Strengthening pro-poor targeting of investments by African utilities in urban water and sanitation - the role of the International Development Association of the World Bank

Case studies from Ghana, Burkina Faso and Tanzania

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Preface

This report presents findings from research into the impact of selected projects on water supply and sanitation (WSS) services in urban areas of sub-Saharan Africa (SSA), with particular emphasis on the way in which poor areas and households are included in those investments.

The research has focused on projects carried out by utilities and funded by the International Development Association (IDA). The IDA is an important source of funding for investments in WSS in low-income countries through concessional loans and grants. The research covered utility-implemented, IDA-funded projects in three countries, Ghana, Burkina Faso and Tanzania, focusing on the following cities: Accra (and one other urban centre in Ghana), Ouagadougou and Dar es Salaam.

The study aims to assess how the inclusion of low-income areas and households is *conceptualised* in urban WSS (UWSS) policies and strategies, *designed* in the specific projects under consideration - including the approaches of the water utilities/operators as observed in relation to those projects - and *implemented* on the ground.

Demographic changes are presenting major challenges for water delivery systems. Rapid growth in each city has more than doubled populations over the last two decades, with urban expansion into new areas and large numbers of residents living in slums and informal settlements. The aim of this study has been to draw lessons from both the achievements and weaknesses of the selected projects, in order to contribute evidence and analysis to policy debates regarding the improvement of water services for previously un-served or poorly served users in SSA cities, with particular attention to low-income households.

This research was commissioned by WaterAid, as an input to an on-going dialogue process which aims to strengthen understanding between the World Bank and civil society organisations (CSOs). The research has been conducted over a period of three years. In February 2009, a team comprising WaterAid and ODI took the project outline to the World Bank 'Water Week' for initial discussions, including consultation as to which IDA-supported utility projects would be studied. In Spring 2009, reconnaissance missions were made to Ghana, Burkina and Tanzania and in-country research partners in each case were identified. In the second half of 2009, the research was undertaken by ODI/SOAS and the local partners.

In July 2010, a preliminary report, in draft, was submitted to WaterAid by ODI/SOAS, on behalf of the research team. WaterAid transmitted this to the World Bank for review and comment. The World Bank subsequently responded in December 2010 with detailed written comments on the preliminary report in a reply document, with comments on the Burkina chapter sent in January 2011. In response to ODI/SOAS' request (forwarded by WaterAid to the World Bank in March 2011) for documents and reports which had not been available to the study teams in 2009, the Bank supplied, in May 2011, some additional documentation. Some gaps still remained in the information available to the researchers, for example documentation of social analysis in Tanzania which was reportedly undertaken during project design.

In May 2011 also, a meeting was held by video-conference between the World Bank, ODI/SOAS and WaterAid to consider issues raised by the ODI/SOAS research in relation to the challenges of achieving 'inclusion' faced by urban water supply and sanitation projects in Africa (on an informal basis - the discussions during the video-conference are not cited in this report).

The research findings presented in this report are, mostly, based on the work of the researchers undertaken in 2009. The report has, however, been reviewed and revised by ODI/SOAS to respond to the World Bank's written comments on the preliminary July 2010 draft, taking account of the points presented by the World Bank and views expressed in those written comments.

Further, the researchers in each of the three countries were requested, in Autumn 2011, to conduct a rapid check for any major project or sector developments. The three country studies in Sections 2 - 4 include, therefore, some information updates as at November 2011.

At the time of the research in 2009, the sample projects were at different stages. In Ghana, the *Urban Water Project* had been approved in 2004 and originally scheduled for completion by the end of 2010. Implementation had, however, been delayed; at the time of the main research in 2009, disbursement was reported to be only in the region of 40% of total funds. The closing date of the Ghana project has subsequently been re-scheduled for 31st December, 2012. In Burkina Faso, the *Ouagadougou Water Supply Project* (commonly called the 'ZIGA' project) was concluded in 2007 and a further initiative, the *Urban Water Sector Project*, was approved in 2009, with a sanitation component. In Tanzania, the *Dar es Salaam Water Supply and Sanitation Project*-DWSSP began in 2003 and concluded in November 2010, following several time extensions from the originally programmed end-date of December 2008.

As per the research brief, a key focus has been the 'pro-poor' strand in UWSS: how far inclusion of low-income areas and households, established in national policy in the three countries, was maintained in a chain of activities from policy principles to project design and project implementation in order to achieve results in terms of pro-poor service. The research team accordingly looked for the translation of the policy statements on inclusion and 'equity' in the three countries into utility plans/operator contracts, project designs, and realisation of the projects on the ground.

At the outset of this research, the intention was to include more study of sanitation aspects, but the selection of Ghana, Burkina and Tanzania - as the outcome of the dialogue between WaterAid, the World Bank and ODI/SOAS - meant that a majority of the chosen project elements targeted to poor populations were for water supply rather than sanitation provision. In relation to sanitation, only the new project in Burkina includes a substantial sanitation component. The project in Ghana focused exclusively on water supply, while in Tanzania the majority of project funds (and virtually all of the specific pro-poor elements) were dedicated to water. Consequently, water supply is given more focus in the present study.

Acknowledgements and disclaimer

This report has been written by Peter Newborne (Research Associate) and Josephine Tucker (Research Officer) of the Water Policy Programme at the Overseas Development Institute (ODI) and Kate Bayliss of the School of Oriental and African Studies of the University of London (SOAS).

This report brings together the findings from the studies in-country, and draws heavily on the individual reports from each country carried out by the following partners:-
- Ghana: Joseph Ampadu-Boakye of Maple Consult, Accra, Ghana;
- Burkina: Dr. Claude Wetta of the University of Ouagadougou (of the *Unité de Formation et de Recherche en Sciences Économiques et de Gestion*) and M. Djimé Fofana, independent sanitary engineer;
- Tanzania: Dr Paula Tibandebage and Festo Maro of the Economic and Social Research Foundation.

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A key source of information in each country has been the project appraisal documents (PADs), written by World Bank staff in discussion and negotiation with Government representatives. Available documents also included the Implementation Completion Report (ICR) (conducted by the evaluation division of the World Bank) of the Ouagadougou Water Supply Project in Burkina, and - when the research was updated in 2011 - the ICR of the Dar es Salaam Water Supply and Sanitation Project.

Additionally, the research team has had the benefit of the written comments of the World Bank on the preliminary July 2010 version of this report, as referred to above (those comments were delivered in December 2010 and January 2011).

Responsibility for the opinions presented in this report rests exclusively with its authors and should not be attributed to WaterAid, the World Bank or any of other institutions and organisations consulted.

Any feedback on this report would be gratefully appreciated by the authors at p.newborne.ra@odi.org.uk, j.tucker@odi.org.uk and kb6@soas.ac.uk.

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List of abbreviations

AfDB	African Development Bank
AFD	*Agence Française de Développement* - French Development Agency
AICD	The Africa Infrastructure Country Diagnostic
AJWSR	Annual Joint Water Sector Review
ATMA	Accra-Tema Metropolitan Area, Ghana
AVRL	Aqua Vitens Rand Limited, Ghana
CAS	Country Assistance Strategy
CBO	Community based organisation
CIUP	Community Infrastructure Upgrading Programme, Tanzania
CONIWAS	Coalition of NGOs in Water and Sanitation, Ghana
CSLP	*Cadre Stratégique de Lutte contre la Pauvreté* (the PRS in Burkina Faso)
CSO	Civil society organisation
CWSA	Community Water and Sanitation Agency, Ghana
CWSSP	Community Water Supply and Sanitation Programme, Dar es Salaam
DASS	*Direction de l'Assainissement* (Department of Sanitation), ONEA, BurkinaFaso
DAWASA	Dar es Salaam Water and Sewerage Authority
DAWASCO	Dar es Salaam Water and Sewerage Corporation
DFID	Department for International Development
DMOZ	*Direction de la Maîtrise d'Ouvrage de ZIGA*, current project management unit at ONEA
DSM	Dar es Salaam
DWSSP	Dar es Salaam Water Supply and Sanitation Project
DPs	Development partners
EIB	European Investment Bank
EWURA	Energy and Water Regulatory Authority, Tanzania
FCFA	Francs of the African Financial Community (at exchange rates in 2009: 1 US$: c.450 FCFA)
FGDs	Focus group discussions
FTCF	First Time Connection Fund, Dar es Salaam
FYIP	First Year Investment Programme, Ghana
GEMP	Government Environmental Management Plan, relating to the ZIGA project, Burkina Faso
GLSS	Ghana Living Standards Survey
GDP	Gross domestic product
GNI	Gross National Income
GoB	Government of Burkina Faso
GoG	Government of Ghana
GoT	Government of Tanzania
GPRS	Growth and Poverty Reduction Strategy, Ghana
GSS	Ghana Statistical Service
GTZ	Gesellschaft für Technische Zusammenarbeit, German Development Agency
GWCL	Ghana Water Company Limited
HBS	Household Budget Survey
IBRD	International Bank for Reconstruction and Development
IBT	Increasing block tariff
ICB	International competitive bidding
ICR	Implementation Completion Report
IDA	International Development Association
IEG	Independent Evaluation Group, of the World Bank
INSD	*Institut National de la Statistique et de la Démographique*, National Statistics Institute, Burkina Faso

INSS	*Institut des Sciences des Sociétés*, Burkina Faso
ISR	Implementation Status and Results Report
ISU	Informal settlements unit
JAS	Joint Assistance Strategy
JMP	Joint Monitoring Project
KPIs	Key performance indicators
LGSP	Local Government Support Project, Tanzania
LIC	Low-income community
LICS	Low Income Customer and Safeguard Officer, Ghana`
MAHRH	*Ministère de l'Agriculture, de l'Hydraulique et des Ressources Halieutiques*, Burkina Faso
MDGs	Millennium Development Goals
M&E	Monitoring and evaluation
MICS	Multiple Indicator Cluster Survey
MoF	Ministry of Finance, Tanzania
MoFEP	Ministry of Finance and Economic Planning, Ghana
MoWI	Ministry of Water and Irrigation, Tanzania
MoU	Memorandum of Understanding
MOZ-ONEA	*Maîtrise d'ouvrage de ZIGA*, ONEA project management unit for the ZIGA project, Ouagadougou, Burkina Faso
MTR	Mid Term Review
MWRWH	Ministry of Water Resources Works and Housing, Ghana
NAWAPO	National Water Policy, Tanzania
NBS	National Bureau of Statistics, Tanzania
NGO	Non-governmental organisation
NRW	Non revenue water
NSGRP	National Strategy for Growth and Reduction of Poverty, Tanzania
NWP	National Water Policy, Ghana
NWSDS	National Water Sector Development Strategy, Tanzania
ODI	Overseas Development Institute
O&M	Operation and maintenance
ONEA	*Office National de l'Eau et de l'Assainissement*, the urban water utility in Burkina Faso
PAD	Project appraisal document
PDO	Project Development Objective
PN-AEPA	*Programme National d'Approvisionnement en Eau Potable et d'Assainissement* - National Water Supply and Sanitation Programme, Burkina Faso
PAF	Performance agreement framework, Tanzania
PMU	Project Management Unit within GWCL, Ghana
PPP	Public private partnership
PRS	Poverty Reduction Strategy
PSAO	*Plan Stratégique d'Assainissement de Ouagadougou et Bobo-Dioulasso,* Strategic Sanitation Plan for Ouagadougou and Bobo-Dioulasso, Burkina Faso
PSP	Private sector participation
PURC	Public Utilities Regulatory Commission, Ghana
RBT `	Rising block tariff
RMS	Results Measurement System
RRRF	Repair, Replacement and Rehabilitation Fund, Ghana project
SDR	Special Drawing Rights
SIP	Strategic Investment Plan, Ghana
SOPE	Status of Projects in Execution
SME	Small or medium enterprises
SNA	*Stratégie Nationale d'Assainissement,* National Sanitation Strategy, Burkina Faso
SSA	Sub-Saharan Africa

SSIP	Small-scale independent providers
SWAp	Sector Wide Approach
SWE	Small scale water entrepreneur
SYIP	Subsequent Year Investment Programme, Ghana
UFR/SEG	L*'Unité de Formation et de Recherche en Sciences Économiques et de Gestion,* University of Ouagadougou, Burkina Faso
UFW	Unaccounted-for-water
UNDP	United Nations Development Programme
US$	Dollars of the United States of America
UWS	Urban water supply
UWSA	Urban Water Supply and Sewerage Authority, Tanzania
UWSS	Urban water supply and sanitation
VIP	Ventilated improved pit latrine
W4L	Water for Life, Ghana
WHO	World Health Organisation
WRC	Water Resources Commission, Ghana
WSDP	Water Sector Development Programme, Tanzania
WSP	Water and Sanitation Program of the World Bank
WSS	Water supply and sanitation
WTP	Willingness-to-Pay
WUAs	Water Users Associations
ZIGA	The location 50 kilometres from Ouagadougou where river water is abstracted at increased volume as a result of the project of the same name

Executive Summary

The background to this research project, including an overview of the objectives and processes involved, is provided in the Preface above. This Summary presents a synopsis of the main research findings as well as recommendations arising from those. A key observation is the diversity of approaches adopted in the countries and projects studied when it comes to providing services for low-income households.

- **'Inclusion' in water policies**

Conceptualisation of 'inclusion' in policy

In each of the three countries studied (Ghana, Burkina Faso and Tanzania), laws and/or policies applying to water supply include a commitment to universal access to potable water supply and recognition of the need for 'equity' (Burkina and Tanzania) in making water available to the poor (Ghana and Tanzania) at affordable cost (all countries).

How far these stated policy goals were translated into practice is discussed below.

- **Project Investment in Water Infrastructure**

Engineering and technical achievements

The projects have established substantial new water infrastructure and rehabilitated existing facilities. The achievements in engineering and technology in each of the countries as are follows.

In Ouagadougou, the Ouagadougou Water Supply Project - or 'ZIGA' project - saw: construction of an earth dam/reservoir at the ZIGA river site; 50 kilometres of primary water main bringing bulk supply to the city; a storage facility and a pumping station at the city boundary; water towers and ground-level tanks within the city; plus 171 kilometres of secondary and 1,437 kilometres of tertiary distribution networks in the city. Water production and delivery has been tripled, from 40,800 cm3/day in 2001 to 122,000 cm3/day in 2007, with a transformation from an intermittent to continuous supply (including in the dry season), sufficient to meet current demand.

In Tanzania, the Dar es Salaam Water Supply and Sanitation Project (DWSSP) has made a substantial investment in rehabilitation of water production facilities and the distribution network, to go some way to address a severe shortfall in bulk water in the system. 110,000 connections (new, reinstated and rehabilitated) and 184 water kiosks have been installed, and stand-alone water supply schemes have been constructed in 41 peri-urban communities. Infrastructure improvements have, however, been delayed, with the result that water losses have not yet been significantly reduced. The development of new water sources is still urgently required. Continuing lack of water in the network, as well as a failure to address some management issues, mean that a reliable service is not provided by most kiosks; in 2009 only 12 out of 184 (7%) were functioning reliably.

In Ghana, the Urban Water Project (UWP) was intended to finance infrastructure in urban areas in all ten regions of the country to cover individual water supply systems, extension of water production, transmission and distribution networks. However, progress in implementation was extensively delayed, which meant that, at the time of the research in 2009, the project had yet to realize the full extent of the proposed - and much-needed - investment in infrastructure.

- **Utility capacity and commercial/financial performance**

Progress in strengthening utility capacity and commercial/financial performance

Strengthening of utility/operator capacity and financial performance is also a central objective of each project, as clearly set out in the project appraisal documents (PADs). Indeed, the combined utility capacity and infrastructure components are allocated by far the largest share of project budgets. In each of

the three countries, there has been support for strengthening aspects of utility/operator capacity, with considerable progress (at least, against project targets as stated in the PADs) in Burkina and recent improvements in Tanzania at utility level, though the performance of the operator has been less strong. Some improvements have also occurred in Ghana, although performance remains below target.

In Burkina, the strong leadership by the Managing Director of ONEA and his team generated a substantial turn-around in financial/operational management: bill collection, reduction of unaccounted-for-water, staff productivity, and financial reporting.

In Tanzania and Ghana, institutional reform was oriented towards the introduction of private operators: Aqua Vitens Rand Limited (AVRL) in Ghana and initially City Water in Tanzania, until the management contract was terminated in 2005 and water and sewerage operations were leased to the publicly-owned Dar es Salaam Water Supply and Sewerage Corporation (DAWASCO). The failed privatisation in Dar was damaging because it delayed improvements in operations and infrastructure, and led to an unsatisfactory institutional arrangement where the operator lacks accountability.

In each of the countries studied, there was a contract between the State and the utility/operator. In the cases of Ghana and Tanzania, the operators were managers of the water system, with a parallel state body being the owner of the infrastructure. In Burkina, the infrastructure was owned and managed by the publicly-owned utility, ONEA.

Performance contracts and projects are 'skewed' to utility/financial and engineering matters…

The contracts between supervising government ministries and the utilities, and the independent operators in Ghana and Tanzania, focus on improving utility performance and achieving financial stability, measured by technical and financial indicators. The contracts provide very little incentive for the utilities/operator to serve low-income households.

In Burkina, ONEA's performance contract did not include any performance targets relating to 'pro-poor' objectives. In Tanzania, the performance contract for DAWASA (the public sector utility which owns the water infrastructure) includes implementation of the pro-poor components of the DWSSP, and these terms mirror targets expressed in the project design as set out in the PAD (to implement a lifeline tariff, first-time connection fund, kiosk installation and community water supply and sanitation projects). However, when it comes to the contract with the operator of the water infrastructure (DAWASCO), these are missing from the contractual performance indicators, which focus solely on general technical/service standards and efficiency measures, leaving an accountability gap around the services for low-income households for which DAWASCO was responsible (first time connection fund and kiosk construction).

In Ghana, the contract between the government water company (GWCL) and the private management company (AVRL) was reported to contain no specific incentives to increase services to low-income households. While the management contract included key performance indicators which were aimed at improving service delivery (reducing non-revenue water, improving water quality, improved standards for customer response), none related to improvements in service delivery for low-income households. There was only a very loose proviso that AVRL was obliged to perform its services in accordance with social policy of the regulator (PURC). In addition, the relationship between GWCL and AVRL was strained, with the two parties failing to agree on the interpretation of some clauses in the management contract. That eventually culminated in the signing of two Memoranda of Understanding (MoUs) in 2007 and 2008 respectively.

This contributes to a key finding of the research that, while the project documents contain substantial pro-poor rhetoric, when it comes to the details of design and implementation the projects assessed by this research study are *skewed* towards commercial/financial and technical objectives, to the relative detriment of social aspects.

… to the detriment of social aspects

In the design of each project, as set out in the PAD, pro-poor goals referred to in descriptive parts of the text are not reflected in the key performance indicators (KPIs). While project performance indicators prioritise financial and technical aspects, social indicators - where they exist - refer to numbers of connections or standpipes/kiosks installed with no measure of where these are located or who is to benefit.

So, output/outcome indicators refer to objectives in terms of installation of standpipes/kiosks (Ouagadougou and Dar es Salaam), creation of community schemes (Dar), and operation of life-line or 'social' tariffs (Ouagadougou and Dar), as well as 'social' connections (Ouagadougou) and the First Time Connection Fund (Dar), but they do not make explicit who these water facilities are to serve and whether they will provide a good and affordable service.

In Burkina, a "primary goal" of the 2009-2015 Urban Water Sector Project (page 20 of the PAD) is "to contribute to sustainable improvement of hygiene and environmental health by improving access to safe drinking water and sanitation in poor fringe areas of Ouagadougou, Bobo-Dioulasso and other urban areas … including reducing "…the access bias between formal and informal settlements…". But, among a number of infrastructure/financial objectives in the KPIs of the project, this social goal is not reflected. In the KPIs, there is no reference to the location of either infrastructure type and no specification of which categories of 'population' and 'individuals' are to benefit from the new connections and standpipes. The same omission occurred in the design of the prior 'ZIGA' project in Burkina (2001-07).

