

Improving water and sanitation provision globally through information sharing

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Despite huge investments in the water and sanitation sector over the years, millions of urban poor communities still remain unserved with adequate water supply and improved sanitation services. Part of the problem has been the failure to give attention to indicators, financial mechanisms and institutions that are designed by local organizations at local level. This paper, which describes an ongoing project, shows that there are many innovative and inspiring examples of locally driven initiatives that improve water and sanitation in low-income urban areas. The project aims to create an environment where local teams can learn directly from each other and provide a basis for better understanding of how to identify and build upon local initiatives that are likely to improve water and sanitation in low-income urban settlements. Although efforts to replicate such local successes have been disappointing, there have been important advances in local information collection, financing and organization.

Keywords: community participation, financing, going to scale, urban poor, water and sanitation, knowledge sharing

THE FAILURE OF APPROACHES used in the past in the provision of water and sanitation to those living in low-income urban areas has left many people still lacking adequate water and improved sanitation. One of the major reasons for this situation has been that the majority of governments and water and sanitation agencies in the Southern countries plan their services with limited or no participation of the urban poor.

Questions still remain, therefore, about how to ensure that the urban poor participate in water and sanitation programmes in practice, especially in view of weak democratic processes in many countries in the South (Mulenga, 2003). In most cases, the situation of poor urban communities is exacerbated by the fact that their settlements are considered illegal; for this reason they lack access to decision-making mechanisms. Where governments have attempted to assist the urban

Poor urban communities lack access to decision-making mechanisms because their settlements are illegal

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poor, their activities have been hampered by lack of accurate statistics for planning, and the lack of understanding of the needs, perceptions and coping strategies of the urban poor. To meet the Millennium Development Goals (MDGs), the United Nations believes that coordinated communication is required, not just from governments but also from people who use the water and sanitation facilities and those who invest in them.

The international response

The prevalent reaction, however, has been to target internationally comparable indicators to monitor progress, international financial mechanisms to fund improvements, and internationally endorsed institution shifts to drive improvements. Little attention has been given to indicators, financial mechanisms and institutions that are designed by local communities and organizations for local situations. There are many creative and inspiring examples of locally driven initiatives that improve water and sanitation provision in deprived urban areas, including some that have reached considerable scale. Efforts to replicate local successes or models have been disappointing. But there have been important advances in local information collection, financing and organization. There are examples of local innovations in gathering and using information to drive water and sanitation improvement – through partnerships between urban poor organizations, local NGOs and municipal governments that map deficiencies in provision. Other local innovations include addressing the challenge of financing improvements in low-income settlements, and developing institutions that respond to local water and sanitation deficiencies. By combining forces, local initiatives can also become more visible and influential in both national and international arenas and, therefore, bring international water and sanitation targets closer to realization.

Partnerships between CBOs, local NGOs and municipal governments have mapped deficiencies in water and sanitation provision

The project

The International Institute for Environment and Development (IIED) based in London, and its partners in Angola (Development Workshop, DW), Argentina (IIED-America Latina), Ghana (People's Dialogue Ghana, PDG), Pakistan (Orangi Pilot Project Research and Training Institute, OPP-RTI) and India (The Society for the Promotion of Area Resources Centre, SPARC), are currently working on a project funded by Sida, Danida and DFID entitled: Improving Water and Sanitation Provision Globally, Through Information and Action Driven Locally. The partners were identified because they are engaged in innovative

The partners were chosen because of their innovative efforts to improve urban poor communities

efforts to improve conditions in urban poor communities, including local water and sanitation. Boxes 1 to 5 give a synopsis of the teams involved in the project. The main goal of this project is to contribute towards the improvement of water supply and sanitation in low-income urban settlements so that the water, sanitation and slum improvement targets of the Millennium Development Goals can be achieved. The project also aims to enable the partners to learn and share experiences directly from each other, and influence the efforts of international agencies to improve water and sanitation in deprived urban communities. Planned outputs from this project include: paper presentation by each team at the 2008 Stockholm Water Week; working papers; journal articles on selected themes; videos; and a book.

Although the teams may have different strategies, there are striking similarities and common principles. All the partners work outside the water sector, but have a deep understanding of the conditions and politics of urban poverty. Each team has designed its part of the project so that it contributes to the local agenda, but also so that they can all combine to have an important impact internationally. Building on these advances and sharing them among localities are critical to achieving international water and sanitation targets. Although most of the partners are already performing well it is hoped that, through this project, the teams involved in the network will increase their capacity to address local water and sanitation deficiencies through what they have learned from other successful initiatives.

