



Tool 3: Cost recovery and financing of water and sanitation services

Case and region	Issue	Type of tool	Description	Economic and financial benefits	Environmental benefits	Social /poverty alleviation benefits	Governance changes	Scaling up and relevance for developing/ transition countries	Concerns
<p>(1) Social contract formulas in rural areas: the India Naandi Foundation water treatment plants</p> <p>South Asia</p> <p>Source: www.naandi.org http://www.naandi.org/strategy_papers/PDFs/OBApproaches21_IndiaWater.pdf</p>	-	Cost recovery and financing of water and sanitation services	<p>Community Safe Water Schemes (CSWS) – based on an innovative public-private partnership model using cost-effective water purification technology and an Output-based Aid approach – provide safe drinking water to poor families in 25 rural villages, Andhra Pradesh.</p> <p>As project manager, Naandi secures pre-financing and contracts a private company (WaterHealth International) to build the UV filter water treatment plant and undertake O&M for 8 years. The community provides land, a water source, a financial contribution (20% of capital cost) and a pre-agreed electricity tariff. Naandi develops education and awareness campaigns on water use and health, mobilizes the community to raise their financial contribution and collects water user fees.</p> <p>Naandi receive a performance-based donor (GPOBA) subsidy upon delivery of pre-agreed outputs which include water services. These services are verified by the presentation of three months of billed water.</p>	<p>The subsidy has made it easier for Naandi to borrow funds from commercial banks.</p> <p>Safe drinking water is provided at a price well below bottled water.</p> <p>The grassroots fee-for-service model coupled with a sense of community engagement and ownership will help ensure the long-term sustainability of the CSWSs. Expected long-term impacts include reduced expenses on alternate sources of water, reduced health costs and freeing up time for other economic activities.</p>		<p>The project (2007-2009) has benefitted 16,104 families, providing access to clean, affordable drinking water for 77,878 people.</p> <p>Naandi trains Safe Water Promoters and Village Health Workers to facilitate behavioral change and improve sanitation and hygiene practices.</p> <p>Average time spent collecting water has reduced by 40 minutes per trip. Incidence of waterborne diseases has dropped by 85% with Rs650-750 per year savings on medical expenses.</p>	<p>The CSWS model is built on collaborative partnerships between the states, villages, and technology partners. Naandi facilitate the projects, but strong support from the local village council – the Panchayat – is essential.</p>	<p>All partners in the project believe scaling up is possible, as the impacts in one project will motivate adjoining villages to engage in similar projects, accelerating demand and willingness to pay for clean water through user fees.</p> <p>WaterHealth International has entered into similar public-private partnerships in Ghana, the Philippines and India. Naandi is now introducing rural private operators into its schemes in central Vietnam with the aim of improving the financial and technical sustainability of its schemes.</p>	<p>It takes time to change mindsets and behaviors in a community, and to convince communities of the need to pay for the water purification service provided.</p> <p>It is sometimes a challenge to get local political support for the project.</p> <p>The estimation of unit costs is a lengthy and complex exercise. Hence, the ex ante preparatory process could be lengthier.</p>
<p>(2) Output-Based Aid: extending water and sanitation services to the poor in peri-urban Morocco</p> <p>Africa</p> <p>Source: http://www.gpoba.org/gpoba/sites/gpoba.org/files/GPOBA%20morrocco%20urban%20-%20Final.pdf</p>	Cities	Cost recovery and financing of water and sanitation services	<p>Growing informal peri-urban settlements are a growing challenge in Morocco. They lack access to water and sanitation services and connection costs are unaffordable.</p> <p>Project funded by the Global Partnership on Output-Based Aid (GPOBA) to expand access to water and sanitation services in targeted poor peri-urban communities in Casablanca, Meknes and Tangiers.</p> <p>Operators pre-financed expansion of services and a pre-agreed Output-Based Aid (OBA) subsidy was disbursed once outputs were achieved – 60% upon a functioning household connection and</p>	<p>Reduced time queuing at standpipes enables people to spend more time engaging in income-generating activities</p>		<p>The pilot provided subsidized access to water supply to a total of 10,504 households and sanitation services to a total of 9,036 households, benefitting more than 52,500 people.</p> <p>The project has resulted in important direct benefits to households in terms of time savings, reduced health costs and improved hygiene practices.