In the PADs of the studied projects, statements of 'pro-poor' goals are not translated into quantifiable measures of impact for low-income households. There is, therefore, no requirement to assess the effectiveness of pro-poor measures as part of project evaluation. This means that pro-poor goals are likely to be de-prioritised, and that opportunities to learn from the efforts which *have* been made to reach low-income populations may be missed.

Ensuring low-income groups are not the last to benefit

Addressing underlying constraints, such as a lack of bulk water in the system (a problem in all three cities/countries at the start of the projects and one which persists in Accra and Dar es Salaam) or strengthening utility management, is *necessary* to underpin any improvement in service provision, including for low-income populations. However, to ensure that low-income groups are not the last to benefit, overall system improvements alone are not *sufficient*; specific measures are needed.

- **Water services - 'inclusion' in projects**

On the subject of 'inclusion' of poor areas and households, the research finds that in all three countries, the national policies (referred to above) express the principle of affordable services to low-income communities. However, when it comes to the translation of policy statements into utility plans/contracts, project design and ultimately project implementation, social aspects, in particular inclusion of low-income areas and households, have been lost or disregarded (in Dar, they are taken account of in part, but

in many cases downgraded in priority) - as shown in the **Figure** attached to this Executive Summary (reproduced from section 5.5).

In Ghana, the infrastructure investment has been allocated across the country according to specific criteria. The regional allocation is based on the urban population, GDP per capita, the proportion of the population covered by existing services and the extent of parallel investments. Within each region, funds are allocated according to water availability, population service coverage and existing investment per capita. Thus, the allocation mechanism is intended to reach those on lowest incomes in areas with least coverage and least investment. While this indicates a pro-poor targeting strategy, the research study found that this did not necessarily reach those most in need where there were additional water sources such as private wells and customers faced substantial obstacles in obtaining a household connection in the form of cost and bureaucratic processes.

In Burkina, the ZIGA project provided (according to the 2008 World Bank evaluation reported in the ICR) 56,000 new household connections and 400 standpipes. Based on ONEA's estimates of the number of persons per connection and standpipe, this means that over 600,000 persons were served with new facilities, i.e: more than a doubling of persons with access to network in six years. That was a substantial achievement, except that ONEA is unable to say *who* has benefitted - which sorts of household make up the 600,000. During the 2009 interviews conducted by the present project's research team in Ouagadougou, an ONEA official had commented that the city was composed of mixed wealth communities so that it is: "impossible to distinguish between rich and poor areas". Since, the researchers in Burkina have carried out a mapping exercise, based on the 2006 census, showing levels of poverty of peri-urban zones, as compared with comparatively wealthier central sectors of the city. This exercise has shown that the water infrastructure installed by ONEA reached, broadly, poor peri-urban districts, but that there were targeting errors which meant that some poor districts were excluded, and some non-poor areas were included.

The most tangible effort of inclusion was made in Tanzania under the DWSSP, which included several pro-poor components in its design. Of these, a community water supply and sanitation programme has provided water services to between 165,000 and 400,000 people (estimates vary) in peri-urban areas. This initiative has been broadly successful and DAWASA has shown commitment to the programme, including extending the approach, through a dedicated Community Liaison Unit - a very positive achievement. However, the other pro-poor components have not been effectively applied. A fund to subsidise new connections for those categories of households was collected with the intention of ensuring that at least 80% of new connections were for low- and middle-income households, but it was never applied. An insufficient number of households in networked areas met the criteria of eligibility for the fund, and instead a universal connection subsidy was provided under the project, meaning that there was no way to ensure that a majority of lower- or middle- income consumers were connected. Meanwhile the kiosks installed under the project are not generally providing a good service, as described above, and seem to have been de-prioritised.

Targeting to low-income areas or households is either non-existent or undeveloped and unsystematic

As noted above, the projects have delivered some improvements in water services in all countries, albeit with varying degrees of success. From an equity perspective, however, the question arises as to *who benefitted* from these improved water services. Currently, none of the projects demonstrate a clearly defined and adequately developed targeting strategy, which is consistently applied by the utility/operator.

In Ghana, the implicit assumption seems to have been that, by improving bulk water supply and financial performance of the utility, improvements in delivery to low-income households would emerge as a by-

product, without special measures. The regulator, PURC, is leading social policy highlighting pro-poor issues, and a small element of the UWP was allocated to an innovative pilot study aiming to reach poor households in three deprived areas of Accra. This pilot project incorporated detailed baseline analysis and community sensitisation before implementation. A Water User Committee was established in each project area. These pilot projects led by PURC are positive attempts to tackle the challenges of pro-poor target, although they constituted a small proportion of the budget for the UWP.

In Burkina, where the June 2008 ICR of the ZIGA project says that standpipes are "mostly" located in poorer districts of Ouagadougou, this is correct, but not analytically useful. ONEA's stated intention of implementing a 'social' policy was not realised by the ZIGA project, or at least *not demonstrably* realised.

In Tanzania, various targeting approaches were developed under the DWSSP which represented an effort to reach low-income households in design. The CWSSP schemes were clearly targeted to areas in need of new services and with high rates of water-related disease, while kiosks were mostly targeted to areas identified as priorities for infrastructure upgrading (under a parallel project) and some attempt was made to assess demand for kiosks versus household connections. The first time connection fund was also to be targeted against a set of criteria aimed at identifying low- and middle-income households. However, the process for targeting kiosks used under this project has not been integrated into the routine practice of the operator, while the targeting criteria for the connection fund were found to be ineffective and have not been applied. As a result of the abandonment of targeted connection subsidies, the project's design target for 80% of new connections to reach low- and middle-income households fell by the wayside. There is no measure of whether the new household connections installed under the project have reached low-income households.

The lack of clear commitment by the utilities/operator to pro-poor services in each of the three countries threatens the sustainability of the social components of the projects, as does the weakness in accountability. Problems of functionality of standpipes are affecting access in areas where focus groups were convened as part of this research study (e.g. Tabtenga in Ouagadougou; Dar es Salaam).

- **Tariffs and subsidies**

Subsidies are not directed to low-income households

The utilities in the three countries operate a system of subsidy to household connection cost and consumption tariff, each with its particularities. However, connection subsidies have been geared to increasing the number of household connections *irrespective* of for whom - not specifically for low-income households - while consumption subsidies benefit only those with an individual household connection. Water from standpipes/kiosks is subsidised in all three countries, but in Burkina and Tanzania it remains more expensive for consumers than water from a household connection, as the cost of paying an operator/caretaker is passed on to kiosk/standpost users.

In Ghana, there exists a lifeline tariff for the first 20 m3 of water supplied to households, although this has been shown to be regressive, because it penalises those in high-density housing (usually on lower incomes) where a large number of individuals access water from a single connection. The tariff at standpipes is the same as the social tariff, but - as in the other cases studied - the actual price paid is often higher due to the mark up of the standpipe operator. Unlike in Burkina and Tanzania, connections are not subsidised in Ghana. The view of the regulator (PURC) is that the main barrier to access for poor households is not the cost of connection, but inadequate infrastructure, and that customers are able to meet the full cost of connections once the service is expanded to them.

In Burkina, together with a reduced tariff for the first tranche of residential water consumption, a key element of ONEA's policy was noted to be (still was in 2011), a subsidy to stimulate demand for household connections, called 'social connections'. This subsidy is made available to *all* households in the areas of the Ouagadougou beyond the centre that express the desire to connect - i.e. the subsidy is not targeted to any peri-urban districts or customer income categories living outside the centre in particular. The subsidy continues to be applied universally. As such, in the Ouagadougou context, it is too blunt an instrument to achieve the goal of equity set out in national water policy. Treating all customers' requests for connection to the network equally will not achieve equity. By not filtering out relatively wealthy households from their current eligibility to benefit from the social connection subsidy, low-income households in poor peri-urban areas of the city are being made to *wait* for improved access. Meanwhile, by not charging the full unsubsidised connection cost to more wealthy households, ONEA is missing out on revenue, which does not help it in its objective of maintaining financial equilibrium. As to the reduction in the price of household connection in Ouagadougou (from FCFA 300,000 to FCFA 30,000), the responses from the focus groups conducted by the research team in surrounding areas (far from the Ouagadougou city centre) suggest that the reduced price of FCFA 30,000 needs reviewing - on the basis that it is still not affordable by very poor households (in both formal and informal areas).

In Tanzania, whilst a targeted connection subsidy was designed under the DWSSP and was supposed to ensure that at least 80% of new connections were for low- and middle-income households, in practice free connections were provided to *all* new customers under the project in order to increase the number of connections on DAWASCO's books and help achieve financial stability, with no differentiation as to household wealth. All those with a private connection also benefit from a consumption subsidy to the first 'lifeline' tranche of water consumed each month, although many consumers access water from neighbours' connections and would therefore be unable to benefit from this (section 1.2). Meanwhile, water purchased from kiosks or the CWSSP schemes remains more expensive than water purchased through private networked connections, although these consumers are expected to be poorer.

Socio-economic analysis either lacking or not utilised

- **Socio-economic analysis**

The PADs in all cases cite very limited social analysis as compared with the depth of information and discussion of financial and technical aspects and, to the extent the projects assessed, as a starting point, the needs of poor households, the socio-economic information on which that assessment was based was either not cited in the relevant PAD or was not utilised in the project design.

In Ghana, the pro-poor national targeting strategy of the project was to be supported by more detailed socio-economic analysis. When it came to implementation, the analysis appears not to have been conducted in the manner anticipated in the PAD. Instead of a substantial review at the start of the project, use was made of already-existing research which was dated and oriented towards privatisation rather than the needs of the poorest households. Subsequent to the 2009 research, a socio-economic study was commissioned in 2011, but, coming so late in the project, this is unlikely to have the impact on targeting that was envisaged in the PAD.

In Burkina, a survey conducted for ONEA in 2007 by international consultants collected data on the 'socio-economic profile' of households in Ouagadougou and other urban centres in Burkina, based on a questionnaire which was delivered to a sample of 760 households in the seven cities surveyed. In the consultants' 2008 report[1] to ONEA, the description of Ouagadougou (and the other urban centres) which is presented clearly drew on responses to the questionnaire and confirmed Ouagadougou as a city with identifiably different levels of wealth/poverty. Nevertheless, in designing the 2009-2015 Urban Water

[1] ICEA/SOGREAH 2008, made available by ONEA to the researchers in 2011.

Sector Project, this socio-economic data was not *utilised* as an input to a strategy for targeting low-income areas and households.

In Tanzania, the PAD contains a very brief assessment of affordability which identifies, but does not address, the fact that water from kiosks will remain more expensive than that from household connections. Although World Bank staff indicated that other social analysis was conducted to inform project design, evidence of this was not made available to researchers. The project the Implementation Completion Reports (ICR) indicates that a rigorous beneficiary impact assessment was 'foreseen' later in the project but never undertaken. DAWASA did commission a survey to assess project impacts, but although income data was collected, the survey did not provide any disaggregated data by income level which could have guided pro-poor strategies, for example on service levels, affordability or needs. DAWASA's Community Liaison Unit has, however, shown a commitment to learning from the CWSSP experience and has commissioned a number of studies to assess both impacts for beneficiaries and the effectiveness of its approaches.

- **Management for results and, particularly pro-poor impacts**

Lack of disaggregated socio-economic data…

In all three countries, there is a lack of data disaggregated by household income level. Increasing water access is documented in terms of numbers which bear no reference to income groups. The water utilities in each country do not currently organise customer data by income category. This goes hand in hand with the lack of targeted subsidies for connections (or consumption) - directed at low-income consumers. The utilities currently have no systems to identify these households, and are also not making use of census data or other available information to do so.

In Burkina, the absence of disaggregated information available and utilized by ONEA means that it lacks information with which to analyse how far the new water infrastructure which it has installed brought improved services to low-income households. Poor households in Ouagadougou have benefitted, but ONEA is not able to say how many. And, from the perspective of inclusion of poor households, its 'targeting' of peri-urban areas is patchy. Further, in some areas/sectors of Ouagadougou, it seems (subject to ONEA's explanations in each case) that equity was *not* done, e.g. the sectors of the city which are seen in the bar chart supplied by ONEA and reproduced in Annex 6 of the present report to have received less than 10 standpipes in 2003-2009[2].

Until this pro-poor and equity gap is addressed by the utilities and regulating/supervising state bodies, it risks undermining progress in tackling the challenge of extending improved water services to peri-urban areas of cities, both formal and informal.

... and weak measuring and monitoring of impacts in terms of poverty reduction

The lack of monitoring arrangements for pro-poor services in all three countries/cities raises concerns about accountability, given that, as noted above, there is no overall strategy or plan for inclusion in any of the cities studied and a lack of indicators relating to social issues in either the project documents or utility contracts. For services provided to the poor, there is no clear basis on which to hold utilities accountable.

[2] Namely sector 15 (poor), 20 (poor), 26 (poor), 28 (very poor) and 29 (very poor).

- **Significance of IDA Support**

For each of the projects studied, the World Bank is the largest single financial contributor. IDA support contributed much-needed investment which was important in enabling the progress in infrastructure and strengthening utility capacity noted above.

The research team studied how the projects are applying IDA and other project funds, and - as far as possible based on available information sources - the nature of inputs of World Bank staff to project design and implementation, including attention to pro-poor targeting during project design and implementation,

Those sources - those which provide evidence on World Bank-Government discussions and interactions - were limited. Official documentation accessed by the researchers comprised the PADs of each project and the ICR's of two projects (in Burkina and Tanzania). The PADs are key project documents written by World Bank staff, recording the project designs which emerged out of the discussions between the Bank and the partner Governments. The researchers were not, of course, privy to those discussions during the writing of the PADs, so the tenor of those exchanges, including on inclusion issues, was not visible to this study, including any differing views which may have been expressed by government officials and Bank team members.

The researchers have additionally taken into account the written comments of the World Bank on the preliminary July 2010 draft of the present report.

Further, in Ghana, the researchers attended the Mid Term Review of the UWP at which the Government, World Bank and other actors were present[3].

Save for the evidence of the Government-World Bank interaction offered by the above sources - a few insights only - the lack of transparency of Government-World Bank interactions, and the lack of an accompanying process of open public debate, has made it very difficult for the research team to assess fully the role of IDA in project design and implementation, including determining whether strengths and weaknesses observed are the result of government or donor practices. The World Bank acknowledged in the written comments of December 2010 that "… the process and ability for non-government stakeholders to access World Bank key project documents is not straight forward"[4].

Interpreting such evidence as was available on the significance of IDA support to the projects

What is, however, clear from the available sources is that both the official country strategies and the IDA project documents are characterised by a disconnect between policy and practice. In each country, universal coverage is a clear government goal and yet this fails to be adequately reflected in practical implementation. Similarly, in project design: the PADs state that the aim is to improve services for low-income households, but the details of how this is to be achieved are underdeveloped or missing and, when it comes to the indicators by which the project will be assessed, that pro-poor objective is poorly reflected in those key performance indicators (KPIs).

[3] InTanzania, meetings held at the beginning of the DWSSP and mid-way through the project were attended by sector stakeholders, but not by the World Bank, although Bank staff had been invited.

[4] NB: the written comments went on to note that the World Bank's new 'Access to Information Policy' came into effect on July 1st, 2010. The researchers understand that, as from that date, 'aide memoires' written by Bank staff, reporting on missions to country, are made publicly available, with, it is hoped, an increase in the degree of transparency of projects - as discussed in this report.

In relation to the ZIGA project in Burkina, from the written comments of the World Bank in January 2011, it is clear that Bank staff accepted, without challenge, the sweeping characterisation by ONEA that the population of the 'service territory' of the project was uniformly poor, since that view is reiterated in those written comments. This suggestion that poverty exists in the seventeen districts (sectors 14-30) of the service territory of the project in a homogeneous form is surprising - and misleading, as the mapping exercise carried out by this research project, referred to above, clearly shows (echoed by ICEA/SOGREAH in its 2008 report). A substantial part of east Ouagadougou, for example, is very poor; at the same time, not all districts beyond the central area are poor: two surrounding districts (sectors 18 and 24) are relatively well-off, and two other outlying areas (sectors 21 and 14) are in the intermediate category, while the remaining thirteen districts which received standpipes are poor or very poor - as shown in the different colours on the map in Annex 5.

As for observations on Government-World Bank interactions made in key informant interviews with other actors - actors who were not privy to the Government-Bank discussions, but who expressed views as to the role of Bank staff which, they said, they had witnessed - it was, for example, reported in Ghana and Tanzania that that pro-poor service provision had at least become the subject of policy discussion as a result of these IDA projects, so that some donor influence seems to have come into play. According to these reports from key informants, individual World Bank staff members were seen to have supported incorporation of pro-poor components: in Tanzania, pushing for more attention to pro-poor aspects of design, and, in Ghana, making efforts to overcome delays in procurement.

Such support in principle does not, however, seem (based on the available evidence) to have been followed up with adequate guidance on how to target low-income areas and households. Overall, the impression of the research team is that World Bank staff did not provide the necessary strategic guidance, and support mobilisation of sufficient resources, to work out how to deliver pro-poor services in the circumstances of each city - or, to the extent the World Bank staff did provide guidance, this was not such as to influence the utilities/operators to strengthen inclusion aspects. This may be because, for the Bank, equitable outcomes were a lower priority than improvements in the financial position of the utilities.

So, given the extent of donor dependence of these low-income countries - the reality underlying the relationship between major external sources of funding and partner governments - the World Bank is in a position to push more forcefully than it has to-date for greater emphasis on increasing access for low-income households. As noted in a 2008 World Bank publication on the political-economy of policy reform, the role of development partners is "to persuade rather than prescribe" (World Bank, 2008b, page 7), but *persuade* they can, if/when they so choose, and, in the present case, that is the appropriate role for World Bank - in order to work more pro-actively for inclusion in UWSS projects. That includes (as discussed below) World Bank staff actively taking the lead in supporting governments and utilities to devise innovative approaches for increasing access and upgrading the priority attached to equity in project outcomes.

World Bank thinking on support to UWSS had evolved from key focuses in the 1990s (post-1992) on quality regulation, economic regulation and private sector participation, to a shift of emphasis, post-2000, to improved performance of utilities, whether public or private - as expressed in the 2004 Water Resources Strategy (p.19): "*building of commercially oriented and customer-focused utilities, able to mobilise financing for rehabilitation, upgrading and expansion of infrastructure*". The Bank's 2004 Operational Guidance[5] notes that this "*requires specific attention and targeted interventions*". The statement in the section of that Operational Guidance on 'Extending Services to the Poor[6]', that "*diagnosis should form the starting point for formulating policies to address access and equity issues in*

[5] World Bank 2004b.
[6] Ibid p.11-12.

the sector", with also, referred to in the Guidance, application of a range of options, including poverty mapping and incentives to operators, could have usefully been applied by World Bank staff in each city.

Are over-ambitious cost-recovery goals undermining outreach to the poor?

- **On-lending and on-granting**

In all four projects studied, once the World Bank had made available the IDA funds to the governments (via ministries of finance), the governments transmitted the funds to the water companies/utilities in the form of both loan and (non-reimbursable) grant. The rationale is that finance for components which are expected to generate revenue is on-lent, while funds for activities not expected to generate income are on-granted, e.g. the sanitation component of the new project in Burkina which is to receive a grant of US$ 24.44 million grant (PAD, World Bank 2009b, p.17). Credits/loans are seen as instruments of financial rigour, and the utilities' financial models, as described in PADs, specify ambitious cost recovery targets. The question arises whether this will place excessive pressure on utilities and undermine outreach to poor areas.