Methodology

The project evolved from an international workshop held in London in December 2004, which brought together a number of international water sanitation researchers and practitioners. At the workshop, it was concluded that there was need to develop a better understanding of how to identify and support successful locally driven initiatives to

The community enterprises managing the water supply are financially sustainable

Box 1. Development Workshop Angola

Development Workshop is an NGO committed to developing local capacities to improve the living conditions in less developed communities. In Angola, Development Workshop has supported the construction and management of hundreds of wells and standpipes, and the development of locally elected water committees united through *barrio* (district)-level associations to manage these standpipes, working in collaboration with the water utility and the local authority. The financially sustainable community enterprise model invests half the funds collected from users into running and maintaining the standpipes, with 30 per cent going to the water company to pay for the bulk supply, 10 per cent going to the local authority and 10 per cent to a local community development fund.

Box 2. IIED-AL

IIED-AL is an independent, non-profit organization based in Argentina but with a regional reach. Its mission is to contribute to the development of more just, participatory, egalitarian and democratic societies by working in alliance with other civil society organizations, government and private sector. Its work focuses on local development processes geared towards the improvement of living conditions and empowered decision-making practices led by the most vulnerable groups in Argentina, as well as the rest of Latin America and the Caribbean. Most of the projects are action-research projects, working in collaboration with local governments and community groups. One of its main drivers is to support long-term processes, and to achieve this different projects are integrated over time within a spatial circumscription (a *barrio* or a municipality). In this way, the institution has contributed to housing, infrastructure, and environmental and social improvements in low-income urban areas.

At OPP community initiatives are supported with social and technical guidance and credit for microenterprise

Box 3. Orangi Pilot Project

Orangi Pilot Project (OPP) is an NGO which began work in Orangi, Karachi, Pakistan in 1980. Orangi, situated in the periphery of Karachi, is a *katchi abadi* (informal settlement) with a population of 1.2 million. OPP runs five basic programmes of low-cost sanitation, housing, health, education and credit for micro enterprise. The approach at the OPP is to encourage and strengthen community initiatives (with social, technical guidance and credit for microenterprise) and to encourage partnerships with the government for development based on local resources. The low-cost sanitation programme enables low-income families to finance, manage and maintain sanitary latrines in their homes, underground sewerage lines in the lanes and secondary sewers (this constitutes internal development). Government is responsible for providing main sewers and treatment plants (i.e. external development). OPP-RTI provides social and technical guidance to both community and government facilitating partnerships. The model that has evolved from the programme is the component-sharing concept of development with people and government as partners. The programme has extended to all of Orangi and to other settlements of Karachi and 13 cities covering a population of more than 2 million.

Box 4. SPARC

The Society for the Promotion of Area Resource Centres (SPARC) is one of the largest Indian NGOs working on housing and infrastructure issues for the urban poor. In 1984, when SPARC was formed, it began working with the most vulnerable and invisible of Mumbai's urban poor – the pavement dwellers. SPARC's philosophy is that if the organization can develop solutions that work for the poorest and most marginalized in the city, then these solutions can be scaled up to work for other groups of the urban poor across the country and internationally. Since 1986, SPARC has been working in partnership with two community-based organizations, the National Slum Dwellers Federation and Mahila Milan. Together, they are known as the Alliance. Today, the Alliance works in about 70 cities in the country and has networks in about 20 countries internationally. Due to poor housing and services in most cities, the immediate aim of the Alliance is to create the institutional arrangements that are necessary for large numbers of the poor to access housing and infrastructure. The long-term vision is to support a process whereby organized groups of the urban poor can participate in making decisions about how their cities are developed and managed.

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Community exchange programmes enable different communities to learn from one another

Box 5. People's Dialogue Ghana

People's Dialogue Ghana (PDG) is an NGO which started operating in 2003. Its primary goal is to find alternatives to forced evictions in Ghana and to establish federations of the urban poor in deprived urban settlements. PDG also works with the Ghana Federations of the urban poor to achieve socio-economic development of people living in slums and informal settlements through housing, shelter improvements and infrastructure provision. PDG currently supports community-led initiatives and efforts as part of its mission. In the past few years, PDG has supported federations of the urban poor to establish and operate water and sanitation services in informal settlements. These facilities are operated on a commercial basis to ensure effective maintenance and efficiency in cost recovery. PDG and the federations use the Daily Savings Group Formation tool to mobilize communities in slums and squatter settlements. The daily savings collectors have also been trained in health and hygiene methods so that they can educate the communities on environmental sanitation as well as food and personal hygiene. PDG and the federations also coordinate community exchange programmes to enable different communities to learn from one another. Federations with specialized skills such as mapping and enumeration, and community-building skills are encouraged to share their knowledge with communities without such capacity. In the past three years, PDG and the federations have developed a working relationship with the government as a way of influencing the government to change its stance over forced evictions of residents in deprived urban areas.