</p>	<p>The National Initiative for Human Development (INDH) was launched in 2005, with a focus on upgrading public utilities and social services in poor neighborhoods, particularly in urban and peri-urban areas. This recognized informal settlements (previously considered ineligible for services) and gave momentum for operators and local governments to expand</p>	<p>The World Bank is now working with the Government of Morocco to plan a scale-up program to bring water and sanitation services to other poor peri-urban settlements throughout the country, using the OBA method.</p> <p>The OBA approach is seen as strategically relevant to Morocco, given the lack of targeted subsidy mechanisms for poor</p>	<p>The pilots experienced a slow start due to implementation difficulties unrelated to the OBA approach: World Bank procurement procedures, upstream investment delays, and lack of clarity over land tenure. Connection rates accelerated significantly thereafter.</p>





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			40% upon 6 months of service, independently verified. The subsidy allowed for reduced connection fees, bridging the gap between capacity to pay and actual cost of connection.				access and find low cost solutions for the poorest. The project targeted INDH priority areas.	households, especially in informal urban settings.	
<p>(3) Small scale urban sanitation financing in Vietnam</p> <p>South-east Asia</p> <p>Source: www.wsp.org/user/files/file/financing_analysis.pdf</p>	Cities	Cost recovery and financing of water and sanitation services	<p>A Sanitation Revolving Fund (SRF) (financed by World Bank, Governments of Australia, Finland and Denmark) provided loans to low-income households for building or improving sanitation facilities in 3 cities (both on-site and with sewer connections).</p> <p>Facilities included mostly septic tanks, but also urine diverting / composting latrine and sewer connections, with average hardware costs US\$197 per household. There was also software support (US\$21 per household) for sanitation promotion, hygiene promotion and creation of Savings and Loan groups. The Savings and Credit groups were seen as critical to ensure repayment of the loans and regular saving contributions.</p> <p>The program facilitated access to credit via Sanitation Revolving Funds. Small loans (US\$145) were granted for hardware construction, over 2 years with subsidized interest rates equivalent to US\$6 per loan (and 50% lower than commercial bank rates). Loans covered 65% of average costs of septic tank, and households had to find other sources to cover the total investment cost.</p>	<p>The revolving fund proved highly sustainable, as the funds were revolved several times before being transferred back to municipalities to allocate further. The scheme was a very efficient use of public funds which covered 7% of total costs and are sustainable (have revolved many times).</p> <p>Lending procedures were attractive to borrowers, and the loans worked as a catalyst for the households to find additional financing and invest.</p> <p>The scheme has also generated revenues to provide loans for income-generating activities, contributing to reducing poverty in the project area.</p>		<p>Program resulted in a rapid extension of coverage and benefitted almost 200,000 people over seven years (2001-2008). It contributed to increasing coverage in target area by between 13% and 21%. All facilities built appear to be still operating 5 years later.</p> <p>People in targeted areas were predominantly poor.</p> <p>Awareness of the linkages between hygiene, sanitation, environment, and health was raised by many hygiene promotion campaigns. These were critical for generating demand for sanitation investment.</p>	<p>The revolving funds were initiated by local utilities, who placed them under management of local Women's Unions – well organized and pervasive organizations experienced in managing microfinance schemes. The Women's Unions received assistance from the local utilities in order to develop technical solutions and supervise the quality of constructed work.</p>	<p>Scaling-up to cover the remaining uncovered population is achievable and affordable compared to the government's budget for sanitation</p> <p>Scale-up has been achieved in country through World Bank and government-led projects.</p>	<p>Although loans helped spread the burden of investment costs over time, the solutions built still represented a high proportion of poor household's income (around 45% for the poorest) and were therefore not affordable to the poorest. In order to reach the very poor, it may be necessary to define alternative lending schemes, with a higher level of subsidized interest rate or perhaps a small hardware subsidy.</p>