The answer to this question will lie in the detailed financial workings, over time, of the utilities. First indications of a response, however, are that, in Burkina, despite the progress made by ONEA in strengthening its finances, the 2009 PAD and a recent independent report (commissioned by the Water and Sanitation Programme of the World Bank-WSP) highlighted ONEA's debt service obligations as a concern (WSP, 2008). Repayment of the IDA loan for the ZIGA project is scheduled to start soon. And, in Tanzania, comparison of DAWASA's actual financial position with PAD projections shows much slower progress, so that utility and Bank staff have now recognised that financial targets were far too optimistic and were based on flawed assumptions (as confirmed by weaknesses in the DWSSP noted in the ICR). The PADs look like they displayed, in each case, excessive optimism as to what the utilities/operators could achieve.

The 2009 PAD in Burkina could have added that certain water elements (e.g. standpipes) generate lower commercial revenues (than full cost recovery). The PADs of the four projects, in sections relating to on-lending and on-granting, make no reference to different levels of revenue generation from water components, yet the grant elements of the IDA funding packages provide opportunities to direct subsidies to 'social' water components, without imposing an extra burden on the Government's treasury or the utility's/operator's finances. One option would be to deliver a subsidy to low-income urban households, by retrospectively compensating the utility for all (or proportion) of water sold through lower revenue-earning project components, e.g. standpipes. This would be a means of remedying current disincentive to utilities to work with the lower-revenue 'water economy'.

Recommendations

Based on the studied projects, the following are key recommendations:-

- **Mainstreaming of inclusion**

Reaching low-income households needs to move up the policy agenda of governments, the World Bank and other donors in the three countries. **Ministries responsible for UWSS need to commit to a concerted process of sector review of social and 'inclusion' aspects** alongside those of utility performance and engineering without the current disconnects - with the review process involving the utility, other service providers and water user associations, as well as Government and NGOs.

Sector institutions need to articulate time-bound strategies for serving low-income areas and households, beyond the design of specific project components, so that these are not 'add-ons', but components which

are conceptually and methodologically developed, so as to be integrated into the project design. Such adjustments also need to be incorporated into wider government strategies with appropriate fiscal support.

The World Bank needs to actively encourage and support this sector review process in each country, so that sector investments prioritise low-income households and this is incorporated into all aspects of project design and implementation, including the key performance indicators (KPIs) .

The World Bank, other donors and governments need to work with the utility, other service providers and water user associations and CSOs, including those (both within and beyond the water sector) who have conducted analysis of socio-economic conditions and poverty in each city. Greater attention is needed to wider aspects of water access, with promotion of innovative, case-specific approaches.

- **Development of city-wide strategies for inclusion**

Measures to be determined during the above sector review process include city-wide strategies for inclusion. The targeting approaches selected will need to be informed by analysis and collection of existing and new data. Existing data may be drawn from census and surveys already commissioned by utilities and regulators. The first step should be to draw together and review existing sources, and also to review any targeting methods used in other sectors (such as healthcare). This data should provide insights which help service providers determine how to identify low-income households (i.e. what are their visible or easily determined characteristics?), and which measures will be most effective in improving their access to services (i.e. what are their current constraints to access?). The World Bank could provide insights here from its experience in other countries and sectors, although 'one size fits all' approaches should be avoided as pro-poor strategies must be matched to local conditions.

Section 3 (Box 3.4) gives examples of the type of household characteristics which could be used as possible proxy indicators for identifying wealthy households. Different targeting methods will be appropriate in different urban contexts, given that the extent to which geographic location and household characteristics (such as size of dwelling per inhabitant) correlate with poverty will vary, and the availability of data may also differ between cities. Social development specialists in each city should be involved in the targeting process to help identify the most suitable methods in each case.

The most sophisticated targeting methods, such as income-based means testing, are expensive. In these cities, the key will be to find indicators of poverty which are as meaningful as possible, but not prohibitively costly to apply, e.g. the poverty mapping approach suggested in the Burkina case study which may, for example, be combined in Ouagadougou with targeting by household characteristics. Greater levels of sophistication can then be developed in future, as appropriate.

Better understanding of the precise constraints to access of low-income households is vital, including *inter alia* more attention to levels of affordability of services. This analysis should inform a discussion of how best to provide subsidies, appropriate service options and other types of support (e.g. flexible payment mechanisms) to low-income consumers.

Analysis of the socio-economic characteristics of urban districts and households needs to *actively inform* the provision of water services for different water users as part of a city-wide strategy for pro-poor services. The targeting strategy used to identify low-income households, and the suitability of the provisions afforded to them (such as subsidies for specific purposes or priority infrastructure development), should be the subject of regular reflection, analysis and refinement. This could be the main function of pro-poor units in utilities/operators where these exist (currently in Tanzania only).

Finally, means of shaping the priorities of utilities so that serving low-income areas is at least as important as cost-recovery are required and will need to be determined as a key component of a city-wide strategy for pro-poor services.

- **Modes of service provision**

Standpipes and kiosks should remain components of pro-poor services in the studied cities. For many households in poor areas, public standpipes/kiosks, are, and will continue to be in the short and medium term, a key source of water. While many may access water from neighbours and other alternative sources, this relies on social networks that may not be available to the most marginalised, particularly in transient urban communities. Kiosks may not be commercially viable, but where they provide an important means of access for low-income communities, subsidies need to be considered.

The decision in Burkina to focus a larger proportion of investment of the water component under the new project (2009-2015) (compared with the ZIGA project) on new household connections, instead of standpipes, is, from an inclusion perspective, a move in the wrong direction. Where, as in Dar, standpipes/kiosks are not currently working well, they should not be de-prioritised, but rather a concerted effort should be made to bring as many standpipes/kiosks as possible into operation, particularly where the underlying constraint is not one of bulk water supply and can therefore be resolved more rapidly. Funding mechanisms should be developed to ensure that water from kiosks/standpipes is no more expensive - and preferably cheaper - than water from a private connection.

- **Utility performance**

Projections of utility performance need to be based on more realistic assessments of potential for progress, including detailed analysis of institutional constraints, especially where these are linked to the approval of on-lending arrangements, and are in danger of having a perverse effect in terms of diverting attention from the achievement of social objectives.

Government-utility contracts should be re-negotiated, to incorporate appropriate social targets and indicators.

- **On-lending of concessional loan elements**

Study of the projects, the subject of this research, raises an important issue in relation to the application of the concessions incorporated in these IDA financings: namely, whether the manner in which governments are on-lending to responsible water entities the *loan* component of IDA finance - itself, made available to those governments at *concessionary* rates - is influencing incentives against targeting of low-income areas and households. It is recommended that the World Bank review whether the 'IDA plus' interest rates charged by the ministries of finance in their on-lending to the water utilities is having the effect of pressuring those utilities into focusing more on securing revenues from relatively wealthy areas/households than targeting low-income ones. If it is, the World Bank should consider how its influence may be brought to bear to persuade governments to modify this practice to avoid in future such negative effects as it has from an inclusion perspective.

- **Destination of grant elements**

Meanwhile, future PADs should specify in more detail how *grant* elements are to be applied to project activities - to direct subsidies as close as possible to those who need them.

As referred to above, one option would be to deliver a subsidy to low-income urban households, by retrospectively compensating the utility for all (or proportion) of water sold through lower revenue-earning project components, e.g. standpipes. This would be a means of remedying current disincentive to utilities to work with the lower-revenue 'water economy'.

- **Management for Results**

In line with the Accra Agenda (paragraphs 22 and 23 - cited in Section 5 of the present report), the World Bank should work with the Governments in the three countries to strengthen (employing the Accra

Agenda terminology) ‘management for results’ under the projects, through socio-economically disaggregated data on water users and service levels - to ensure, in other words, pro-poor impacts.

The World Bank is in a position to draw on its wide experience in many countries, its convening power, and its access to expertise, to support governments and utilities in the development of approaches to monitoring and evaluating (M&E) of project results, including pro-poor impacts.

- **Information and transparency**

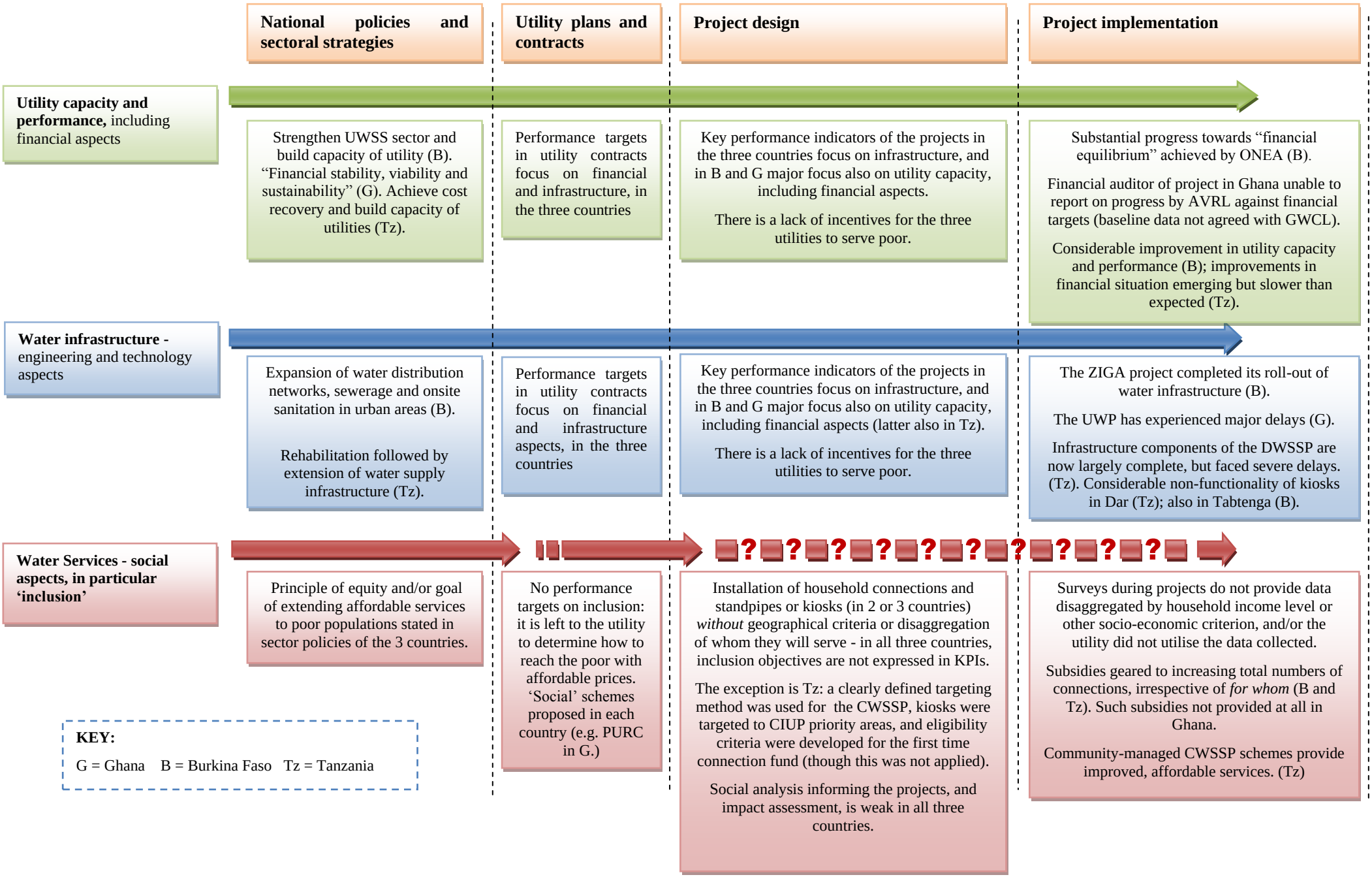
As noted above, non-governmental actors are very largely excluded from project discussions and the impression is of a lack of transparency and accountability. As well as the post-July 2010 availability of the ‘aide-memoires’ written by Bank staff, there seems, additionally, to be a need for more questions and answers sessions between Government, World Bank staff, CSOs and other sector actors during project design, and implementation, on the basis of open exchange of information, including on pro-poor aspects.

Concluding remarks - of this summary

This research study of selected utility-executed, World Bank-funded projects has highlighted some achievements in improving water services in the project countries. The stated objectives, however, of reaching low-income households were - consistently in each case - *no*t translated into project activities or outcomes that could be monitored by clearly specified indicators. A shift in priorities is required so that greater emphasis is accorded to the needs of marginalised households. Such an adjustment will require innovative and diverse approaches to recognise different existing conditions. In addition, careful baseline and evaluation assessments are needed to determine the equity impact of IDA investments.

Without such a shift in policy direction within water utilities and operators, supported by the Bank, this research indicates that there is a high risk that benefits from IDA-funded investments in the water sector will benefit relatively wealthy households in recipient countries and will fail to alleviate conditions of water deprivation for those most in need.

Policy principles to project implementation: how 'inclusion' is being lost or disregarded



1 Introduction

This report presents findings from a research study on the equity impact of four urban water supply and sanitation projects in sub-Saharan Africa carried out by utilities and funded by the International Development Association (IDA) of the World Bank as part of its financing of development. This Section 1 provides some details of the aims and objectives of the research which is followed by background information on the context, and a review of the literature on methods to provide services to low-income households. The final section considers the significance of IDA support.

1.1 Research Overview

This report describes the aims, scope and results of a research study on inclusion of poor populations in investments in urban water supply and sanitation (UWSS) in selected countries and cities in sub-Saharan Africa (SSA) and the role of the International Development Association (IDA).

The research has assessed UWSS projects in three SSA countries: Ghana, Burkina Faso and Tanzania - with a focus on the following cities, respectively: Accra (and one other urban centre in Ghana), Ouagadougou and Dar es Salaam.

The studies have been designed to contribute evidence and analysis to inform discussion on the challenges facing utilities of making services available and accessible to poor areas and households in urban and peri-urban contexts in SSA, including measures for targeting.

The research was carried out between July and December 2009. This report has been updated in November 2011 to reflect availability of new information, but primarily reflects the situation at the end of 2009 (as described in the above Preface).

1.1.1 Aims of study

This research examines the extent to which poor areas and households are included in the example utility-executed, IDA-funded projects in the three SSA countries. The aim of the research is to draw lessons from both the achievements, and any weaknesses, of the selected projects in reaching poor populations, and make recommendations:-

- to inform dialogue between governments, civil society organisations (CSOs) and the World Bank;
- to contribute to lesson-learning by the World Bank and by CSOs, as well as other actors;
- to understand better the role of the World Bank in relation to IDA's investments in UWSS in the selected countries.

The main question asked by this research project is:-

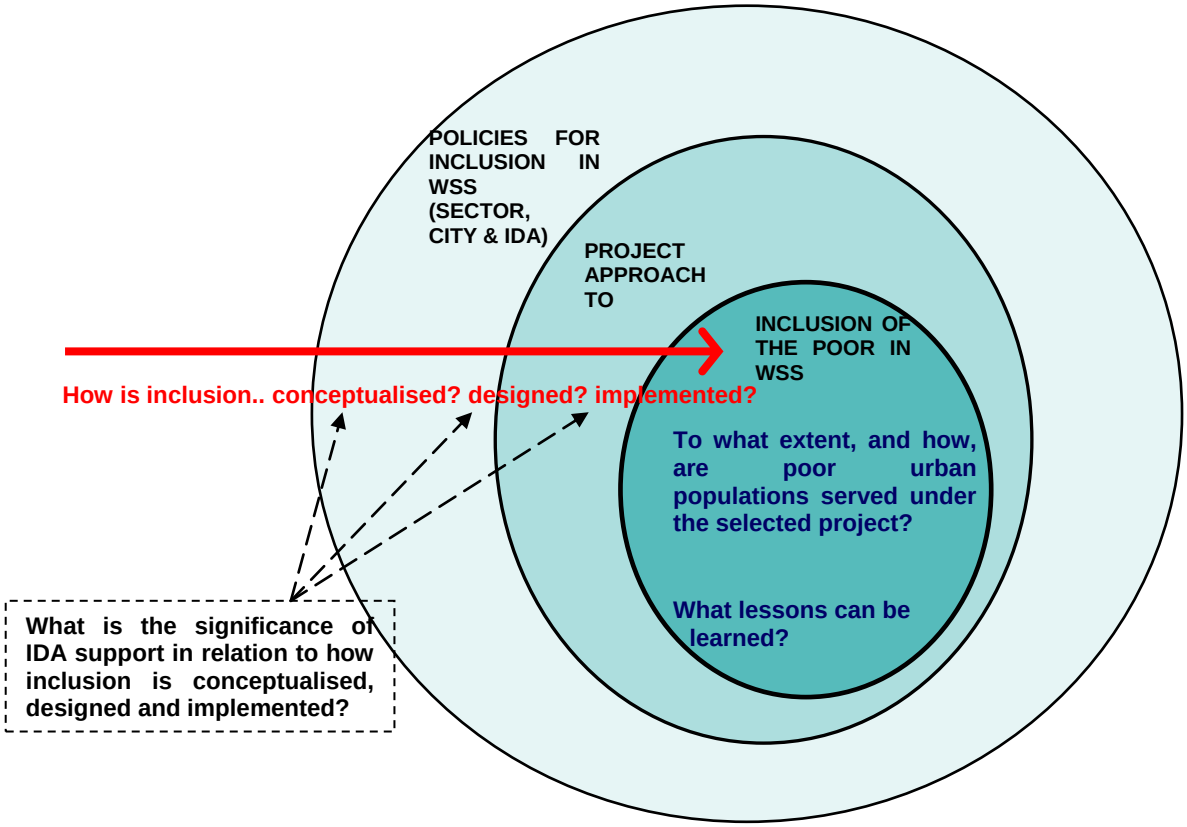
> *'To what extent, and how, are poor urban populations served under the selected utility, IDA-supported projects, and what lessons can be learned?'*

To answer this question, **each country study has examined how inclusion of the poor in water supply, or sanitation, is:-**

- ***conceptualised*** **in policies and strategies;**
- ***designed*** **in the approach taken by the chosen utility project(s); and**
- ***implemented*** **on the ground;**

- see the red arrow in **Figure 1.1,** the **Research Framework,** reflecting the three limbs to this question.

Figure 1.1 Research Framework



'Inclusion' means the inclusion of low income households in the design and delivery of WSS services:-

- targeting and design of services for poor areas and households (e.g. network expansion, subsidies, low-cost approaches);
- the extent and appropriateness of services received on the ground by poor households.

To meet the needs of poor households, services need to be accessible and affordable, and service providers have to be accountable to government/regulators and users. The sustainability of services (or prospects for sustainability) is an indicator of the (likely) long term impact of the projects on poor users.

In looking at investments in UWSS through the lens of 'inclusion', **equity** between different groups of users has been a key consideration.

In their different ways, the selected projects throw light on these issues, and provide lessons for debate. The country studies investigated the particular circumstances and characteristics of each project. In the three countries, the researchers reviewed sector policies and strategies relating to urban water supply and sanitation to see how far 'inclusion' is taken into account.

1.1.2 Projects studied

The IDA-supported projects which were the subject of this research are shown in **Table 1.1.**

Table 1.1 Projects studied by this research				
Country	**Project name**	**Project number** (as per IDA)	**Dates**[7]	**Project value and IDA contribution US$ million**
Ghana	Urban Water Project (UWP)	P056256	2004-2010	120 IDA 103
Burkina Faso	Ouagadougou Water Supply Project (also known as the 'ZIGA' project)	P000306	2001-2007	205.88 IDA: 70
	Urban Water Sector Project (includes a sanitation component)	P106969	2009-2015	92.92 IDA: 80
Tanzania	Dar es Salaam Water Supply and Sanitation Project (DWSSP)	P059073	2003-2010	164.6 IDA: 61.5

As indicated by the dates in Table 1.1, the four projects were, at the time of the research in 2009, at different stages:-

- the Urban Water Supply Project in Burkina (referred to in this report as the 'new project') was just beginning (approved for IDA funding in May 2009);
- due to delays, the Urban Water Project (UWP) in Ghana was ongoing with many activities still to be completed (the closing date of the project is now scheduled for 31st December, 2012) ;
- the Dar es Salaam Water Supply and Sanitation Project (DWSSP) in Tanzania was originally programmed to be completed by December 2008, but was extended to November, 2010; and
- the Ouagadougou Water Supply Project, also known as the 'ZIGA' project, in Burkina had been concluded in 2007, with a World Bank evaluation carried out in June 2008.