Source: Project partners

improve water and sanitation provision in urban poor communities. To allow for effective dialogue and sharing of information between the teams working on this project, a web-based discussion forum has been set up. The discussion forum offers a platform through which any common themes, common approaches, sharing of experiences and resources can be debated and the knowledge shared easily (<http://www.dgroups.org/groups/oneworld/IIED-HS/index.cfm>). The discussion forum, although web-based, is not open to the public until the project is completed at the end of March 2009. The sharing of ideas also enables the teams to inspire each other. It is also planned that the experiences will be documented and disseminated more widely through various media.

In order to help focus the work, four key issues in the water and sanitation sector have been identified and agreed upon by the participating teams. These issues make it easier for the teams to link the more group-specific issues with those of other teams at the international level. The issues are:

- working in collaboration;
- loans, subsidies and financing water and sanitation improvements;

- using information to drive local action and monitor improvements;
- going to scale.

The issues are discussed in more detail below.

Working in collaboration

Partnership has always been recognized as a key component in the achievement of development in communities. It must be noted that community-driven water and sanitation improvements are very limited if they are pursued by communities acting on their own. The same applies to private, market-driven improvement efforts, and to government-driven schemes, at least when it comes to improving conditions in the most deprived urban areas. Much depends on the relations between these communities, government authorities and water and sanitation providers, both formal and informal. A great number of development projects are designed and implemented by professionals which permit urban poor groups no influence and which rarely produce the hoped-for improvements in water and sanitation. Many professionals object to community-driven projects because their own role and importance are diminished – and because their professional training did not equip them to work with urban poor groups and to support their initiatives. And in most cases, the official development assistance agencies find it difficult to support community-driven development because their structures and procedures were never designed to do so.

However, new and interesting methods and institutional structures have emerged in urban poor communities, sometimes leading to the establishment of new institutions such as water boards or community-based organizations with legal standing, and the development of new ‘paperwork’ (including contracts, charters, licences and regulations). The Orangi Pilot Project in Pakistan has become one of the best-known examples of NGO/community collaboration in developing infrastructure. It has demonstrated that low-income households can afford to pay the full cost of installing basic drainage and sewerage, if all households within a street or lane work collectively, generally collecting small contributions from each household and sub-contracting the work (Hasan, 1997).

In post-war Angola, Development Workshop has supported the construction and management of over 200 urban standpipes, more than 700 hand-dug wells, and the development of local elected committees to manage these standpipes, working in collaboration with the water utility and the local authority. Development Workshop uses the stakeholder approach to bring community and state actors together.

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The approach does not just involve identifying the potential partners or building their capacity but involves bringing them together and helping them to work together. It also involves repeated face-to-face interaction, so as to achieve a successful outcome and also create trust and an understanding of mutual benefits of working together (Cain *et al.*, 2002).

In India, the SPARC alliance has had several engagements with national, state and local governments across the country. These engagements have resulted in many instances of city-wide collaboration. SPARC believes that no single institution can address all the problems in deprived urban settlements, and facilitates dialogue between different stakeholders. In Ghana, People's Dialogue has worked in collaboration with federations of the urban poor and the Ministry of Local Government to implement water and sanitation projects in deprived settlements such as the urban slum in Shama Ahanta East Metropolitan Area (SAEMA) of New Takoradi.

IIED-America Latina also offers another successful example of working collaboratively. In the past few years, the organization has been working on a project that aims to build the capacity of local government and communities to allow them to work together in the framework of a partnership-based management model to provide water and sanitation services to informal settlements of Moreno, Buenos Aires. It is hoped that through this project the partnership-based management model will become institutionalized, so that each actor will demonstrate its commitment by allocating staff that understand and cater to the particular needs of service provision to the urban poor groups, and all actors will enter into formal agreement to coordinate service provision. In order for these initiatives to work, however, communities need to be organized and committed and the water and sanitation agencies need to be responsive to the needs of these people. Although there are attempts in all the countries participating in the study to move towards involvement of a wider range of stakeholders, it must be noted that not all engagements are productive and result oriented. Therefore, for organizations such as OPP-RTI, the decision to get involved in or become part of the official process is made after carefully assessing the potential outcome.