<p>(4) Pro-poor financing and tariffs in Medellin, Colombia</p> <p>Latin America</p>	Cities	Cost recovery and financing of water and	<p>Empresas Públicas de Medellín (EPM) , a service provider owned by the Municipality of Medellín have designed a number of programs aimed to increase water services coverage, improve efficiencies, and target low-income</p>	<p>The programs have resulted in significant investment in water and sanitation services, and extensive financing which has prevented</p>	<p>EPM invest in campaigns and customer training programs to raise awareness of water use and water</p>	<p>During 1998-2010, the 10,163 drinking water and 13,917 sanitation domestic connections were made, benefitting 55,670 people and</p>	<p>EPM, as the governing body of these initiatives, has taken a proactive lead in designing strategies to increase access to</p>	<p>The NCFP and RFWC are suitable for replication in other developing countries due to their positive economic and social</p>	<p>Fraud is persistent in poor neighbourhoods, reducing the effectiveness of some of the measures.</p>





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<p><i>Source: Pers. comm. Rubén Darío Avendaño, Empresas Públicas de Medellín</i></p>		sanitation services	households and peri-urban areas. Initiatives include a program offering long-term credit at low rates to low income populations for construction of water and sanitation networks and connections to public utilities; a program providing people with low payment capacity and bill debts access to low cost financing; a program offering credit at competitive rates for home improvements and efficient appliances; contracting small community organizations for work related to network expansion, operation and maintenance in water and sanitation services; and provision of public water services to peri-urban areas.	delinquent accounts and resulted in interest rate savings for consumers (compared to conventional financing). Community organization contracts have been awarded, generating jobs, increasing incomes for communities and stimulating local, regional and national economies.	efficiency; credit facilities promote the adoption of more efficient appliances, contributing to significant energy, water and gas savings. The community organization contracts include environmental protection clauses complemented with auditor procedures to verify compliance.	contributing to improved welfare of low-income groups. Programs have effectively targeted low income groups and provided credit with low interest rates and payment flexibility to people who otherwise would not be eligible for financing.	services and target low income households. They have the institutional capacity to manage the whole process from problem identification to program evaluation. Strategies are based on an extensive analysis of the beneficiaries' conditions and include permanent monitoring and evaluation procedures to ensure objectives are continually being met.	impacts. The results of the 'minimum for life' initiative are being analyzed by regional government to evaluate its replicability in the entire region of Antioquia.	
<p>(5) Community water management improvement project for traditional farmers in Mkushi, Kapiri Mposhi, Masaiti and Chingola districts, Zambia</p> <p>Africa</p> <p><i>Source: http://www.africanwaterfacility.org/fileadmin/uploads/awf/projects-activities/PAR%20-%20DAPP%20Zambia%20post-IDWG%2027%20Oct%2009%20-%20final.pdf</i></p>	Agriculture	Cost recovery and financing of water services	The project aims to promote the use of improved on-farm water resources management methods and low-cost irrigation technologies for rural poor smallholder farmers. It addresses 3 critical constraints on using agriculture as a poverty reduction strategy - access to technology, know-how and finance. Project components include: enhancing institutional capacity; increasing knowledge on water management, horticultural practices and basic business skills; improving access to water and technologies; improving access to financial services. The credit access and investment facilitation component of the project involves capacity building and training of farmers and private sector pump entrepreneurs in micro credit management; supporting a micro-finance institution in issuing loans for smallholder micro-irrigation investments; and technical assistance to farmers and micro-irrigation institution throughout the investment cycle.	<i>Expected:</i> 1000 loans issued for smallholder micro-irrigation investments and 90% of loans paid back in time. Creation of enabling environment for smallholder self-supply investments, bridging the gap between smallholders and the financial services sector. This will increase agricultural productivity and growth. The project aims to enhance traditional farmers' ability to move towards a more efficient and commercially oriented mode of production, moving away from	<i>Expected:</i> To ensure long-term sustainability of crop production and climate change resilience, the project activities include promotion of water resource awareness, good water management practices and sustainable farming methods.	