Each of these projects is described in detail in succeeding sections of this report: Section 2 on Ghana (Accra, and one other urban centre, Obuasi), Section 3 on Burkina (Ouagadougou), and Section 4 on Tanzania (Dar es Salaam).

As regards the institutional framework of the projects, Sections 2-4 also describe the agencies responsible for implementing the projects and their roles among UWSS-related institutions in each country. By way of overview, this selection of countries and UWSS projects comprised:-

- a public utility in each country holding assets, with separate operators in two countries (Ghana private, Tanzania public); the above utilities/operators are mandated by government to operate on commercial principles;
- regulation is by the relevant ministry in one country (Burkina) and by independent regulators in two countries (Ghana and Tanzania);
- of the three utilities, two are responsible for water and sanitation (Burkina, Tanzania) while the Ghanaian utility provides water only.

[7] The dates of the four selected projects are not the same as the dates of IDA 15 (2008-2011), but as an *approximate* guide, the above percentage UK contribution to IDA 15, of 16.28%, applied to the total IDA contribution to the four selected projects would be £33 million (at exchange rates at the time of writing).

At the outset of this research, the intention had been to include more study of sanitation aspects, but the selection of Ghana, Burkina and Tanzania - as the outcome of the dialogue between WaterAid, the World Bank and ODI/SOAS - was that a majority of the chosen project elements targeted to poor populations were for water supply rather than sanitation provision. In relation to sanitation, only the new project in Burkina includes a substantial sanitation component (US$ 24.44 million of IDA funds and US$ 11.12 million of government funds[8]), while the other projects focused on water supply (exclusively so, in the case of the project in Ghana). Consequently, water supply is given more focus in the present study. As to the prospect of increased attention to sanitation in the future, a recent report of the World Bank (World Bank, 2010) has recommended that the Bank work with clients to shift more attention to sanitation[9].

1.1.3 Methodology and information

The principal methodologies employed by the research teams were:-

(i) semi-structured interviews with key informants in relevant institutions (government ministries, utilities (the operator in Ghana) and, in both Ghana and Tanzania, the regulatory bodies), World Bank country offices, and other actors in each country;

(ii) focus group discussions (FGDs) with water users; and

(iii) desk study - of documents supplied by those interviewed, and such other information as was available relating to the projects studied, as well as plans of utilities, and UWSS policies/strategies already in the public domain.

The key source of information available on project design is the **Project Appraisal Document (PAD)**. Each PAD sets out the elements of the project which emerge from the negotiation between Government and World Bank. This research project was not privy to discussions between the governments and the World Bank[10] on the design of the selected projects. The comments in this report are based on the researchers' reading of the PADs, and other official documents (e.g. the Implementation Completion Report of the completed project in Burkina), as well as such observations on Government-World Bank interactions as were made by key informants[11] in interviews. The researchers have additionally taken into account the written comments of the World Bank on the preliminary July 2010 draft of the present report. Without published information, the tenor of discussions *during* the writing of the PAD, on *inter alia* inclusion issues, is not visible, including differing views which may have been expressed by government officials and Bank team members. The PAD records the position arrived at the conclusion of any such debate - the resulting project design. As one key informant commented, if an element of design is missing from the PAD, that is because either the government representatives or Bank team members "did not think of it, or "tried to negotiate its incorporation but failed, or tried and succeeded".

[8] Alongside US$ 51.74 million and US$ 1.04 million of IDA and Government funds respectively for the water supply component.

[9] The 2010 evaluation by the World Bank's Independent Evaluation Group (IEG) examined all the "water-related" projects financed by the Bank between 1997 and 2007. Bank-supported projects (dedicated and non-dedicated) listed in Table 2.2 on page (vi) as relating to 'urban water supply' were 299 in that period, as compared with 190 to 'urban sanitation and sewerage' (not including wastewater treatment). The evaluation recommended that the Bank work with clients to shift more attention to sanitation in order to broaden sanitation access, as one of a number of "tough but vital issues".

[10] The researchers in Ghana attended the Mid Term Review of the Urban Water Project in Ghana at which the Government of Ghana (GoG), World Bank and other actors were present.

[11] A few comments only - civil servants and World Bank staff supplied information to the researchers, without generally talking about the conduct of meetings and other exchanges between the Bank and partner governments relating to the four projects.

In its written comments on the preliminary July 2010 version of this report, the World Bank acknowledged, in relation to the process of drawing up the PADs:-

> "We realize that the process and ability for non-government stakeholders to access World Bank key project documents is not straight forward".

The above comment adds that the World Bank's new 'Access to Information Policy' came into effect on July 1st, 2010. The researchers understand that the intention is that, as from that date, 'aide memoires' written by Bank staff, reporting on missions to country, will be made publicly available - with, it is hoped, an increase in the degree of transparency of projects (as further discussed in section 1.5.2 on the 'roles of countries and development partners' and section 5.6 on 'accountability').

1.2 Context

Efforts in developing countries to expand water and sanitation services are struggling to keep up with high levels of urban population growth. According to the 2010 WHO/UNICEF report 'Progress on Sanitation and Drinking Water, from 1990 to 2008, globally, the number of urban dwellers without access to improved drinking water increased by 37 million. SSA is the fastest urbanising region in the world, including an increase in urban slums. Slum prevalence at 62% is the highest in SSA (UN-Habitat 2008). Countries have not been able to keep up with investment and maintenance in UWSS. Investments in informal areas have not been prioritised for a number of reasons including physical challenges as well as the unclear legal status of residents. In addition, in some cases "Incentives to perform according to financial targets have discouraged utilities from prioritizing expansion in these areas" (Keener, Luengo and Banerjee 2009, p.1.)

Keener et al (2009) present findings from a literature review and available data from national surveys and the *Africa Infrastructure Country Diagnostic-AICD* - on water provision for low-income households in SSA. They find that large proportions of the urban population are not connected to piped water supplies, although there is variation in the proportion of households that are outside the reach of the network ranging from above 80% in some cities (in Uganda, Mozambique, Rwanda and Nigeria) to as low as 21% in Namibia and 12% in South Africa. Central and Eastern Africa rely to a greater extent on standpipes, while Western Africa has a higher reliance on wells and boreholes (ibid).

Generally the AICD research (see Foster and Briceño-Garmendia 2010 for Flagship Report and www.infrastructureafrica.org/aicd for website with database and supporting papers) found that standpipes were the main source of water for unconnected households in most cities. However, utilities overestimate coverage from public standpipes. The research found a discrepancy in the proportion estimated by the utility to be functioning (81%) and the proportion estimated to be in working order on the basis of independent studies (42%). The research also found that standpipes were a low revenue generating service which was poorly monitored and regulated by utilities. In addition, there has been a shift over the past three decades from standpipes owned and managed free of charge to those run by private individuals or communities.

Household resellers were found to be important in countries with medium to low water coverage levels. Evidence indicates that these can provide up to 80% of water resources for the urban poor but such access methods do not necessarily emerge in official data as this is not consistently listed in the categories of water sources in household surveys. Instead they fall into the category of piped water or 'other'. In addition, low income households obtain water from small scale independent providers which have established secondary networks and mobile vendors (Keener et al 2009).

In relation to sanitation, the dimension of the challenge calls for particular attention. According to the above-mentioned 2010 WHO/UNICEF report, the number of urban dwellers who accessed improved sanitation in the period 1990-2008 fell substantially short of population growth: 813 million compared with 1,089 million, i.e. a short-fall of 276 million. Overall, for urban (and rural) sanitation, SSA is not 'on track' to meet the sanitation target under Goal 7 of the Millennium Development Goals (MDGs).

1.3 Reaching low-income households

1.3.1 Subsidies

Poor urban populations face four main challenges in accessing water and sanitation services: the cost of accessing services; the bureaucratic process involved in securing access; the locality of their settlement (many poor communities are situated far from the existing piped network); and the legal position of land tenure, which can bar them from services. Underlying these is the weak political position of poor populations. Low-income groups and households generally lack a strong voice to demand services and their needs are seldom prioritised by decision-makers.

Providing services to those on low-incomes requires an understanding of the complexities of the constraints which households face and these will differ across locations and communities and may not simply be a question of affordability (which itself presents substantial challenges and complexities). These may be physical, for example, where a settlement is far from the piped water network so that a connection is not possible, e.g. without substantial expenditure. Often slum areas are congested and lack other infrastructure, so it is difficult to simply extend the network. Alternatively, where low income households live in rented accommodation, both landlord and tenant may lack incentives to pay for a household connection, so residents rely on external sources. Where no utility facility is available (standpipe/kiosk), residents will use alternative sources. Households may be deterred from securing a connection on account of an intermittent billing system which allows high debts to accrue, or by difficulties in paying monthly bills compared with payment "by the bucket". Onerous bureaucratic processes can prevent households going to the effort to obtain a private connection. Finally, securing a connection to the piped network, either inside a house or a yard or via a standpipe or kiosk, will only provide effective access if there is water on a regular basis which is of reliable quality.

Much of the literature on delivering water and sanitation to the urban poor focuses on practical solutions to these challenges. However, beyond these proximate problems/solutions lie a wider set of questions about policy priorities and management approaches which will constrain or support the adoption of pro-poor measures.

Utilities face financial pressure and extending services to such users can be a low priority. There is, in much of SSA, a history of serious underinvestment in infrastructure, so that many utilities struggle to provide adequate services to existing customers or maintain existing infrastructure, let alone expand. The Africa Infrastructure Country Diagnostic (AICD), referred to above, estimates the overall expenditure required to achieve the MDGs in water and sanitation to be about US$21.9bn a year, including investment and maintenance with water accounting for abut two thirds of this. Existing spending is around US$7.6bn so there is a large a financing gap.

Policies which aim to provide services to low-income poor households, then, need to understand the constraints faced. Generally, the approach to extending services to low-income households centres on subsidising costs. The rest of this section considers the equity impact of different subsidy mechanisms and methods used to target low income households.

Subsidies occur where any user obtains a service for less than the cost of its provision. They can be implicit or explicit. *Implicit* subsidies are not always visible, occurring, for example, where inputs

(such as electricity in the case of bulk water production) are underpriced, or they may take the form of a financial loss which is absorbed by the utility, which in turn may constrain a utility's ability to invest in maintaining and extending infrastructure (UNDP, 2006). Such subsidies are common in SSA where, although tariffs are high by developing country standards, they are not sufficient to cover all costs. Average water tariffs in Africa are around 64% of full cost recovery, a subsidy which is highly skewed towards better-off households which tend to have connections (Foster and Briceño-Garmendia 2010, p.92).

Other forms of implicit 'subsidy' include non-collection of revenue or a tolerance of illegal connections. It may be that illegal connections are well targeted as they are more common in informal settlements and less so in wealthy areas, but this is difficult to evaluate (Komives et al 2005, p.11). Implicit subsidies also occur where governments (and/or donors) cover the cost of capital works. The choice of such capital works directs the incidence of the subsidy. Projects that lead to service expansion will benefit unconnected customers, but projects which improve the reliability of service will benefit only existing customers (ibid, p.16).

Subsidies can be financed from the public purse through general taxation, from donor funds or from other types of user through cross-subsidy, for example from industrial to residential consumer. Another form of cross-subsidy would be a surcharge on services to existing consumers to finance expansion of services to new consumers. But, this can fail where prices on industrial consumers are so high that they exit from the piped network.

Explicit subsidies may subsidise consumption or connection to the water network and they may or may not be targeted. There is a trade off between the accuracy of targeting tools and the complexity and, hence, cost of methods used. Targeting has benefits over universal provision in that the costs are lower and a limited budget can have a greater impact, but targeting also can be administratively costly and may have a stigma attached if associated with being poor.

A universal, non-targeted method of subsidy delivery would be a national tariff for consumption or connection as the costs incurred will vary across the country. General universal under-pricing, where the tariff is below cost for all consumers, is also an un-targeted subsidy. Similarly a flat rate fee in the absence of meters may be universal.

Targeted subsidies benefit a subgroup of customers. Explicit targeting aims to reduce the cost of service to customers with a particular characteristic (such as low income, in informal settlements etc). Targeting of subsidies takes the form of self-targeting - where an individual opts for a particular form of service - or administrative targeting - where households are selected to receive a subsidy by an external body such as the utility, the state or the community. Such targeting may be categorical (e.g. pensioners), geographic or based on some characteristic such as income.

Looking in more detail at consumption subsidies, some are described as self-targeted where they are linked to a particular standard of service level. For example, lower tariffs at stand posts are self targeted as individuals choose whether or not to use this form of service delivery. Quantity based subsidies, such as increasing block tariffs (IBTs) where higher consumption levels are charged at a higher rate, are also categorised as self-targeted in that households technically can choose their consumption level. This form of targeting tends to penalise those living in high density housing where a large number of individuals access water from a single connection. This is typically the case in low income areas of urban SSA. Furthermore, the subsidised volumes are available to all consumers, regardless of wealth, so there is considerable leakage of subsidy to better-off households (a form of targeting error).

Any consumption subsidy that is targeted via household connections (rather than standpipes), may be regarded as regressive to the extent that those with household connections are generally more wealthy. However, the situation in SSA is more complex in that a high proportion of non-connected households access water from their neighbours (see above) and therefore might benefit indirectly from consumption subsidies.

The provision of connection subsidies is considered to be a more effective targeting method than subsidising consumption, as it reaches those outside the piped network and provides access to water from the utility which is typically cheaper than alternative sources. Such a subsidy can be progressive if these are low income households. The biggest cost hurdle for low income households in accessing a piped water network is not usually the cost of water, but the cost of connection (LeBlanc 2007; Trémolet & Halpern 2006). The average cost of connection is over $100 in SSA, an amount far beyond the reach of many poor households (UNDP 2006). Furthermore, connection subsidies benefit those not already connected, who are more likely to be poor, and as one-off subsidies are much easier to target and administer.

Table 1.2 summarises the above discussion, showing the different ways in which consumption and connection subsidies may be targeted and delivered.

Table 1.2. Targeting subsidies for water

	Universal (no targeting)	**Self-targeting**	**Administrative targeting (e.g. geographic, means testing, community-based)**
Consumption subsidies	• Under pricing (e.g. not covering capital costs) • Flat fee for households • National tariff	• Lower tariff at standpipe - likely to be progressive as wealthy households will not use such service. • Quantity targeting such as increasing block tariff so that self selection is based on consumption (BUT consumption is difficult for individual households to monitor and this penalises high density housing typical of low income areas)	• Lower consumption tariff for target households. Trade off exists between precision of targeting and complexity of methods. Simple forms target geographical areas or household type. More complex tools are based on income levels determined by means-testing which require high levels of data availability. • Alternatively, community members may identify target beneficiaries and select poor households. They may have greater knowledge, but may be subject to political pressures.
Connection subsidies	• Flat fee for all new connections	• Lower cost for particular form of service level or for households which provide their own labour	• Social connection tariff for households with particular characteristics (discussed above) or in a specific geographical location.

Source: Adapted from Komives et al 2005

1.3.2 Targeting methods

There is often a trade-off between simplicity and accuracy of targeting methods. The geographic distribution of poor and non-poor households, the information available to planners, and the desired trade-off between accuracy and cost, all influence the targeting method selected. **Table 1.3 sets out**

major targeting methods and their advantages and risks, including both administrative methods and self-targeting.

Table 1.3 Targeting Methods

Targeting Method		Advantages	Risks	Suitable contexts
Administrative Targeting Methods	**Geographic Targeting** Areas identified as poor are prioritised and households in those areas are selected	Cheap Simple to administer Reduces bias towards vocal communities	Misses poor households in better-off areas Subsidises the better-off living in poor areas i.e. two possible types of targeting error.	Low-income households known to be concentrated in specific areas (e.g. poverty map in place) Low inequality within geographic zones Useful for identifying broad areas to target, e.g. for infrastructure expansion.
	Targeting by household characteristics Households are selected by characteristics believed to correlate with poverty, e.g. housing type.	Discriminating: targets individual households in any location Cheaper than full means testing (see below)	Misses "non-typical" households (in terms of the selected characteristics)	Clear differences between households of different income groups (based on good information) Significant inequality within geographic areas.
	Income-based means testing Households are selected based on household income.	The most accurate targeting approach, if done well	Expensive to administer Income data is difficult and expensive to collect Will miss poor households which move location, fall into poverty or migrate to the city, unless information base is continually updated Possible stigma attached to being classified as 'poor'	Sophisticated social targeting mechanisms including means testing already exist, of which water/sanitation can make use High capacity and adequate financial resources.
	Community-based Community leaders, community organisations or civil society organisations select poor households in their community.	Potential to be highly accurate as draws on in-depth knowledge of communities	Subjective and possibly non-transparent Risk of bias (and it may be difficult to recognise or control this)	Trusted community-level organisations with good understanding of communities.
	Self-targeting Households select from a range of service levels at different prices (e.g. household connection or standpipe) OR the first volumes of water used are subsidised and households (in theory) self-target by consumption level.	Households set their own cost/service priorities	Households may be missed if the range of options does not meet their needs, or the range is too narrow (e.g. if no options are affordable for the poorest)	Utility has the capacity to respond to household requests and provide different service levels (which may be simple e.g. shared *versus* single connections).

Socio economic analysis to support pro-poor targeting requires analysis of:-

Affordability - Incomes vary within urban areas. Allocation criteria based on incomes may omit the most marginalised where an average figure is used. An alternative approach would be to target areas identified as having high incidence of poverty where this information is available. The fact that high prices are paid to water vendors does not necessarily mean that water at that tariff is affordable. Households have to adopt coping strategies in such circumstances because they have to obtain water somehow.

Alternatives - Where households have easy access to wells and boreholes they may prefer this to the effort and cost of securing a connection.

Attitudes to utility water – generally utility water is likely to be safer and there are environmental hazards from the random sinking of boreholes especially in urban areas. In some cases, the taste of utility water is considered inferior to well or river water and this may be particularly so in situations where the utility lacks credibility. In such circumstances, it may be necessary to carry out some kind of sensitisation in the community to encourage use of utility water.

Distribution of water access – allocation based on assumptions of coverage which are derived from population and water production estimates may be misleading. There is a need to determine the way in which water consumption in an area is distributed. This need not be 100% precise but there may be some areas where there is no access even though coverage estimates indicate that water is sufficient.

Constraints to access – to target infrastructure effectively it is important to understand why households are not connecting to the water network. Different constraints will lead to alternative policy responses. Possible barriers to access include: cost of connection, inadequate bulk water, bureaucracy of securing a connection,

Disconnections – to determine the social impact of tariffs, utilities need to monitor what happens to those that are disconnected for non-payment to determine if they subsequently reconnect or remain disconnected. A system where a high proportion of connections is inactive for non-payment is not effective.

Quality and regularity of supply – weaknesses in these may mean that households use alternative sources.

1.3.3 Regulation

In many developing countries, WSS sectors were restructured during the 1990s, often with a view to privatisation. Sector reforms included the separation of infrastructure ownership from sector management (as in Tanzania) and establishment of an independent regulator (Tanzania; Ghana). The regulatory framework was based on that of industrialised countries. Several years later, privatisation has not happened as intended. In SSA, there are few private sector companies operating on a long term basis and private sector participation has typically been in the form of management contracts where performance targets are set for the operator (e.g. Ghana).

In the two countries, the role of the regulator is not entirely clear. Regulatory functions cannot be fulfilled in the same way as in developed countries. There are constraints in terms of access to

information and in suitability of sanctions. Where the utility is a public sector company in a weak financial position, the imposition of fines for non-compliance has little impact.

Independent regulation can play a key role in ensuring that utilities deliver services of an acceptable price and quality, although the impact of regulation is now in some doubt. Evidence from a review of 24 African countries suggests that, in the water sector, performance in countries with an independent regulator is no better than in those without (Foster and Briceño-Garmendia, 2010). Elsewhere, however, there are some positive examples, for example in Jamaica, Brazil and Peru, where regulators have made considerable efforts to work with poor users, to increase understanding of their needs and to better assess the services they receive (World Bank 2004d). A regulator cannot, however, set the overall policy and institutional framework of the sector, and it cannot substitute for broader sector reform where sector policy and political incentives do not favour pro-poor approaches (ibid).

