SNV has conducted field visits to showcase different affordable toilet management and technology options for KCC and Khulna Water Supply and Sewerage Authority (KWASA) officials. They have also provided technology support to develop decentralized wastewater treatment systems, and trainings on maintenance of community toilets.

LWSC is now fully mandated to provide sanitation services to PUAs/ low income settlements within the city and rural areas, including OSS & FSM services (see Table 2). Subsidies of roughly 75% of costs are being provided for construction of 5000 IHHLs in the three target PUAs, and pit emptying is subsidized for all HHs (roughly 50% of retail costs are covered by LWSC). KCCA has seen a large increase in customer usage of its Call Centre for professional emptying services. According to the KCCA, the Call Centre reduced the average price of an empty by roughly 20%. FS collection efficiency in the informal settlements has increased from 18% to 31%, and citywide from 54% in 2017 to 61% in 2019. Significant investment by KCCA and partners in public primary schools has resulted in 96 toilet facilities constructed in the last 4 years. At the end of 2019, the KCCA had trained a total of 210 Pit Emptying Operators and distributed 158 pieces of Personal Protective Equipment (PPE). KCCA also saw an increase in reporting of illicit practices such as illegal dumping.

Challenges and lessons learned

In Narsapur, Warangal and Wai, there was an almost exclusive focus on challenges associated with a lack of land tenure, and limitations on available space. Those same challenges were voiced by IIHS as well; in addition, IIHS focused on challenges associated with management of community toilet facilities. SNV had a focus on challenges associated with a lack of space and Kampala had a focus on

⁵ Gender Responsive Sanitation solutions in urban India, Miriam Hartmann et al. 2015.

a lack of land tenure. For KCC and KCCA there was a focus on the challenges associated with HH behavior and the unaffordability of proper IHHLs. Garbage in pits was a particular focus for the KCCA, since this makes emptying much more difficult.

Table 4: Challenges regarding implementation of pro-poor interventions as noted by CWIS grant projects and local sanitation authorities

Types of Challenges	Narsapur	Warangal	Wai	Trichy
Space & Land Tenure	Insecure land tenure	--	Space constraints for IHHL	Insecure land tenure
HH Constraints	Financial constraints for IHHL construction	--	--	Varied sanitation needs. Interventions designed in participatory ways
Service-Provider Constraints	--	--	--	CT caretakers did not have the skills for proper accounting and reporting systems
Types of Challenges	Khulna	Dakar	Lusaka	Kampala
Space & Land Tenure	Slums have inaccessible roads for mechanical emptying	--	Poor road network	Insecure land tenure
HH Constraints	Affordability of cost of IHHL construction Contacting working members during the day	--	IHHL too expensive if not subsidized	IHHL too expensive, Garbage in pits, Lined pits too expensive
Service-Provider Constraints	High staff turnover, delayed service, tedious bureaucratic processes	--	Project delays due to the long procurement process	--

Conclusion

Partner organizations implementing CWIS grant projects in general designed pro-poor interventions that were either based on building new or upgrading old infrastructure; capacity building in slums; adopting new policies and regulations; or creating new institutions. Infrastructure was either IHHLs, CTs or decentralized wastewater treatment plants: in the case of IHHLs the interventions included consumer subsidies and outreach; in the case of CTs it was mostly capacity building and in the case of treatment plants it was using outside funding to pay the entire costs of construction. Infrastructure based interventions and IEC programs were implemented in all cities.

Capacity building in slums was implemented across all CWIS cities in India. In these locations existing organizations and management structures were strengthened and augmented through trainings and workshops. Interventions based on new policies and regulations included creation of government frameworks, strategies and mandates aimed at professionalizing services, setting goals for government efforts (e.g. LSP in Lusaka) and increasing competition (e.g. KCCA's Call Centre).

Each pro-poor intervention that was discussed here was designed for a specific local context, but a follow up comparison of interventions is warranted. For example, comparing the effectiveness of HH subsidies for IHHL construction versus policy or regulatory changes aimed at expanding and improved OSS and FSM, and the cost-effectiveness of each, would help cities make more informed choices regarding pro-poor interventions in the future. In general, more data on the costs, outcomes, sustainability and impacts of the approaches described here as well as those ultimately adopted by the sanitation authorities in the CWIS cities, could serve as useful reference for future programming in any city wishing to address sanitation access among poor HHs.