<i>Expected:</i> Improving smallholder farmers' access to finance improves their access to affordable irrigation systems. This is expected to result in an increased number of farmers investing in self-supply solutions for improved production and income generation.	Critical to the success of the intervention is the involvement of a well-established, private sector micro-finance institution, and the close collaboration with the Ministry of Agriculture and Cooperatives.	The project will closely involve staff from the Ministry of Agriculture and Cooperatives so that lessons learnt can be used for scaling up. The micro-finance institution involved is looking to expanding their services into rural areas, so the project will enable them to develop, learn, and consolidate a loan scheme for traditional farmers which can then be scaled-out after the project ends.	Farmers are trained on pest-management and given technical assistance on horticulture to mitigate risks of crop failure. The risk that land tenure insecurity will undermine farmers' interest in investing will be mitigated by raising awareness on procedures and requirements for land tenure security. Risks of weak market demand and instable prices for horticultural produce will be mitigated by aligning investments with dry season production (when prices are higher), value-chain analysis to identify markets with most price-stability, and training in business management





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				dependency on rain-fed agriculture geared towards own-consumption.					skills to enable farmers to strengthen links to traders and sellers.
<p>(6) DISHARI: Decentralized Integrated Sanitation, Hygiene and Reform Initiative in Bangladesh</p> <p>Asia</p> <p>Source: https://www.wsp.org/wsp/sites/wsp.org/files/publications/financing_analysis.pdf</p>	-	Cost recovery and financing of water and sanitation services	<p>The approach adopted aimed to scale up the Community Led Total Sanitation approach and strengthen local governments to become main implementers.</p> <p>The project mobilizes households in rural areas (with strong demand for low-cost solutions) to build basic latrines, reducing dependency on external subsidies. The financial approach is based on software support for community mobilization, sanitation promotion and local government strengthening (SUS7 per household). Households are responsible for investing in latrine construction using low-cost materials and simple designs (average cost SUS17).</p> <p>Up-front in-kind hardware subsidies (USS7) targeted the poorest only. Outcome-based financial rewards were provided to villages that achieved 100% sanitation coverage (no strings attached and do not need to be spent on sanitation).</p>	Basic sanitation costs were reasonable when compared to household income (3-4%). Public investment (from project and government funds) led to a relatively high ratio of private investment from households.		<p>The project resulted in a substantial and rapid increase in coverage, and contributed to an increase in coverage from 20% to 90% in 4.5 years (up to June 2008). 81% of the unions in the project area achieved 100% sanitation. High levels of maintenance and user satisfaction were attained.</p> <p>1,631,000 people have benefitted in 5 districts with high incidence of poverty. 7% of households received a hardware subsidy and community involvement ensured highly effective targeting of the poorest.</p>	<p>The project was initiated by group of donors and NGOs, but aimed to strengthen local governments to become main implementers instead of NGOs.</p> <p>The project complements the government's national sanitation program.</p>	<p>Involving local governments aimed to strengthen the approach's scalability and sustainability, rather than relying on NGOs.</p> <p>The project deliberately targeted poor areas in order to demonstrate the effectiveness of its approach in the most difficult to serve areas and encourage scale-up.</p> <p>Scale-up achievable at a reasonable cost. Ending open defecation in 1,800 remaining unions is deemed achievable in 2 years.</p>	<p>High pressure on delivering fast results may negatively affect long-term sustainability.</p> <p>Weak monitoring and evaluation systems, based on self-reporting with tendency to over-report and no independent verification.</p> <p>Levels of service provide are very basic. An alternative financing approach may be needed to help thousands 'climb the sanitation ladder', potentially with microcredit to help them prefinance investment in higher levels of service.</p>