1.3.4 Incentivising utilities to serve the poor

In an attempt to improve the performance of water utilities, a number of countries have introduced **performance contracts** between the utility and the government which set time-bound goals for performance. In SSA, these include *inter alia* Uganda, Senegal and some cities such as Nairobi and Durban (WSP/PPIAF 2009). Such an approach stems from an awareness of the need to shape the incentive framework of the service provider.

Where targets are in terms of financial performance, there is an incentive to prioritise service delivery to water users who consume high volumes and are secure payers, as these will be lowest cost consumption units due to economies of scale. There will be a disincentive to serve poor households which may consume low volumes and may find it difficult to pay according to traditional methods (where billing and payment is not designed appropriately).

For targets for service expansion to poor populations to carry weight, and for utilities to be held accountable for meeting the targets, they must be clearly specified and detailed in contracts. A broadly stated goal of expanding services to the poor is usually inadequate (Trémolet & Halpern 2006). Further, targets must be matched with the resources necessary to achieve them.

The attitude of utility staff to the poor, including in some cases unwillingness to work in poor areas, may often be barriers to expanding services to poor communities (Grant & Hulme 2008; Connors 2005). This barrier can be overcome through training, performance management and motivational tools (e.g. goal-setting and rewarding staff who work in poor areas), good supervision and even financial compensation for staff working in slums[12].

1.4 The IDA and urban water in SSA

The IDA provides funding to low-income countries, through loans on concessional terms and grants - see **Box 1.1.** The IDA is "the single largest source of donor funds for basic social services in the poorest countries" (source: World Bank website[13]).

[12] An example is Bangalore where significant progress has been made in extending services to slums through such approaches even without wholesale institutional reform (Connors 2005; WSP, 2006a).

[13] The webpage on the IDA entitled: "What is IDA"? http://web.worldbank.org/WBSITE/EXTERNAL/EXTABOUTUS/IDA/0,,contentMDK:21206704~menuPK:83991~pagePK:51236175~piPK:437394~theSitePK:73154,00.html

Box 1.1 IDA funds: concessional loans and grants

As well as a zero interest rate, IDA loans (or 'credits') allow borrowers more time to repay than if they borrowed from other sources (including commercial banks). 'Maturity' periods for IDA loans are between 20 and 40 years, including a 10-year period of grace before the borrower has to begin to pay back the capital (or 'principal'). In the case of loans from the International Bank for Reconstruction and Development (IBRD), another lending arm of the World Bank, maturity and grace periods are typically shorter, between 15 and 20 years and 3-5 years respectively.

The IDA also provides grants which are non-reimbursable, or non-reimbursable parts of capital amounts made available in IDA credits.

Source: World Bank website

The IDA is one of the largest donors supporting WSS. In 2009, 6% of total IDA commitments, globally, amounting to US$ 14.00 billion, were made to 'Water, Sanitation and Flood Protection' (DFID 2009, page 27). In SSA, the IDA supports water projects in over 20 countries. In the World Bank's review of the 32 IDA projects which finished in 2008/09, "water and sanitation projects benefitted over 2 million people by constructing 4,000 new water connections and 93,000 sanitation facilities" (ibid, page11).

IDA funds are provided by donor countries contributing in rounds of IDA 'replenishment', in a three year cycle. Since the initial subscriptions to IDA in 1960, there have been 14 past replenishments with the 'IDA 15' round of contribution relating to the period from July 1st, 2008 to June 30th, 2011.

In its 2009 report on 'The UK and the World Bank' (DFID, 2009), the Department for International Development (DFID) recorded that the UK was pledged to make its largest contribution ever to the IDA in IDA 15 (2008-2011), of GBP 2.1 billion, a 49% increase on the UK's contribution to the previous IDA round (ibid, page 11). Based on all donor pledges of £12.9 billion for IDA 15 (ibid, p.11), the UK pledge represents 16.28% of the total.

1.5 Significance of IDA support

As shown in the Research Framework, the fourth question posed by this study relates to the significance of IDA support to the selected projects.

1.5.1 'Operational Guidance' on WSS

First, the significance of IDA support is, as noted above, that the IDA is a major supporter of WSS in low-income countries in SSA, and, to the projects studied, the IDA is the largest single financial contributor.

In the Operational Guidance for World Bank Group Staff (World Bank 2004b)[14], it is stated that a focus of Bank policy is efficient and financially viable water utilities and service providers, public or private (page 4). Reforms "required to place the water supply and sanitation sector on a

[14] One of several 'key publications' linked to the Bank's WSS webpage, at the time of carrying out this research in 2009. This World Bank document (as its title indicates): "provides guidance to World Bank staff" (Foreword, p.iii): a "framework within which staff can design assistance programs and individual operations in a manner that ensures the quality of our interventions" (ibid). The focus is on urban contexts.

commercial footing", says the Foreword (page iii), are a necessary step in tackling the challenge of reaching the poor. In the section in the Operational Guidance on "Extending Services to the Poor" (p. 11-12), it states:-

> "Reforms that place the sector on a sound financial footing will generate increased resources for investment in systems expansion. But this alone will not guarantee that the poor are reached. *Extending services to the poor requires specific attention and targeted interventions.* The nature of the problem - involving a lack of the access by the poor to credit and unaffordable connection fees and consumption charges - should first be *well analyzed, and this diagnosis should form the starting point for formulating policies to address access and equity issues in the sector*" (emphasis added).

1.5.2 Roles of country and development partners

As to the nature of the World Bank's development partnership with the countries which the IDA supports, the World Bank is party to the commitments made in the Paris Declaration (Paris Declaration on Aid Effectiveness, 2005) and reaffirmed in the Accra Agenda for Action of 2008. Extracts from the Paris Declaration and the Accra Agenda are set out in **Box 1.2** including paragraphs on 'ownership' and 'alignment'.

Under paragraph 16 of the Paris Declaration, donors "commit to *base* their overall support - country strategies, policy dialogues and development co-operation programmes - on partners' national development strategies…", including "*poverty reduction* and similar overarching strategies *as well as sector* and thematic *strategies*" (emphasis added).

Box 1.2. Extracts from the Paris Declaration and Accra Agenda (emphasis added)

Paris Declaration

Statement of Resolve - paragraph 2. "…core principles… because we believe they will increase the impact aid has in reducing poverty and inequality, increasing growth, building capacity and accelerating achievement of the MDGs".

Ownership – Partner countries exercise effective leadership over their development policies, and strategies and co-ordinate development actions.

- para 14: Partner countries commit to: exercise leadership in developing and implementing their national development strategies through broad consultative processes. Translate these national development strategies into prioritised results-oriented operational programmes as expressed in medium-term expenditure frameworks and annual budgets…
- para 15: Donors commit to: respect partner country leadership and help strengthen their capacity to exercise it.

Alignment - Donors base their overall support on partner countries' national development strategies, institutions and procedures.

Note: the term 'national development strategies' includes poverty reduction and similar over arching strategies as well as sector and thematic strategies.

Donors align with partners' strategies – para 16 – Donors commit to base their overall support – country strategies, policy dialogues and development co-operation programmes – on partners' national development strategies and periodic reviews of progress in implementing these strategies…".

Accra Agenda

This is a moment of opportunity – para 1 – We are committed to eradicating poverty and promoting peace and prosperity by building stronger, more effective partnerships that enable developing countries to achieve their development goals. Para 3: Democracy, economic growth, social progress, and care for the environment are the prime engines of development in all countries.

Para 8. Country ownership is key. Developing country governments will take stronger leadership of their own development policies, and will engage with their parliaments and citizens in shaping those policies. Donors will support them by respecting countries' priorities, investing in their human resources and institutions, making greater use of their systems to deliver aid, and increasing the predictability of aid flows.

The Paris Declaration refers throughout to donors and 'partner' countries and in the Accra Agenda (paragraph 1) the expressed aim is the building of stronger, more effective 'partnerships'. Within partnerships generally, more or less active/passive roles can be assumed by partners[15]. Although the Paris principles put much emphasis on the partner country's leadership role as an important feature of development cooperation, that does not preclude a role for the donor in shaping policy. The practice of development cooperation since 2005 suggests that donors do not consider their commitment to "respect partner country leadership" (paragraph 15) as a *bar* to efforts on their part to influence country policies. The same applies to influencing of the content of projects[16] supported

[15] The expression 'sleeping' partner is, for example, sometimes employed by lawyers to describe an extreme type of situation where a party enters into a partnership arrangement, but then does not contribute to, or participate in, the partnership in any way.

[16] As noted, the Paris Declaration was entered into in 2005, prior to the design of all but one of the projects studied by this research (the new project in Burkina was approved in 2009). The Paris Principles (and Accra Agenda of 2008) are,

by development assistance. As noted in a 2008 World Bank publication on the political-economy of policy reform, the role of development partners is "to persuade rather than prescribe" (World Bank, 2008b, page 7), but *persuade* they can, if/when they so choose.

The **lack of transparency** of government-World Bank discussions, noted in section 1.1.3 in relation to project design, presents a difficulty for researchers. In this pluri-party context, attribution of a decision on a given issue to a particular actor (whether during project design or implementation) is not straight forward.

1.5.3 Role of World Bank in project design and implementation

What, then, is the role of the World Bank in project design and what is the nature of inputs of Bank personnel to project implementation?

Notes on the role of the Bank's 'task team leaders' and their teams are set out in **Box 1.3,** based on insights provided to the researchers during key informant interviews in 2009.

This portrayal of the team task leader's role, as communicated to the researchers, is one of considerable discretion in presentation and negotiation of the project design.

Box 1.3 Role of World Bank 'task team leaders'

In relation to project design, the role of the Bank task team leader is to call on and gather the Bank staff and external consultants who will write the project appraisal document. The PADs are "documents of the World Bank" (as noted on their front pages) and their purpose is to present the proposed financing to the Board of the Bank, appraising the economic rate of return on the Bank's investment and the viability of the project on which that will depend. The PAD, in practice, sets the programme for implementation of the project and becomes an important point of reference for the task team leader during the project - the document to which the Bank team attending the six-monthly missions to country regularly refers.

During the writing of the PAD, elements of the proposed project which the leader and his/her team consider should be included in the design are discussed and negotiated. The task team leader leads this negotiation with the government.

The composition of the Bank team, in terms of disciplines and skills, is a function of whom the task team leader gathers in his/her group of internal specialists and external experts. Once the project has started, the Bank team monitors project implementation through the bi-annual missions. The team which the task team leader summons for the monitoring missions will again be a combination of Bank staff and external consultants, including commonly some members who participated in the design mission(s). The missions are a means by which the task team leader can bring technical assistance to the project, including guidance to government and implementing agency on particular aspects of the project.

/cont…

nevertheless, referred to in this report as the code of practice for donors and partner countries applying at the time of carrying out this study.

Box 1.3 Role of World Bank 'task team leaders' - continued

Aside from the six-monthly missions, the extent of interaction between task team leader and government counterparts during projects varies, from case to case, and at different times in projects' lives. Some task team leaders stay in regular contact, e.g. phone calls, advice and (if they are based in-country) informal meetings. Much day-to-day contact is with the procurement team. If the Bank feels a project is going off-track, first, it works with the implementing agency to try to resolve the issue, secondly, it is taken to higher levels of government; ultimately, in the worst case - in the event of a severe breach - the World Bank (just as any banker or funding institution) may opt to terminate the financing agreement.

How far a project incorporates lessons from other projects depends very much on the task team leader and his/her team, as well as the peer reviewers of the PAD who are staff from other countries/regions. The role of the Washington-based staff also involves dissemination of knowledge and experience of different projects including, from time to time, commissioning comparative studies. Subsequent to project evaluations, the findings in the Implementation Completion Reports (ICRs) are discussed.

1.5.4 Status of 'PADs'

Box 1.3 refers to the negotiation between the government officials and Bank staff during the project preparation process. PADs are written in coordination with the respective governments. The content of each PAD is a function of the project components and other design features which have been proposed and discussed by government and Bank representatives, and - depending on the respective strengths of argument and the relative bargaining position of the parties - incorporated into the design.

The Bank team are required to certify in the PAD that the project complies with all applicable Bank policies, for example environmental social safeguards policies[17], or, alternatively, to specify an exception to such policies, for which special approval is requested. The title of the 2004 World Bank document on urban WSS, referred to in section 1.5.1 above, is that of 'Operational Guidance for World Bank Group Staff' which suggests that the section on 'Extending Services to the Poor' (pages 11-12) may not have policy status. This document provides a "framework within which staff can design assistance programs and individual operations, in a manner that ensures the quality of our interventions" (Foreward, p.(iii)). It "cautions against one-size-fits-all-prescriptions" in recognition of "variations in circumstances in developing countries". This flexibility allowed to Bank staff in WSS project design echoes that of the task team leader's role, in Box 1.3.

PADs are distributed to the World Bank Board of Executive Directors after permission has been sought on the entire project approval package from governments. As to the status of PADs, they are not formal contractual documents. The contract between the World Bank and each Government is comprised by the finance agreement and other legal documents, which include a summary of the main project components and objectives, and the performance indicators - which nevertheless mirror the PAD. The 'project agreements' are separate, as also are the 'subsidiary agreements', those, for example, relating to on-lending and on-granting, as well as the performance contracts between government ministries and utilities. The role of Bank staff in relation to those subsidiary agreements is "to review and give no objection", particularly where development of those performance contracts is funded by the Bank finance.

[17] E.g. a check in relation to adverse environmental and social impacts of the proposed project, e.g. persons required to be re-settled due to infrastructure works.

During project implementation, the terms of PADs may be modified, by amendment to the legal agreements, drawn up by legal counsel and submitted to the Board of the Bank for approval. In this way, a project component may be cancelled, or the indicators of a project may be modified. More major alteration of a project requires "project restructuring" which entails a more lengthy legal and administrative process.

1.6 Structure of this report

The following sections of this report are organised in the following way:-

Section 2 describes the scope and results of the Ghana case study.

Section 3 describes the research in Burkina and the findings of the study in Ouagadougou.

Section 4 summarises the investigations carried out in Dar es Salaam and the results from that Tanzania study.

Section 5 summarises the findings of the case studies on the projects in the three countries, including review of progress against goals which are common to the projects, and considers the role of the World Bank.

Section 6 sets out conclusions and recommendations.

2 Ghana case study

This section has been written by **Dr. Kate Bayliss** of SOAS and Mr **Joseph Ampadu-Boakye** of Maple Consult, drawing from an earlier country report prepared by Mr Ampadu-Boakye .

Updating

The main research was completed in December 2009. This report has since been updated in Autumn 2011 to reflect availability of new information, but primarily reflects the situation in 2009.

Since the end of the research period, some developments have occurred. The management contract with AVRL for the management of GWCL finished in 2011 and was not renewed. Management of the utility has since reverted back to GWCL. There have been socio-economic studies commissioned under the Urban Water Project - as discussed in section 2.3.

2.1 Background; context

This chapter aims to assess the impact of Ghana's Urban Water Project (UWP) on poor households. The UWP was financed by a grant from the World Bank's International Development Association (IDA) of US$103m with US$12m from the Government of Ghana (GoG) and US$5m from the Nordic Development Fund (World Bank, 2004e). The findings presented here are based on a literature review as well as interviews and focus group discussions (FGDs) held in Ghana between June and November 2009. The UWP was approved in 2004 and scheduled for completion by the end of 2010. However, implementation was severely delayed. At the time of this research in 2009, disbursement was reported to be only in the region of 40% of total funds. The closing date of the project has now been re-scheduled for 31st December, 2012. Thus, the findings presented here are of the project progress to that date. Observations are based on information made available which is clearly cited, but the researchers encountered considerable constraints in accessing information. Greater transparency in information sharing would enable a more accurate assessment of the project's contribution towards equitable water access.

2.1.1 Water access and coverage

There is considerable unmet demand for water in urban areas of Ghana although care must be taken in interpreting the data. Water distribution in Ghana is assessed in terms of both 'access' and 'coverage' - see **Box 2.1.**

Box 2.1: Some Terminology

Access figures are typically based on surveys where households are asked about the source of their drinking water. Where this source is classified as 'improved', these households are defined as having safe access. However this indicator fails to account for the regularity of supply and distance from water sources.

Water *coverage* measures water supply as a proportion of assumed demand derived from an inferred consumption that is based on the population of a locality. More populous settlements are expected to have higher commercial activity and so per capita consumption rates are assumed to be higher. This indicator, however, does not capture actual usage and fails to account for equity in the distribution of water provided.

Water *poor* - the Public Utilities Regulatory Commission (PURC) has adopted a working definition of the urban poor as those i) without direct access to regulated piped supplies (including standposts as public piped water services); ii) who depend on secondary and tertiary suppliers and iii) who buy by the bucket (PURC 2005a).

According to official figures from the Joint Monitoring Project (JMP -WHO/UNICEF, 2008), in 2006, 90% of the urban population of Ghana had access to safe drinking water.[18] This is higher than the average for SSA, which was 81% according to the JMP. The Multiple Indicator Cluster Survey (MICS) in Ghana was one of the sources from which the JMP indicators were extrapolated. The survey asked 10,315 household members about the water that they use and the findings are shown in **Table 2.1**.

[18] The JMP was created by UNICEF and the WHO to monitor progress towards the MDG targets for water and sanitation. The data they use is derived from national surveys and statistics.

Table 2.1 Main Drinking Water Source in Urban Areas in Ghana

Source	Proportion
Improved sources	
Piped into dwelling	10.1
Piped into yard or plot	16.8
Public tap or standpipe	38.8
Borehole	6.5
Protected well	6.6
Spring	0.3
Sachet water	11.3
Bottled water	0.3
Sub total	90.7
Unimproved sources	
Unprotected well	3.5
Rainwater collection	0.2
Tanker truck	2.4
River/stream	0.7
Sub total	6.8
Missing data	2.5
Total	100

Source: Multiple Indicator Cluster Survey, 2006

Thus these data indicate that about 90% of the urban population has access to a safe water source which ties in with the JMP data above. However, only 27% of these households have water piped into their house or compound and these statistics fail to capture the whole picture. Many of those that say they use a piped source may be using water bought from neighbours with a piped source. Furthermore, these figures do not indicate the cost of the water or the time taken to collect it.

Water *coverage* by region is shown in **Table 2.2** and the figures indicate that water produced is 59% of estimated demand but the coverage rate does not necessarily imply household connections. The Upper West, Eastern, Brong Ahafo and Volta Regions have the lowest coverage rates. However, considering the absolute quantum of unmet demand for water, the Greater Accra region has the highest figure.

Table 2.2 Coverage Rates in Urban Water Supply-2008

Region	Population	Demand (m^3/day)	Supply (m^3/day)	Coverage %
Ashanti	2,000,728	187,118	91,500	49
Brong-Ahafo	602,840	48,125	14,385	30
Central	1,129,733	90,225	38,415	43
Eastern	1,015,155	77,995	21,470	28
Gt.- Accra	3,837,236	532,570	401,800	75
Northern	560,820	44,449	20,375	46
Upper-East	172,168	13,239	5,665	43
Upper-West	106,735	8,539	1,180	14
Volta	575,287	43,974	17,115	39
Western	694,399	54,799	34,535	63
National	10,689,366	1,101,032	646,494	59

Source: Presentation by GWCL at Annual Government of Ghana/ Development Partners Sector Review Conference, 2008.