Not all
engagements
between
stakeholders
produce results

Financing water and sanitation

Financing and cost recovery are key issues for sustainable water and sanitation schemes. Considering the importance of household and community action and investment in improving water and sanitation, there is a need to develop appropriate finance schemes. The impact of better local financial systems on improving the provision for water and sanitation may be direct – as they fund these improvements



A community water project implemented by People's Dialogue and Ghana Homeless People's Federation in New Takoradi (photo by author)

– or indirect as, for instance, they finance urban poor communities in acquiring official tenure of their land, which then allows official water and sanitation utilities to serve them. In one sense, loan finance might seem inappropriate for low-income households, especially the poorest, since they have the least capacity to repay loans. But experience from the participating teams has shown that if loan packages are designed and managed in ways that match the needs and repayment capacities of low-income households, limited funding can go much further. In addition, when a small loan is combined with community-driven initiatives that strive to keep down unit costs, its potential becomes much greater. Collective loans can have particular importance – for instance by allowing savings groups formed by urban poor households to purchase land together and on which new housing can be developed. Subsidies, too, can play a role, at least when they are part of a viable financing strategy.

When a small loan is combined with cost-saving community initiatives, it can achieve much more

The different partners in this project have had different experiences, and have employed different approaches to address the financing challenges, potentially raising a wide range of questions. To what extent, or under what conditions/strategies, is it important for community groups themselves to gain the capacity to manage finance? What are the advantages and disadvantages of loan-based financing – for households, communities, utilities and countries? Are there ways of designing subsidies that ensure that they actually help improve water and sanitation provision in deprived areas?

In Orangi, for example, OPP-RTI provides communities with maps and plans, estimates of labour and materials, tools and training for carrying out the work, but communities finance the work and manage the finances. By involving the communities in the financing and construction of sewers, the costs have been far cheaper than if the government agencies had built them. In some replication projects, OPP-RTI has found that they collapse in situations where subsidies have been used because the subsidies create a sense of dependence and no sense of ownership. Experience of Development Workshop in Angola shows that relying solely on centralized funds from the state budget to maintain local infrastructure in low-income urban areas has proved unrealistic (Cain et al., 2002). The Orangi experience also shows that the extension of services to the urban poor need not be about securing external finance, but can be achieved through the development of competent, capable, accountable local agencies or utilities that can work with community organizations (Satterthwaite et al., 2005).

When communities provide or pay for the labour and supervise the work, costs are immediately cut

Using information to drive local action and monitor improvements

One of the major reasons given by water and sanitation agencies for their failure to extend services to slums and squatter settlements has been the lack of baseline data about these settlements. A survey and documentation of physical conditions, social actors and relationships and economic conditions is very important because this will show what already exists and what needs to be improved on. It must also be noted that, in the absence of such documentation, realistic and cost-effective planning cannot take place (Hasan, 2006). All of the partners on this project have used locally gathered or processed information to help drive local action. Some involves using high-tech equipment, much of it is map-based, and almost all of it serves a clear, strategic purpose.

To initiate action and dialogue with government agencies, the partners on this project carry out detailed slum enumerations and surveys that draw information from each household and develop detailed maps with the participation of the residents. Through mapping,

All of the partners have used locally gathered information to help drive local action

Through mapping, communities have become more knowledgeable about their situation

communities have become more knowledgeable about their situation, and empowered to challenge and find solutions to the issues they face. OPP-RTI, for example, has successfully prepared maps for all informal settlements in Karachi, Pakistan, and these now provide a city-wide picture that allows planning for city-wide systems, as well as providing the basis for community-managed investments in each settlement. OPP-RTI has also prepared handbooks for local councilors to show them what is needed to improve services in their constituencies. Development Workshop in Angola has also invested considerable time and resources in the development of tools appropriate for local administration staff and residents' committees to monitor service provision and to gather all available information in one place (Cain et al., 2002). Development Workshop also encourages local administrators to use the information generated locally to lobby provincial and central government for further allocation of resources.

The improvement of data collection at community level could also complement a new initiative that promotes *benchmarking* of urban water and sanitation facilities. Benchmarking involves identifying industry best practices, measuring and comparing one's own performance against others, identifying key areas for improvement and upgrading to match the best (WSP, 2007). In India, for instance, it is reported that the Ministry of Urban Development is committed to institutionalizing benchmarking because of its potential to improve urban services.