<p>(7) Total Sanitation Campaign in Maharashtra, India</p> <p>South Asia</p> <p>Source: https://www.wsp.org/wsp/sites/wsp.org/files/publications/financing_analysis.pdf</p>	-	Cost recovery and financing of water and sanitation services	<p>The approach adopted was based on the Community Led Total Sanitation model, combined with small hardware subsidies for poorest households and monetary rewards for villages that achieve overall cleanliness objectives.</p> <p>Software activities are used to generate demand for sanitary facilities, mobilize communities and promote hygiene behavioral change.</p> <p>Households fund about 90% of the total costs of adopting sanitation. Outcome-</p>	<p>Households invested in a level of service based on what they could afford. Community mobilization was a major driver for household investment.</p> <p>In some districts, banks have started to respond to sanitation financing needs with locally developed credit products.</p>	Environmental benefits derived from the reduction in open defecation – the program focuses on the sanitary confinement and safe disposal of human excreta within the physical environmental of households and institutions present in the village (e.g.	<p>Rapid increases in coverage (with some cases of relapse) and has benefitted 21,200,000 people (over 4 years) in rural areas throughout the state – an 18% increase in coverage.</p> <p>Means-tested poverty targeting was effective, although some were excluded. Outcome-</p>	<p>The program was part of a nationwide 'Total Sanitation Campaign', launched in 2001.</p>	<p>The program has already been scaled-up throughout the state (though coverage still needs to improve) and budget is affordable at state level.</p> <p>At a national level, the Total Sanitation Campaign has scaled to 587 of 608 rural districts in the country, with sufficient funds</p>	<p>The formal monitoring system for the village ODF awards is largely a one-off event, which means lasting improvements may not always be achieved.</p>





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			based financial rewards are given to villages reaching Open Defecation Free (ODF) status to be spent on sanitation investments. Hardware subsidies (US\$24) are given to poorest households after the village is declared ODF.	The program made low demands on and represented efficient use of external public funds (accounting for only 9% of total costs).	schools).	based subsidies have helped to meet the needs of the poor. Communications campaigns effectively improved hygiene practices.		available for completing the remaining rural districts.	
<p>(8) Using market finance to extend water supply services in peri-urban and rural Kenya</p> <p>Africa</p> <p><i>Source: Advani, R. (2010) SmartLessons IFC publication, November 2010</i></p>		Cost recovery and financing of water and sanitation services	<p>In Kenya, community-based organizations (CBOs) are important water service providers in areas not served by public utilities. However much of the infrastructure is run down and access to finance for infrastructure investment is a significant constraint.</p> <p>An innovative program has combined commercial debt with subsidies to finance investments in community water projects.</p> <p>CBOs borrow up to 80% of the cost of infrastructure development from a Kenyan commercial bank specialized in microfinance lending, with the remaining 20% financed by equity from the CBOs. On completion of the project, up to 40% of the total project cost is paid to the CBO as a donor-funded subsidy, paid against predetermined output targets including increase in coverage and increase in revenue raised by the project.</p>	<p>The program shows that subsidies can be leveraged by 2.5 times to secure cofinancing from the private microfinance sector. The sustainability of these investments is increased by linking debt service to system functionality. In secure of its interest, the bank provides a level of oversight to management.</p> <p>Since 2007, the commercial bank has lent \$1 million to 12 CBOs, 9 of which have completed their projects and received subsidies.</p>		The program has financed investments in water resource development and augmentation, water treatment, distribution and meters. The investments made to date are expected to increase the number of connections in the projects financed from 5,300 to 9,900 and target about 67,000 beneficiaries.	CBOs must be formally registered as cooperatives or societies in order to borrow and must secure the legal right to sell water within their demarcated area of operation (this is essential for giving the commercial lender security).	The program is now being scaled up to target 50 projects countrywide, targeting 165,000 beneficiaries. The disbursement rate is expected to increase significantly as the implementing agency's project management experience has increased.	<p>Experience from piloting the project suggests communities lack the capacity to implement and manage water projects efficiently. The Public-Private Infrastructure Advisory Facility provided funds and the Water and Sanitation Program-Africa technical assistance to support communities in the loan application and project implementation process.</p> <p>Individual CWPs financed under the pilot were not financially viable. Projects should be clustered, with each specialized operator tasked with management of a number of close projects.</p>