The situation for poor households is very different from the story told by the official statistics above. A study by the Public Utilities Regulatory Commission (PURC) found that within the areas covered by the urban piped system, only 15% of poor households had access to piped water either directly or via yard taps (PURC 2005a). The broad statistics fail to indicate fully the level of deprivation facing poor households in a number of respects. First, the population data on which the coverage and demand estimates are based are extrapolated from the 2000 population census using earlier growth rates but the urban population has been growing rapidly since then. According to data from UNICEF, the rate of urban population growth in Ghana has accelerated from 3.9% during the two decades from 1970 to 1990, to 4.5% between 1990 and 2007 (www.unicef.org). Not only has the provision of urban services been overwhelmed by urban growth, but also most of this is from rural migrants who settle in slum areas (WaterAid 2008). According to Keener et al (2009, p.2), slum households account for 70% of the country's urban population and, of these, 66% are not connected to the piped water network. A study based on extrapolation will fail to capture the shifting demographic structure and the rapid escalation in the rate of growth of urban slums. These residents might not even feature in official data.

Second, there is a gender dimension to water deprivation with women mainly responsible for water collection (MICS 2006). Research from Kumasi based on a survey of 210 households indicates that 91% of residents accessed water via a neighbour. Seven percent owned a piped connection while two percent used a public standpipe. The research also revealed that 78% of the households surveyed spent between two and six hours a day fetching water which was done mostly by women and children and affected attendance and punctuality at school (Nyarko et al 2006).

Third, the data do not account for intermittent supply which can penalize poor households. For example sometimes water may only be available between 1-4 am, requiring people to wake in the middle of the night to store water and to have the money to purchase water storage containers (CONIWAS 2009). Often households and communal taps do not provide water for several months at a time. Fourth, the figures do not account for equity of provision. The 59% coverage that is cited in Table 2.2 is skewed to wealthy locations and little formal access reaches poor areas. Houses are cheaper, the further they are located from the piped network so this is where poorer people live. It is poor households that lack access to safe water (WaterAid 2008). Finally, this information is based solely on access to water from the piped network. Meanwhile many rely on wells and boreholes. The

extent of water deprivation cannot be fully understood without wider knowledge of the availability and use of water from different sources

According to Ghana Water Company Limited (GWCL), the company ensures in its tariffs that no consumer spends more than five percent of net income on a quantity of water sufficient to meet basic domestic needs and this, they say, is borne out by data found in the Ghana Living Standards Survey (GLSS) (GWCL 2009). This is, however, not the case for poor households. A survey of poor households in Kumasi indicated that they spent on average about 15% of their income on water (Nyarko et al 2006). Forty percent of the low-income households in the largely slum areas of Nima and Teshie in Greater Accra, spend over half of their income in accessing water and sanitation (WaterAid 2008 p.9). But most of these are not customers of GWCL – at least not directly.

The majority who live in low-income settlements depend on private water vendors for their daily water needs. It is estimated that those without direct services pay around 20 times (and in some cases more) what it would cost them if they had a direct supply from GWCL (WaterAid Ghana, 2008). According to a PURC survey in 2000/2001, the majority of poor households that were connected to the piped water supply spent less than 5% of their income and used around 35 litres per capita. Their counterparts who depended on alternative suppliers consumed only 15 litres of water per capita and spent about 12% of household income on water (PURC, 2001). Thus a piped connection means higher consumption and lower costs.

Households in poor urban communities such as Nima and Teshie in Accra use different sources of water for different purposes. Often, tap water or sachet water is reserved only for drinking and cooking, whilst hand-dug well and river water is used for washing. The main reason for this is the high cost and/or long distance associated with reaching a tap that provides safe water. Alternative sources may be of lower quality but they are closer and are either free or cost only a small fee compared to the safer sources (WaterAid 2008). These households would be classified as having access under the MICS.

The water supply in the capital, Accra and nearby Tema (known as the Accra-Tema Metropolitan Area (ATMA)), is in a precarious state. The city is serviced by two water treatment plants: the Kpong (along the Volta River) and Weija (along the Densu River). Combined production from these two treatment plants is approximately 90 million gallons daily, whilst demand is approximately 150 million gallons and rising with increasing industrial and domestic demand.[19] These treatment plants (commissioned in the 1930s) have far outlived their productive lifespans (Sarpong and Abrampah, 2006). The plants have not witnessed any expansion in their production capacity despite the near tripling of the population of Accra and Tema. GWCL also pumps about 0.6 million cubic metres annually from boreholes located at Dodowa in the Dangme West district of the Greater Accra Region to supplement the supply system in Accra. The piped supply network covers only 36% of the 200 square kilometre land size of Accra (Van Rooijen et al., 2008).

Challenges with poor physical planning and development control and high non-revenue water means that there is not a regular supply of water within the supply network. Water is rationed. Some areas have not received piped water for years. The majority of residents in Accra including those within GWCL/AVRL's supply network rely on small-scale water entrepreneurs (SWEs) for water supply (Sarpong and Abrampah, 2006). The activities of SWEs are poorly regulated. Some SWEs have exploited the current situation, illegally extracting water from GWCL/AVRL pipelines to create scarcity and charge exorbitant rates of up to about eight times the official GWCL tariff (Van Rooijen et al., 2008). The Town and Country Planning Department in its design and planning of layouts for settlements in Accra has not considered the provision of utility services including water to informal

[19] AVRL Website, 'AVRL explains recent water shortage', Posted by Aqua Vitens Rand Limited (admin) on Nov 12 2009, accessed 25.4.10 http://avrl-ghana.com/pages/posts/avrl-explains-recent-water-shortage43.php

settlements. For this Department, these informal communities do not 'exist' (Sarpong and Abrampah, 2006, p.21). The lack of legal status is a major barrier towards extending services to low-income communities.

2.1.2 Institutional framework

Overall responsibility for the delivery of water lies with the Ministry of Water Resources, Works and Housing (MWRWH) through its Water Directorate (www.water-mwrwh.com). This is the lead government institution responsible for broad policy formulation, implementation, monitoring and evaluation of the activities of all official organisations and stakeholders in both the rural and urban water sectors in Ghana.

Water in urban areas is provided by the Ghana Water Company Limited (GWCL) which reports to the Ministry in the performance of its functions. Under the private sector participation (PSP) component of the UWP, GWCL in 2006 handed over the operation and maintenance of its water supply systems to a private operator, Aqua Vitens Rand Limited (AVRL) under a five-year management contract (2006-2011).[20] GWCL however continued to own the company's assets within the framework of the management contract and was responsible for monitoring the performance of AVRL. One of the members of the consortium that makes up AVRL, a Dutch utility, Vitens, has a charitable foundation, Water for Life (W4L), which is operating in Ghana. W4L has approved seven projects in Ghana. One is in Teshie, a poor urban area of Accra (see **Annex 1.**).

The Public Utilities Regulatory Commission (PURC) is an independent body established by Act 538 of 1997 and is responsible for examining and approving rates chargeable for provision of urban water and monitoring the standards of performance of GWCL. PURC is not responsible for regulating AVRL directly. This is the responsibility of GWCL. The PURC reports to the Office of the President of Ghana.

Given its regulatory mandate and, as will be seen in section 2.4, the absence of leadership on the part of other actors in the urban water sector (e.g. GWCL and MWRWH), PURC has effectively assumed a leadership role in addressing social and poverty issues in the urban water sector. However, responsibility for providing potable water supply to all urban settlements remains within the legal mandate of GWCL. Although tasked with monitoring the water sector, the Water Directorate in MWRWH is not adequately staffed to fulfil this role effectively. At the time of this research in the second half of 2009, the Directorate had just one professional staff member.

Other institutions involved in the delivery of water include the Community Water and Sanitation Agency (CWSA) which is responsible for water delivery in small towns and rural areas and the Water Resources Commission (WRC) responsible for the management of water resources. For a comprehensive review of the actors in the Ghana water sector see Fuest et al (2005).

2.1.3 Financing

Ghana's National Water Policy states that the policy objective is to ensure that adequate funds are available for the development of the water sector to achieve the goal of making water available for all (NWP 2005). However, GWCL is in a weak financial state. At the start of the UWP the company was unable to pay its substantial debts. According to the PAD (World Bank 2004e), the PURC had not allowed debt service payments to be included in the water tariff so GWCL had for some years serviced only a few of its 40 loans. The project appraisal document (PAD - World Bank 2004e) called for a debt write-off and supported a debt rationalization for GWCL although this did not receive financial support from the UWP (World Bank 2004e, para 138). However, it has since been reported that PURC does allow GWCL debt service in tariffs for loans that PURC has authorised but will not

[20] The management contract finished in June 2011 but was in place at the time of our research.

allow it for loans with which it does not concur. In addition, after the start of the project, most of GWCL's debt was either written off through HIPC or taken over by the GoG (Correspondence with World Bank, July 2010).

The Strategic Investment Plan (discussed below) estimates that around US$100m a year needs to be spent to achieve universal coverage for urban water but average sector inflows over the past several years come to around US$35m of which US$30m comes from external support agencies, US$2m from the government's annual budget and US$3m from internally generated funds through water sales (Quaye 2008).

The urban water sector relies substantially on external grants and loans. Available information in 2009 from GWCL indicated that a total of US$630.16m had been invested by various Development Partners in the urban water sub sector since 1990. Over 90% of sector finance comes from donors and such inflows can be unpredictable. For example, the allocation for WSS for 2006 was lower than previous years even though the GoG was required to increase the funding devoted to WSS to meet the MDGs. In 2006, out of total sector funding of US$85m only 3.7% was provided by the government with the rest coming from donors (WSP 2006b p.27). On-going investment projects (listed in 2008) amounted to around €539m of which the UWP constitutes around ten percent. The biggest project is funded by a concessional loan from China for the Kpong water supply extension works and accounts for nearly 30 percent of the total on-going projects (Quaye 2008). This is a loan for US$270m to increase capacity of the Kpong treatment plant by 40million gallons.[21] The project is expected to be completed by October 2012.[22]

Water and sanitation attract only a small proportion of the government budget (WaterAid 2008). Available data from the Ministry of Finance and Economic Planning (MoFEP) indicates that budget allocations by the GoG to the water (and sanitation) sector as a percentage of total social sector budget have been low, averaging about 3.6% (Water Sector Monitoring Platform 2009). The recommendations from the 2009 Ghana Water Forum call for higher cost recovery and budget allocation to reduce dependence on donor finance.[23]

2.1.4 Water pricing

Tariffs are set by the regulator, PURC. A uniform tariff is applied across the country which effectively entails some degree of regional cross subsidy as the costs of delivery are not uniform. The tariff system uses an increasing block tariff (IBT) structure so that the first $20m^3$ per month is provided at a lifeline rate and the price for further units is charged at a higher rate (see **Table 2.3**). For a lifeline tariff to be applied, a connection needs to be metered. It was reported in interviews with AVRL that only around 30% of connections in Accra were metered. Connection charges are passed on to the end user in full.

Research from Kumasi indicates that the lifeline tariff fails to benefit poor households in high-density housing. Findings cited in Nyarko et al (2006) indicate that low-income, multi-occupancy households in single-meter compound houses were paying 20% more per unit volume than high-income users in single-family houses with a direct connection to the piped network. The same study also revealed that low-income households were using 56 litres/capita/day while high-income households were using 120 l/c/d . In addition, according to a review by PURC, the lifeline tariff fails to reach the poorest as most do not have a connection to the piped network and so PURC is planning to replace the lifeline tariff system at some stage in the future (PURC 2005a). Many of those that are not connected, rely

[21] '$273m To Expand Kpong Water Plant' The Ghanaian Times 12.2.2010.

[22] Tema, Accra, Sekondi to enjoy free-flow of water soon, Ghana News Agency, 30.4.2011, accessed 14.12.2011

[23] Statement Issued by Ministerial and Development Partners Roundtable At The 1st Ghana Water Forum, Accra, 22nd October 2009

indirectly on the piped supply through neighbours and water vendors and an increase in the price charged by GWCL will be passed on to them, through private vendors so tariff adjustments need to be carefully assessed to determine their full equity impact.

Table 2.3 GWCL Tariffs

Category of Service	Quantity	Ghanaian Cedi/Pesewa	US$/m^3
Metered Domestic	0-20m^3	GHp 0.66 per m^3	0.46
	21m^3 and above	GHp 0.91	0.63
Commercial /Industrial	Flat rate	GH¢ 1.10	0.76
Public institutions/government departments	Flat rate	GH¢ 1.10	0.76
Unmetered premises	Flat rate per house per month	GH¢ 3.89	2.71
Premises without a connection (public standpipes)	per 1000 litres	GHp 0.66	.46
Special commercial	per 1000 litres	GH¢ 2.04	1.36
Reconnection fee Domestic		GH¢ 288	197.20
Reconnection fee Commercial		GH¢ 922	631.50

Source: Ghana Gazette 13th November 2007

The National Water Policy calls for the establishment of a Social Connection Fund to support the connection of low-income consumers to the network (NWP 2005), but this is not supported in the tariff structure in Table 2.3. The PURC does not support subsidies for connection charges for the poor but prefers more targeted interventions for the following reasons:

> "It is often cited that the principal barrier for the poor to access water supply is the connection charge as opposed to the volumetric unit tariff. This is demonstrated in Ghana whereby the non-serviced customers pay substantially higher volumetric rates to secondary market service providers than those connected to the GWCL system. However, in Ghana the barrier is not through customer choice but as a result of a lack of adequate infrastructure. It is considered that the full costs of connections can be met by the customers once the service is expanded to reach them. Consequently, PURC sees no need at present to cross-subsidise connection charges. Notwithstanding this position PURC shall promote and support strategies designed to assist the poor to gain access to the piped water supply system through funding mechanisms specifically designed to help the urban poor" PURC 2005b, p8.

Prices have increased substantially in recent years and it was reported in interviews with the regulator that the tariff was approaching one of cost recovery. In the short term, the tariff structure is to be based on GWCL cash-flow requirements plus some allowances to cover the cost of depreciation. In the long term, the tariff policy supports increases to allow for a return on capital (PURC, 2005b). GWCL also reports that the current tariff is approaching the full cost recovery price. The full economic cost of a unit volume of potable water is about US$0.8/m^3 while current average sale price is about US$0.63/m3 (GWCL 2009). These tariffs are in keeping with those in the rest of the region but they are high by developing country standards (Foster and Briceño-Garmendia 2010). In addition, the idea that the tariff is approaching a stage where it can recover costs through user charges does not seem to be consistent with a financing profile that is so heavily dependent on donors and where investment needs are so high. There may be scope to cover operations costs but the sector is far from financially self-sufficient.

2.1.5 Inclusion in policies and strategies for urban water

In theory, there is strong commitment to universal water access but this is not matched by policy implementation. Water is an inalienable right for every citizen of Ghana including the poor according to Section 35 (3) of the Fourth Republican Constitution of Ghana but it is not clear how these rights are justiciable and enforceable by the Supreme Court of Ghana. Constitutional provision is not sufficient to ensure practical outcomes. Furthermore, strategies and policies are often fragmented.

Currently, Ghana does not have a comprehensive urban development policy. Rather, a number of strategies for urban development including slum upgrading have been outlined in the Growth and Poverty Reduction Strategy (GPRS II) with a focus on strengthening physical planning and improving infrastructural facilities. Implementation of these strategies has been at a slow pace due to lack of political commitment and inadequate financing. Although most urban areas in Ghana have planning schemes with clearly defined layout for infrastructural delivery including water supply, in practice most of these areas are characterised by sprawling and unplanned physical development. The Ministry of Local Government and Rural Development is currently developing an Urban Development and Growth Policy.

Ghana's development blueprint, the Ghana Poverty Reduction Strategy (GPRS) II (2006-2009), and the National Water Policy (adopted July 2007) both articulate the government's aspiration to improve access to potable water especially for the poor as key to sustained poverty reduction in Ghana. Strategies mentioned in these policy documents include mobilising new investments, establishment of a programme such as a Social Connection Fund, extending distribution networks especially to low income consumers, assessing the lifeline tariff for poor urban households and recognising and providing support where appropriate to small scale providers (secondary and tertiary) in the water supply chain.

While there is commitment to supporting poor households on paper, the challenge has been to translate these strategies into action by the relevant institutions. A number of commentators have pointed to this gap. According to WaterAid (2008), policy statements on water supply and sanitation in a range of national policy documents (such as the GPRS, Water Policy and Environmental Sanitation Policy) are inconsistent and/or contradictory.

In addition the strategies and plans fail to be backed up by adequate resources: "WSS is clearly articulated in national strategies and expenditure framework but the link between targeted goals and resource allocations remains limited…what is becoming clear is the wide gap between the requirements needed to meet the government's more ambitious WSS targets (unconstrained budget) with what is annually released to meet them (constrained budget)" (WSP 2006b, p 27). Furthermore, the implementation of the National Water Policy has been slow due to the lack of sufficient professional staff and operational budget at the Water Directorate.[24]

In a bid to promote greater water access for poorer households in urban areas, the PURC in 2005 developed a social policy and strategy for urban water regulation and an urban water tariff policy. In its Social Policy document, PURC stated its intention to "take the lead in water sector stakeholder involvement in improving services for the urban poor" (PURC 2005a, p10). PURC has outlined a number of initiatives aimed at improving accessibility and affordability of potable water for the urban poor notably leading the formation of a working group of stakeholders to address provision of service to the urban poor. The group's tasks include the targeting of social funding or other relief schemes for

[24] Statement Issued by Ministerial and Development Partners Roundtable At The 1st Ghana Water Forum, Accra, 22nd October 2009

the poor as well as undertaking pilot studies to test interventions in delivering water to low-income communities. These proposed studies are to provide lessons to inform PURC's regulatory policies, the supply and payment options available to the utility and the criteria for determining investments targeted to the urban poor. While this idea was first articulated in the PURC's 2005 Social Policy, it was the World Bank's UWP that provided financial support for the pro poor pilot projects.

2.2 Inclusion in project design

The design of the World Bank project is articulated in the Project Appraisal Document (PAD) (World Bank 2004e). This is a 94-page document that sets out the details of the project rationale, schedule of implementation as well as the monitoring framework. The document translates the broad policy objectives into detailed activities and assesses the risks involved. A detailed review of the PAD shows that in the broad project design, while equity is a stated objective at the start, its prominence slips when it comes to the evaluation criteria by which the project will be assessed.

The Urban Water Project (UWP) was conceived with two main objectives:

- to increase significantly access to the piped water system in Ghana's urban centres, with an emphasis on improving access, affordability and service reliability to the urban poor; and
- to restore the long-term financial stability, viability and sustainability of the GWCL.

The Project was approved in 2004 and originally scheduled to finish in 2011. The closing date has now been extended to 31 December 2012. Procurement problems caused project implementation to be delayed by nearly two years (World Bank 2011a). A Project Management Unit (PMU) has been established within GWCL to implement and monitor the project. The project has four components: (1) System Expansion and Rehabilitation (2) Public-Private Partnership Development (3) Capacity Building and Project Management and (4) Severance Programme. Each of these is aimed at achieving the objectives described above.

The poverty focus of the UWP is cited throughout the PAD and summarized early on (p.4), reproduced below (**Box 2.2**): the *majority* of household connections provided by the UWP will be to *low-income households* and the PAD makes explicit reference to *targeting* of poor consumers.

Box 2.2 Poverty Focus of the Project –as stated in the PAD

The provision of easily accessible potable water is a key component of poverty alleviation in Ghana, as it is in every country. For the Urban Water Project, the Government has identified three areas of poverty focus: Access, Affordability and Targeting.

Access: Increasing access to improved water supplies is a major water sector policy objective of the government. Therefore, over 75 percent of Project funds (US$91 million) are for civil works and associated engineering. The government has set a Project goal [of] at least 50,000 new household connections, themajority of which will be to low-income households and for the provision of stand-posts. To complement these efforts, the proposed management contract will contain a performance criteria for increasing cubic meters sold at the "life line" portion of the tariff, thereby giving the private operator an incentive to extend service to as many new connections as possible.

Affordability: The emphasis on new connections also means that poor households will buy less water from high price vendors, significantly lowering their average cost of water. The Project supports efforts of the Public Utility Regulatory Commission (PURC) to put in place programs to ensure that tanker trucks deliver water to consumers at affordable prices. This study must be completed by time of the mid- term review and recommendations implemented in the second half of the Project.