Going to scale

A common criticism of community-driven water and sanitation programmes is that they cannot deliver at scale. The international development community is therefore currently promoting scaling up of successful water and sanitation projects especially those initiated by local communities. It is hoped that by doing so more people will have an opportunity of gaining access to water and sanitation facilities in the near future. It is also believed that this is an effective way of fulfilling the MDG targets on water and sanitation by 2015. Development Workshop in Angola advises that it is not enough to document lessons and experiences from sustainable services programmes in the field in order to scale up, but also to disseminate information and promote discussion on good practice models to both local and international organizations such as UNICEF, the World Bank and the European Commission (Cain et al., 2002). Presently DW is working with the Angolan National Water Directorate to scale up the community management model country-wide.

This project has shown so far that there are many local organizations that have been able to run successful initiatives. In many

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Most community water and sanitation programmes have been easier to scale up with the support of city authorities

low-income urban settlements, local groups have been able to collaborate to improve water and sanitation services, often under very trying circumstances. What is needed therefore is for the authorities and donors to find ways of supporting such initiatives. Some successful initiatives may be difficult to scale up because of the varying local conditions and the policy environment. Findings from some of the project participants show that most community driven water and sanitation programmes have been easier to scale up because city authorities have supported them. At least that has been the experience of SPARC, OPP-RTI and IIED-AL. Another key finding has been the need to involve the residents of the urban poor settlements in the development of a city-wide information base which shows the conditions in various settlements. This enables the residents to identify the communities that need interventions most urgently, and helps develop linkages between all the urban poor communities. The development of pilot projects planned within the city-wide consultations involving urban poor groups serve as precedents and have also been able to encourage other urban poor groups to take action elsewhere.

Conclusions

Although this project is ongoing there are a number of conclusions that can be drawn from the five case studies and from the project so far:

- The project has enabled the different teams to share useful information about their activities on issues such as scaling up, working collaboratively, financing and the use of information to drive local action and monitor improvements.
- The idea to exchange information and ideas between the organizations involved in the project will also create an opportunity to help the scaling up of successful water and sanitation initiatives.
- There have been many local innovations in gathering and using information to drive water and sanitation improvement – for instance through partnerships that map out deficiencies in provision between urban poor organizations, local NGOs and municipal governments.
- All the partners on the project have been involved with community-led mapping and enumeration, which helps communities to collate reliable and accurate information about their settlements, which is useful for negotiations with governments.
- There are also local innovations in addressing the challenge of financing improvements in low-income settlements, and

All the partners have been involved with community-led mapping and enumeration

developing institutions that respond to local water and sanitation deficiencies.

Locally relevant information is needed for extending services to those settlements without access

- Although at the international level, water and sanitation initiatives tend to prioritize internationally comparable information that can help international agencies to monitor global progress, locally relevant information can be more effective in extending services to those settlements without access.
- Community exchanges have enabled communities without access to water and sanitation to learn from those communities that have successfully initiated and effectively implemented their own services without the help of external agencies.

References

Cain, A., Daly, M. and Robinson, P. (2002) *Basic Service Provision for the Urban Poor; Experience of Development Workshop in Angola*, Human Settlements Working Paper 8: Poverty Reduction in Urban Areas Series, International Institute for Environment and Development, London.

Hasan, A. (1997) *Working with Government: The Story of the Orangi Pilot Project's Collaboration with State Agencies for Replicating its Low Cost Sanitation Programme*, Karachi, Pakistan, City Press.

Hasan, A. (2006) *Draft Pakistan National Sanitation Policy*, <http://www.asb.org.pk/sanitationpolicy.pdf>

Mulenga, M. (2003) 'Barriers to the implementation of the demand-responsive approach (DRA) in sanitation programmes: a study of Zambia and South Africa', Ph.D. thesis (unpublished), University of Southampton.

Mulenga, M., Manase, G. and Fawcett, B. (2004) *Building Links for Improved Sanitation in Poor Urban Settlements: Recommendations from Research in Southern Africa*, University of Southampton, UK.

Orangi Pilot Project-Research and Training Institute (OPP-RTI) (2007) *CSOs and Advocacy on Urban Water and Sanitation Services in Karachi, Pakistan*, draft IIED Report, London.

Satterthwaite, D., McGranahan, G. and Mitlin, D. (2005) *Community-driven Development for Water and Sanitation in Urban Areas: Its Contribution to Meeting the Millennium Development Goal Targets*, WSSCC, Geneva.

Water and Sanitation Program (WSP) (2007) 'Benchmarking of Urban water and Sanitation Facilities Gains Momentum in India' [online] <http://www.wsp.org/news/featured.asp?id=81> [accessed 7 March 2008].