Targeting: The PURC has defined a program to ensure better targeting of the poor with affordable delivery of water supply services. PURC's pro-poor program consists of actions to (i) rationalize lifeline tariff to better target poor consumers living in compound houses; (ii) improve affordable access to water supply for the very poor living in areas served by water vendors; and (iii) enhance the quality of tanker delivery including rationalizing the cost of service. To realize the pro-poor objectives of the proposed project, the PURC will be supported to implement its set of pro-poor actions including the setting up of identified pilots in selected cities.

Source: PAD, World Bank 2004e, Page 4

Thus, according to this extract, poor households will benefit from:

- new connections and stand-posts,
- from a reduction in reliance on expensive water vendors and
- because PURC will be given support to implement tariff rationalisation, improved service delivery in poor areas and improved tanker delivery services.

However, the poverty focus becomes muted when it comes to the results and indicators of success which are set out in Annex 3 of the PAD (p.20). An extract is presented in **Table 2.4** below. The access objective is that residents have access to more affordable and reliable piped water but it does not specify which residents. Similarly, the indicator for this objective is the addition of 50,000 new connections or stand posts. Thus if only wealthy households are provided with connections, this objective will have been achieved.

Table 2.4 Extract from Annex 3, Results Framework and Monitoring

Project Development Objectives	**Outcome Indicator**
Residents in targeted urban centers have access to more affordable and reliable piped water. GWCL is operated on a sound commercial and financial basis.	Urban centers receiving civil works add at least 50,000 new connections or stand posts. GWCL in the five largest cities meet 100% of their cash obligations from collected revenues
Intermediate Results per component	Results Indicator for Each Component
Component One Investment Program is fully implemented.	*Component One* At least US$80m is invested to extend and rehabilitate the piped water network
Component Two The urban water sector establishes a successful PSP track record	*Component Two* A 5-year management contract is closed financially and carried out
Component Three The principal actors in the country's urban water sector establish a reputation for capacity and professionalism	*Component Three* MWH establishes a Water Directorate that conceives and implements policy and reform initiatives

	Two well targeted pro-poor programs are put in place by PURC
Component four GWCL is efficiently staffed with capable employees	*Component Four* Number of GWCL staff per 1,000 connections Average GWCL wage compared to equivalent post in private sector.

Source: World Bank Project Appraisal Document for Ghana Urban Water Project, p.20

In terms of the design of the UWP, as set out in the PAD, the poverty focus of the project is not explicitly expressed in the results and outcome indicators. There is no reference in the Results Framework to any socio-economic or other studies/surveys to monitor which water users will benefit from the 50,000 new connections. The question arises, therefore, as to how the pro-poor aims of the project, as set out in Box 2.2 above, will be realised in the implementation of the project and how these can be evaluated. Issues of targeting are discussed in section 1.3.1.

2.3 Inclusion in project implementation

Implementation of the UWP was slow due to procurement delays and the introduction of additional works. Project progress has been difficult to assess due to the absence of baseline information. It was reported in stakeholder interviews carried out for this study in November 2009 that an amount of about US$40m had been spent until then on the project, compared with a target disbursement amount of US$89m by the end of 2009, although details on actual expenditures were not made available to the study team. We assess below the extent of inclusion in terms of each of the project components as set out in the PAD (World Bank 2004e, p.11).[25]

2.3.1 System expansion and rehabilitation (US$91.8m)

This is by far the biggest component of the project and comprises:

- First Year Investment Programme (FYIP) of US$17m which is for minor works for which no major preliminary studies will be required to achieve immediate impacts on improved service coverage and reduce UFW.
- Subsequent Year Investment Programme (SYIP) of US$70m to cover individual water supply systems, extension of water production, transmission and distribution works taking into account long-term requirements. These funds are to be distributed across the ten regions of Ghana, with all regions included.
- Repair, Replacement and Rehabilitation Fund (RRRF) to be managed by the operator, originally with a value of US$5m but since increased with extra donor funding to US$12m.

At the time of the research, the FYIP was just about complete, some five years after the start of the project and calls had just been put out inviting bids for the SYIP. As a result, our research was unable to assess the pro poor impact of the disbursements ex post but we are able to consider the process of allocation. The project funds were to be distributed across all the ten regions of the country and then to be dedicated to specific water systems within each region (GWCL owns 81 water systems across the country). The allocation criteria are set out in **Box 2.3** although the water borne diseases factor was not used due to lack of data.

[25] Except the severance programme.

Box 2.3: Criteria for distribution of UWP funds

Distribution across the ten regions:
i) Urban population for each region according to latest census with the most populous region to be given a factor of 1 with factors to be given for other regions to be in direct proportion to relevant populations;
ii) The GDP expressed in US$ per capita (or any other feasible measure) with the region with the lowest US$ per capita to be given a factor of 1 with factors to be given for other regions to be in direct proportion to relevant US$/capita; this should give due weight to the economic situation in the respective region;
iii) The service coverage, percentage population connected to a water supply system, compounded on regional basis with a factor of 1 to be given to the region with the lowest service coverage and with factors to be given for other regions to be in direct proportion to relevant service coverage; and
iv) Parallel investments taken place or proposed to take place during the course of project implementation expressed in US$/capita with a factor of 1 to be given to the region with the lowest US$/capita and with factors to be given for other regions to be in direct proportion to respective US$/capita.

Distribution across water systems within each region

i) Water availability (or production capacity) per capita (total urban population) (litre/capita and day (l/c.d) with a factor of 1 to be given to a water supply system with lowest l/c.d and with factors to be given to other urban water supply systems to be in direct proportion to relevant l/c.d.;
ii) Population coverage by service connections as a percentage of total population with the water supply system with the lowest coverage to be given a factor of 1 and with factors to be given to other water supply systems to be in direct proportion to relevant population coverage;
iii) Investment per capita (to be based on previously prepared proposed investments for urban water supply systems) with the water supply system with the lowest investment per capita to given a factor of 1 and with factors to be given to other water supply systems to be in direct proportion to relevant investment per capacity; and
iv) Water borne diseases (one representative indicator to be selected) with the water supply system with the highest incidence (cases per 1000) to be given a factor of 1 and with factors to be given to other water supply systems to be in direct proportion to relevant incidence. – *Although this criterion was not applied due to lack of data.*

Source: World Bank 2004e, pp. 22-24

Extrapolating from the 2000 population census and previous population growth rates, the design consultants made assessments of water demand compared with actual provision to estimate the investment requirements for each region and then used the allocation criteria (Box 2.3) to determine where the SYIP funds should be spent. The results for the regional allocation are shown in **Table 2.5**. For more details on the allocation of funds to initial systems within regions, see **Annex 2.**

Box 2.3 shows that the fund allocation process has given priority to low-income, highly populated regions with low coverage and low sector investment. This exercise does go some considerable way towards the targeting of investments towards the areas of greatest need, although the actual amount per region is small (**Table 2.5**).

Table 2.5 Allocation of SYIP funds across regions

	Population 2007	Water demand 2007 M3	Funds for investments FYIP US$	SYIP US$
Greater Accra	3,750,214	476,593	2,900,000	4,364.024
Ashanti	1,579,082	139,434	3,900,000	2,861,748
Brong Ahafo	530,052	40,766		4,874,213
Central	1,067,073	66,355		4,230,765
Eastern	679,067	52,381		4,915,372
Northern	523,564	41,096		6,798,985
Upper east	146,257	15,228		4,354,344
Upper west	84,790	9,073		6,811,316
Volta	568,723	37,472		11,129,035
Western	558,687	38,039		15,160,198
Total	9,507,510	916,435	6,800,000	65,500,000

Source: Adapted from Tahal presentation to MTR (Tahal, 2008)

This approach clearly diverts funding to the poorest regions. However, allocating funding to the regions and systems according to income, existing coverage and investment does not necessarily mean that the services will reach those suffering the most from water deprivation for two main reasons. First, the figures for water coverage do not take account of the distribution of water access within a region or system. The data are based on analysis of water production and population figures and there is no way of knowing if the supply is fairly allocated or if the rapidly growing urban slum population living in informal settlements even feature in the data. Second, the allocation of funds is based on utility water produced and an inferred demand based on an assumed per capita consumption but no consideration is paid to alternative water sources. The availability of ground water and alternative means of access has a considerable impact on the extent of water deprivation and on the impact of interventions.

The limitations of such funding allocation based on such a numerical exercise are recognised in the PAD, which specifies further steps that were to be taken to improve the pro-poor targeting[26] (citing the paragraph from the PAD):-

> The pro-poor emphasis will be a major objective in the design of water supply systems in terms of maximizing the supply to low-income households within the existing service areas as well as **prioritizing extension of water supply services to predominant low-income areas**, either by house-connections and/or stand-posts. The design consultants will carry out **socio-economic surveys**, sub-contracted through qualified survey firms, in order to determine the current status of water supply to low-income households in each of the

[26] In written comments on an earlier draft of the present research report, the World Bank requested that this paragraph from the PAD be reproduced in full.

> selected water systems. **The surveys will be carried out during the early stages of the feasibility studies in order to maximize the impact of the scheme designs on water services to the poor.** The feasibility studies will **clearly describe this pro-poor design process and indicate the numbers of new low-income households that will be served by the schemes** as well as the method of service: i.e. house-connection or stand-post. The actual requirements under the RRRF will be determined during the course of project implementation (PAD, World Bank 2004e, p.24, para 74, emphasis added).

There was, then, considerable importance attached to this paragraph in the PAD. These socio economic surveys were to be the essence of the pro-poor design element of the project and were key to the pro-poor targeting mechanism envisaged by the Bank. However, in the course of our research, it emerged that when it came to implementation, the decision was taken not to carry out these surveys. Instead, the Bank and the PMU decided to make use of already existing material rather than, it was argued, waste resources by duplicating what had already been done (NB: additional material was provided in May 2011).

Five additional documents were provided in May 2011. Of these, three were from 2009 and were presentations to the Mid-term review meeting including the socio economic survey for the pro poor pilot projects under PURC. Just two of the five additional reports predated the start of the UWP. These are presumed to be the already existing socio-economic studies which provided the justification for not carrying out the surveys outlined in Para 74 of the PAD. The information provided is outlined below.

a) Summary of results and recommendations (final chapter) of a study of Willingness to Pay for water carried out by John Young Associates (1999). We were only provided with the summary of results for this study so we are not able to comment on the methodology. The authors find that households that are not connected to the water distribution network are willing to pay to have a piped connection. Based on an assessment of the cost of water for those that use water vendors as well as the share of household expenditure spent on water, the study concludes that a simple tariff structure should be applied where consumers pay the same rate for each cubic meter of water consumed but they recommend that the tariff is varied according to the customer category (domestic, government, industrial, standpipes).

b) **Louis Berger (1998) Private Sector Participation in the Urban Water Sector.** The principal objective of this study was "to develop the Business Framework for the implementation of PSP in the Ghana urban water sector" p. ES2. The study includes the design of an institutional framework for private sector participation, evaluation of the legal and regulatory framework, analysis of technical aspects of urban water supply operations, financial analysis of the urban water sector (mainly to establish a tariff level that would mean the sector would be financially viable), socio economic analysis to determine the impact of PSP on the lower income segments of the population and to assess the tariff level affordable to these consumers and finally, preparation of the Business Framework for PSP.

The socio-economic analysis (Chapter 7 of the Louis Berger study) is from the perspective of the design of the PSP framework. The purpose of this chapter of the study was to "determine the impact of the PSP programme on the lower income sector of Ghana and to study the means for minimising any negative impact. In particular, the necessity for increasing tariff rates as indicated in the Institutional Framework and Financial Analysis sections of this report will have to be balanced in terms of affordability criteria amongst the lowest income consumers." (P. 7.1). The conclusions reached are the following:-

- Landlords should be given incentives to connect. Yard connections should be given special incentives as they serve more than one household. Outside ATMA standpipes should continue to be used.
- The tariff structure should be simplified.
- A social tariff should be applied – at least in the short term.
- Affordability should be set at a threshold of 2-5% of household expenditure. The report also says that: "Detailed socio-economic data regarding other regions [i.e. outside ATMA] (where income levels are significantly lower) is missing. Further studies are recommended" (p. ES15).

This study was itself based on earlier research and used no new data collection was carried out. The consultants used material from previous studies. The main sources were (p. 7.1)

- Study of the ATMA Development and Investment Programme whereby a socio-economic survey of more than 1,000 households was carried out in Jan 1996.
- Water Utilisation and Valuation in Urban communities in Northern Ghana (CIDA 1991). According to the authors: "with an inflation rate of over 300% the results require significant updating. Nevertheless these willingness to pay surveys give some indication of socio economic conditions outside the ATMA area which are otherwise lacking" p. 7.1
- Ghana Living Standards Survey (1992) – data regarding average income levels.
- Extended Poverty Study (World Bank 1995)
- Ghana Statistical Services.

The consultants state that in some cases the data is not adequate for firm analysis: "These figures are considered indicative. A detailed affordability and willingness-to- pay survey is required in the regions outside ATMA is required in order to obtain up- to-date data" (sic) p. 7.14. Later, "Of course, the above data applies only to ATMA. More data regarding low-income consumers is required for the urban areas outside the capital" P 7.17.

As we had made repeated requests for information on the socio economic analysis, we have to assume that the information that we finally received in May 2011 covers the main socio economic analysis on which the pro poor dimension to the UWP was based. There are clearly some limitations:

- This research is dated. The date of the PAD is July 2004. At that stage the Louis Berger study was six years old and furthermore their socio economic analysis is based on studies that go as far back as 1996 and 1991. The study itself made repeated reference to the need for further research.
- The focus of the background studies (particularly the Louis Berger study) is on private sector participation and the impact it will have on low-income households and not about the investment needed to alleviate conditions for poor families.

These two studies would appear to fall far short of the surveys that were to be carried out during the early stages of the feasibility studies in order to maximize the impact of the scheme designs on water services to the poor as stated in paragraph 74 of the PAD.

Other elements that were important for ensuring that the project met the needs of poor households were also neglected. The PMU was supposed to track a number of indicators including new low-income households added to the piped water system as a result of the project (PAD para 31). National stakeholder surveys were intended to produce "comprehensive social impact indicators and changes on stakeholder attitudes during implementation" (PAD, Para 48). These surveys were supposed to identify

zones with the highest concentration of low-income households. The PMU was supposed to monitor the number of low-income households connected under the project. At the time of the revised report (November 2011) we were informed that the PMU does not have data on the number of low-income households added to the piped water system (source: Maple 2011 update report).

There seems to be a major gap between the pro poor rhetoric of the PAD and the practical project implementation. There was a strong sense in the research interviews that targeting the poorest was not in practice a project priority as that there were so many poor households that targeting was not really required. Just improving the bulk supply would be sufficient to help the poor although possibly not the poorest. There was little effort to address the specific needs of low-income households. The PMU was of the opinion[27] that funds available for the SYIP were adequate to provide 100% coverage in all the 26 selected systems for the SYIP except for Accra and therefore there was not considered any need to specifically target the poor. In addition, we were told that such socio economic studies would divert resources from water delivery and delay project implementation.

However, without analysis of water access methods and efforts to identify the needs and constraints facing low-income households, there is a risk that the project funding will be just directed to the middle classes and that the impact of improvements to the water supply just helps those that can afford connections. In practice, investments may not necessarily guarantee access to water for every household as discussed above. For example, currently, although the Greater Accra region has the highest urban water coverage rate (75% - Table 2.2), some communities within the region have no access to GWCL supply.

In addition, a focus on asking households how much they are willing to spend on water will reach the widely held, and intuitively plausible conclusion that poor households are spending a fortune buying water from private vendors. They would much prefer to have a connection because it would be cheaper and obtaining water would be quicker. But this approach neglects some of the more complex nuances in water access such as why exactly do households not obtain a connection to the piped network and what other sources are available. In practice there are many reasons why households do not connect including onerous bureaucratic processes as well as lack of legal tenure. In written comments in response to an earlier draft of this report (July 2010), the difficulties in reaching slum areas were acknowledged by the Bank:

> "In general, expanding slum areas in Ghana are predominately informally settled areas where the inhabitants do not have land tenure. Ghana law requires property ownership before a water connection can be given. This law also discourages the provision of standpipes by the municipality or GWCL as technically the provision of piped water supply to untenured inhabitants violates the law. The project design is obligated to respect the country's legal framework."

Thus the Bank project is constrained by the national legal framework which means that the project – and other Bank activity - risks missing large numbers of the poorest households located in informal areas. We were also informed that the Bank at the time was discussing a new project including provision to peri-urban and informal areas (World Bank comments on draft report, July 2010).

In 2011, the GWCL PMU issued a call for consultants to carry out community entry and sensitivity activities in selected towns to design ways to facilitate access for low-income communities in four regions. According to the ToR:

> "GWCL, acting through its Project Management Unit (PMU), now wishes to engage Consultant(s) to carry out the Community entry and sensitization activities in the towns/systems selected for improvement under the SYIP, aiming at sustainable

[27] Interview with PMU, June 2009.

community-managed water delivery systems with special emphasis on ownership and women's participation in the delivery of good quality water in poor communities in the selected urban areas."

The consultancy was to be located in four geographical areas Area 1: Ashanti, Upper West and Northern Regions; Area 2: Central and Eastern Regions; Area 3: Volta Region and Area 4: Western Region. The consultants were required to carry out field surveys to to determine the "locations and numbers of standpipes or technically equivalent options that optimize access of the predominantly low-income populations to potable water supply" (Terms of Reference, 2011). This study should go some way to identifying how best to serve communities and help them to manage new water facilities. But, this is late on in the project which finishes in December 2012. Contracts for the capital investment have been awarded and it seems doubtful that this study will affect the project design significantly.

Obuasi case study

Our research intended to review the impact of the UWP by holding discussions with project beneficiaries and end users. However, due to the delays in the project implementation, at the time of our research in November 2009, contracts for civil works under the SYIP were being put out to tender so it was too early to assess the impact of the SYIP. However, it was reported by the PMU that some work had been carried out under the FYIP in the Ashanti Region. According to the PMU, a total of 55km, 45km and 15 km of pipelines had been laid under the FYIP in Accra, Kumasi and Obuasi, respectively. Only details on interventions in Obuasi were made available by the PMU. We conducted a short field visit to the region to review the work of the UWP. The information provided by the PMU is presented in **Table 2.6.**

Table 2.6 Update on FYIP Intervention in Obuasi

Name of community	Pipe-lines	Population	Before FYIP	After FYIP
Gausu Ramia	2785	5398	House connections	House connections
Abompekrom/ Nyamebekyere	3950	4394	Private wells	House connections, stand pipes
Industrial Link	2175	6676	Nil	House connections, stand pipes
Bediem	1800	1702	Nil	House connections, stand pipes
Akaporiso	3290	12029	Nil	House connections, stand pipes
Brahabebome	1060	11199	Limited house connections	House connections, stand pipes

Source: Presentation by PMU at Mid Term Review of UWP, August 2009

Our field visit to Obuasi, however, revealed some findings that were contrary to the information reported by the PMU. It emerged that almost 60% of public standpipes (10 out of 17) provided under the UWP had been disconnected just seven months after completion of the intervention because they had been used so little.[28] This was due to complaints about sour taste, intermittent water supply and the easy availability of alternative water sources – most houses have private wells. Moreover, there were indications that additional standpipes would also be disconnected in the near future. A total of 28 household connections had been made to date, out of which 12 were in areas (four out of six communities) that were hitherto not connected to the GWCL distribution network. Through consultations with AVRL Obuasi District officials and Focus Group Discussions (FGDs) with residents during our field visit to Obuasi, we established the following (**Table 2.7**):-

Table 2.7: Update on FYIP Intervention in Obuasi from Field Visit

Name of community	Before FYIP	After FYIP
Gausu Ramia	House connections	10 household connections; 2 standpipes were provided in Mensakrom, a suburb of Gausu Ramia, but they have all been disconnected due to low patronage.
Abompekrom	Private wells	3 household connections; no stand pipes were provided.
Industrial Link (Kunka)	Private wells and boreholes	1 household connection; 5 stand pipes provided, but 2 have been disconnected due to low patronage
Bediem	Private wells and a borehole	4 household connections, 1 stand pipe provided, but it has been abandoned for low patronage
Akaporiso	Private wells and a borehole	4 household connections; 14 stand pipes were provided, but 5 have been disconnected due to low patronage
Brahabebome	Limited house connections, private wells, 1 borehole and 5 standpipes	6 household connections; no additional stand pipes were provided

Discussions with a cross section of residents in the six communities in Obuasi revealed that community members either made a financial contribution towards the establishment of standpipes or provided communal labour for the exercise. This assertion could not be verified by the AVRL

[28] Civil works in Obuasi were completed in March 2009.

officials in Obuasi because the officer who was in charge during the civil works had been transferred to Accra and was on leave. Besides, all attempts to access implementation reports on the FYIP were unsuccessful.

FGDs revealed that residents in Obuasi, generally, were not interested in water supplied by GWCL because of the intermittent supply and sour taste. The residents contended that private hand dug wells guaranteed an almost all year round supply of water and so they did not see the need to connect to GWCL supplies. In response to the issue of sour taste, the AVRL District Customer Care Officer admitted that the overhead tanks for distributing water had not been washed for a while and that the organisation was in the process of arranging for the tanks to be cleaned. This situation questions mechanisms for ensuring the quality of water supplied to residents.

The cost of water at public standpipes was not reported to be a barrier to accessing water in Obuasi, although some residents preferred fetching water free of charge from hand-dug wells rather than from public standpipes and boreholes. Water vendors in all the other communities except Kunka were selling water with a total value of about one Ghanaian Cedi (US$0.70) daily (a 20 litre bucket is sold for about 0.02 Cedi). Vendors were paid 20% commission on water sold and did not find the service sufficiently lucrative.

In FGDs, residents expressed frustration at the bureaucratic process involved in obtaining a household connection, as well as the cost. Applicants are required to provide a site plan and a building permit and few residents (particularly in poor and rented households) have this. In addition, the cost is also a deterrent. Charges for connection are based on the actual cost and so will vary depending on the distance from the network, but were reported in the FGDs to be about US$200. Furthermore, residents reported that it took them over six months to get household connections even where they had all the required documentation. Meanwhile, it cost about the same to have a private well constructed within two weeks. The Obuasi District AVRL Office admitted that household connections were delayed due to the bureaucratic approval process.

To conclude, our research found that some connections were established under the UWP, but there was little evidence to suggest that the investment under this component will reach poor households extensively. Investment in capital works is vital as supply is intermittent and infrastructure is old. However, spending on this alone will not alleviate conditions for the poorest as most are outside the piped network. Indirectly there will be knock-on benefits as many depend indirectly on the piped network, but still they will be paying higher prices and have to devote long hours to water collection. Evidence from Obuasi indicates that reaching poor households is challenging, as, after only a few months, some stand posts are no longer in use. In Obuasi, households prefer hand dug wells, which are cheaper, provide water of higher quality and are more reliable. In Obuasi, these stand posts are wasted resources which would be better devoted to urban areas where alternative water sources are more scarce – as for example in the slum areas of Accra discussed below. It is not simply a question of the siting of stand posts; also important is the quality and regularity of supply, as well as the availability of alternatives which match the needs of end users, if conditions of water poverty are to be alleviated. This suggests that the pro-poor intervention could be better targeted towards on the needs of low income households and a standard text-book approach fails meet their needs

The UWP has devoted funds to providing services that have fallen into disuse just a short time after implementation. There is no evidence to suggest that Obuasi was covered in any of the socio-economic studies that preceded the UWP and it is not clear that the kind of socio economic approach followed would reveal the issues faced in the town. Asking households how much they spend on water and how much they would be prepared to pay may have revealed that there was extensive reliance on alternative water sources but even then, deeper investigation would be required to determine that the bureaucracy is a major barrier to obtaining a household connection.

Furthermore, the situation in Obuasi may be different from elsewhere so all recipient towns would benefit from an assessment of the obstacles to access and alternative water sources to identify the areas where disbursement will have the greatest pro poor impact.

It should be noted that in its written comments on the earlier draft of this report, the World Bank expressed it disagreements with some points in the research's findings in Obuasi, including the following comments:-

- Communal labour was the only contribution by the people through the Assembly for excavation of the trenches for the connecting pipelines to the standpipes.
- Standpipes were not built unilaterally but in direct consultation with Assembly members and in some cases community elders who assisted in the identifying sites in which to build pipes without offending community members who refused to allow pipes to build on their lands or close to their buildings.
- According to the Bank, three out of 17 standpipes have been disconnected as a result of small catchments and resultant low commissions and low returns rather than ten as our research indicated.
- The Bank agrees that high connection fees as well as long delays are a deterrent to securing household connections although they contend that the delays are not as long as indicated in the responses to our FGD questions.

Even taking the Bank's perspective, however, standpipes were disconnected soon after the project start because they were not sufficiently used due to the prevalence of alternative water sources and connection fees and bureaucracy are major obstacles to increasing household connections. It is unfortunate that this information was not discovered in the project design stage or in socio-economic studies that could have preceded investment so that the limited funds could have been more effectively targeted to those that would have derived most benefit from the investments.

To conclude this section, the PAD set out pro poor objectives but these are not followed through. It may be that to conduct these studies would have delayed the project further or it may be that these were never going to be feasible. For whatever reason, the key pro poor elements of the study, to which project implementation was clearly attached, were not carried out. From interviews it seems that the reasoning behind this is that the water supply everywhere is weak and so directing resources to make sure it reaches the poorest was not the best use of them. But this is not reflected in the design of the UWP and goes against the operational aims of the World Bank as stated in its 2004 Operational Guidance (section 1.5.1 of the present report refers). Clearly there is a high risk that the project will only benefit the middle classes, particularly where end users have to pay for the cost of their own connection.

2.3.2 Public private partnership development (US$6.5m)

The aim of this component of the UWP is to improve the financial performance of GWCL by transferring operational control of the utility to a private company. Although only a relatively small proportion of the UWP was devoted to this component, the privatisation of GWCL was an attempt to induce a major reorientation of the company with a view to bringing in sound financial management and commercial practices. Following an international competitive tender, the contract was awarded to AVRL, a consortium comprising two public water utilities: Rand Water from South Africa and Aqua Vitens from the Netherlands. The five-year contract started in June 2006 and finished in June 2011. It was not renewed. AVRL was responsible for operation, repair and maintenance of the already existing works and systems, maintaining current water quality and production levels, water distribution, meter

reading and bill collection. Technical and financial auditors were also engaged under this component to measure the operator's performance.

According to the terms of the management contract, AVRL was entitled to a bonus payment if the consortium achieved the following: reduced the level of accounts receivable, provided plans within twelve months of the start of the contract for optimization of chemical usage, reduced power consumption and reduced water consumption by public-sector entities (the last plan was to be submitted within the first 12 months). Similarly, AVRL forfeited a penalty payment in the event of failure to meet service standards with regard to water quality and pressure, reductions in non-revenue water (NRW), treatment plant operations, customer response plans and customer accounts receivable. The reduction in NRW was a significant target for the management contract as this was reported to be more than 60% in and around the capital - the Accra Tema Metropolitan Area (ATMA) area - and was a critical constraint to adequate service. It was estimated that around 55% of this leakage was due to 'commercial' losses (unauthorized consumption and meter inaccuracies), rather than 'physical' losses (Lievers and Barendregt 2009).

Three years into the implementation of the five-year management contract, an assessment of the performance of AVRL, required for the mid-term review (MTR) of the project (which took place in August 2009) was inconclusive due to the absence of baseline studies. At the MTR, the auditors said that baseline data had not yet been gathered by which to determine water production, due to the lack of bulk meters, procurement of which had been delayed[29]. In addition, some three years after the start of the five-year management contract, the required plans had been submitted by AVRL, but had yet to be agreed with GWCL (Ernst and Young 2009).

The financial auditor reported that progress relating to few of the performance targets for calculating incentives or penalties for AVRL under the management contract had been agreed upon by AVRL and GWCL to date (Ernst and Young 2009). As a result, neither the penalty nor incentive elements of remuneration of AVRL were applied.

In addition, there was limited cohesion between GWCL and AVRL. There was lack of consensus over the interpretation of some clauses in the management contract by GWCL and AVRL, which culminated in the signing of two Memoranda of Understanding (MoUs) in 2007 and 2008 respectively.

Although some progress was made towards the attainment of some targets under the management contract as reported by AVRL (water production, non-revenue water, revenue collection ratio, chemical cost, 100 percent cash obligations from collected revenues in the five largest cities and energy consumption), most of these outcomes fell short of the performance targets in the management contract. Moreover, progress with regard to some performance indicators (e.g. increase in connections and water production levels) cannot be directly attributed to interventions under the UWP. For instance, although the water production level increased from 211.7mm^3 in 2006 to 222.6mm^3 in 2008, the increases were as a result of civil works carried out in the Central and Northern regions, which were not financed by the UWP. A summary of the performance of AVRL on selected indicators vis a vis the position of GWCL is presented in **Annex 3**.

In a bid to increase household connections especially for the urban poor, the PAD proposed to introduce a performance criterion for increasing cubic meters sold at the "life line" portion of the tariff by the operator. This was aimed at providing the private operator with an incentive to extend service to as many new connections as possible. It was established in our research that this

[29] It was reported in the Ghanaian press in February 2010 that these meters were finally being installed, nearly four years after the start of the Management Contract "GWCL invests GH¢4.2 million to purchase bulk water meters" Ghanaweb, 24.2.10

performance criteria was not included in the management contract. In fact, no aspect of the management contract was related to social policy.[30] There was no incentive in the Management Contract for the operator to expand the existing system. The targets for AVRL were just based on the financial viability of the existing system.

The draft management contract does include the requirement that the operator shall perform the services in the spirit of the Government of Ghana's Low Income Household Policies and the PURC Regulatory Social Policy.. According to the draft management contract (unsigned) that we had access to (Paragraph 3.1.3):

"The Operator shall perform the Services in accordance with Applicable Law (including environmental legislation and PURC Regulations), Prudent Industry Practice, the Consumer Charter, the Service Standards, the Low Income Household Policies and the PURC Regulatory Social Policy."

This is the limit of the social requirements of AVRL and there is no mention of how this might be evaluated or what sanctions might be applied if such requirements are not observed.

Evidence presented by AVRL at the MTR indicated that the number of connections has increased (AVRL 2009). However, none (or very few) of these were attributable to the UWP as there had not been much investment in infrastructure at this stage. As noted above, to obtain a connection is a bureaucratic and expensive process (as highlighted by the FGDs in Obuasi). Poor households often live in rented accommodation and it is the landlord that would have to arrange the connection. It was reported informally that many connections are obtained through unofficial means, which can be both quicker and cheaper. When the bulk system is strengthened and extended (usually as a result of donor funding), more households opt to apply for a household connection, for which they pay. So, new connections are financed largely by households and increases are largely due to greater demand as a result of investment in the bulk water system which is not due to the UWP at this stage.

It may be that the UWP will lead to greater demand for connections once the capital works are underway and yielding improvements in bulk supply. The fact is that there is little information in the civil works programme or in the project document that relates to the detail of how to reach those most in need. Whilst one of the PDOs is to increase connections, the UWP is vague in terms of how they will serve poor households. It is not specified if free or subsidized connections will be provided under the UWP. The connection increase since the start of the contract with AVRL is mainly to those that can afford to pay for a connection. **Table 2.8** shows the distribution of connections since the start of the management contract. Only a small proportion of connections are standpipes and the majority are household connections (for a more detailed discussion of the role of standpipes, see section 1.4.3).

AVRL was implementing a disconnection programme in the event of non-payment according to rules set out in the Customer Charter. In interviews, we found that the perception was that those disconnected were not forced into hardship as a result. The view was that users had chosen not to pay, rather than that they could not afford to pay. In addition, some were probably not receiving water anyway due to the weaknesses in the distribution system. There is a risk, however, that disconnections force poor households to use unsafe water sources. Further research is required to determine what happens to those who are disconnected to understand the equity implications of this policy. The PAD described the requirement for three national stakeholder surveys which would generate social impact indicators – one at appraisal, one just before the MTR and one just prior to the Project Completion Date. These were to produce "comprehensive social impact indicators and

[30] This view is based on interviews and a review of a *draft* of the management contract. The actual signed agreement was not available.

changes on stakeholder attitudes during implementation" (World Bank 2004e, p.13, para 48). Despite repeated requests for information on the pro-poor targeting mechanisms of this project, we have not seen any trace of such a study.

Table 2.8 Distribution of Household Connections and Public Standpipes

	June 2006		June 2009	
Regions	**Households**	**Standpipes**	**Households**	**Standpipes**
Greater Accra Region	91,130	244	104,463	257
Ashanti Region	35,166	400	42,559	537
Western Region	11,599	364	12,986	405
Central Region	13,462	892	16,229	1,178
Eastern Region	13,681	427	13,881	417
Northern Region	4,796	71	11,670	213
Volta Region	10,762	608	13,619	689
Brong Ahafo Region	6,844	487	8,111	500
Upper East Region	3,270	19	4,455	25
Upper West Region	1,018	57	1,287	60
Total	191,728	3,569	229,260	4,281

Source: Documentation provided by AVRL

2.3.3 Capacity Building and Project Management (US$7.7m)

This component includes training for GWCL staff (US$2m), technical assistance (US$2.5m) and support for PURC (US$1m) as well as smaller components such as vehicles and office equipment. AVRL has prepared a training plan and has started carrying out training programmes for its staff. Although a copy of the training plan was not available to the study team as at the time this report was being compiled, AVRL reports an annual increase in the number of training days and staff trained from 2006 to 2009. We were informed by AVRL that the content of training delivered was generic and not tailored to addressing pro poor issues.

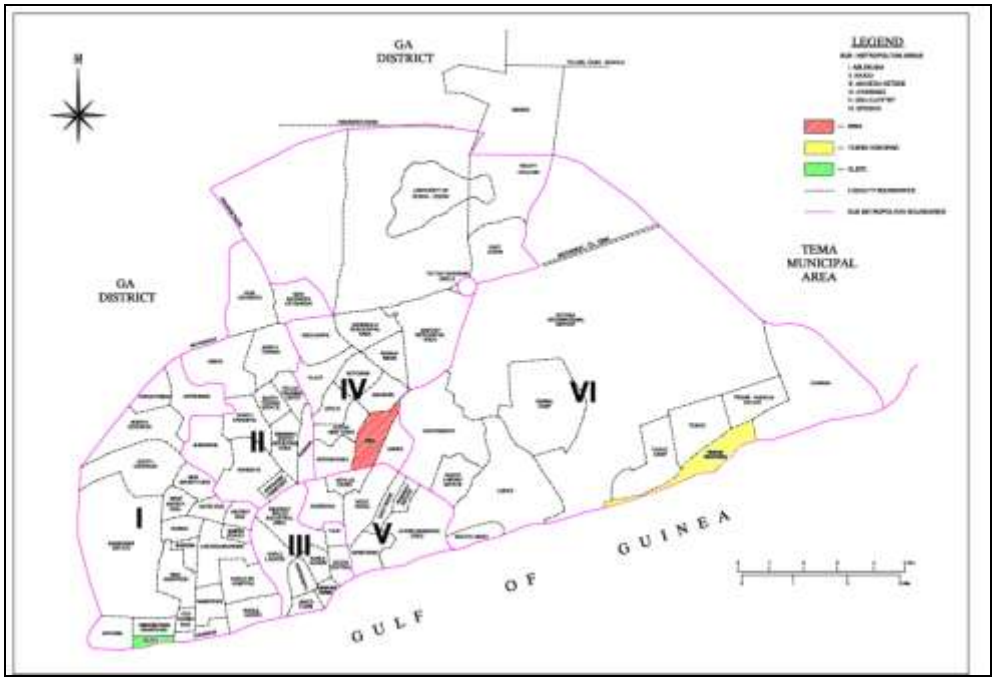
The lack of pro-poor orientation of GWCL was seen as a critical risk to the project impact that would be mitigated in training in pro-poor interventions. However, it seems that training needs are so great on fundamental financial and technical issues[31] that reaching poor households will not be part of training under this project. Although the PAD had proposed capacity development to improve orientation of the utility service provider towards addressing pro poor issues (p.9), elsewhere, in the PAD it is stated that the training needs would be up to the Operator to determine, once appointed. Provision for pro-poor training did not feature in the management contract of AVRL.

[31] The need to improve capacity in these areas was highlighted in the Statement Issued by Ministerial and Development Partners Roundtable at the 1st Ghana Water Forum, Accra, 22nd October 2009

Capacity-building for the regulator, PURC, covers a number of activities including strengthening their website and establishing regional offices as well as the provision of training and programmes to raise consumer awareness. As discussed above, PURC are leading social policy in the delivery of water. As far back as 2005 when the PURC published it social strategy, it announced a plan to pilot interventions in low income communities (PURC 2005 social strategy paper) and this is receiving funding under the UWP - although at just US$200,000 this is a tiny proportion of the total budget (US$120m).

The pilot projects funded under this component are located in three low-income communities in Accra namely: Teshie (Nshorna), Nima and Glefe and the aim is to establish and then assess community management of urban water delivery (see **Figure 2.1** for location of communities). The selection of these communities was based on a number of factors including the strength of community organization, availability of local water supply capacity, extent of current service shortfalls and/or existing collection rate, impact on existing secondary suppliers, ease of construction/connection of pilot intervention (PURC proposal, undated).

Figure 2.1 Map of Accra



Source: Presentation by The Consortium during the Mid Term Review of UWP, August 2009.

The baseline studies established a bleak picture of the water supply situation in the three pilot communities and concluded that residents were willing and would be able to afford water supply services tailored to meet their needs i.e. uninterrupted water supply and buying "by the bucket" at affordable rates.[32]

In the short term, it was not considered realistic to extend the distribution network infrastructure to poor areas so these pilots focus on taking water directly to public distribution points established under the project. The project will involve the construction of bulk water storage facilities (polytanks) and use of water tanker services (Nima and Teshie), extension of service lines (Glefe) and erection of standpipes and water kiosks in the three beneficiary communities. The idea is that these are placed so as to be accessible for tanker service to storage points.

A key output of the community entry and sensitisation activities has been the establishment and training of Water Boards and Water User Associations in all the three pilot communities to operate and manage facilities to be installed under the project. The Water Boards have been mandated to set water tariffs based on their operational cost. Although no tariffs have been fixed yet, there are indications that the tariffs could be higher than the GWCL approved tariffs, given the anticipated cost of water delivery.

This pilot project is critical in establishing alternative options including community management for providing water delivery in low-income urban communities. These are areas of high water poverty and were selected following a review of deprived areas by PURC. However, there were some aspects of the projects which raised concerns regarding sustainability. In the rural water sector in Ghana, membership of the Water Boards is by election. PURC reports that membership of the Water Boards under this project was based on nominations by existing community based organisations and representatives such as landlords associations, assemblymen, traditional authorities etc. In Glefe, the Water Board had been established as a sub-committee of the landlords association. This arrangement

[32] This phrase is used to identify consumers who buy water in portable plastic containers.

excludes the poor from participating in decision-making and so is unlikely to represent their interests and could threaten the independence of the Board.

In Teshie, it was reported that there were about three assembly members of the Water Board. Given the political nature of the election of assembly members, their membership on the Water Board could cast doubts in the minds of residents about the neutrality of the Board. In addition, it was revealed that all the Water Boards do not have constitutions. Involvement of local government authorities in the activities of the Water Boards was low. The baseline study found strong support for women as water supply managers. Women were perceived by community members to have a higher ability to manage water systems because they are assumed to be better managers of domestic resources and they spend more time within the home environment as compared to men. However, the management of the process seems to be dominated by men, although we were informed by PURC that the communities have been instructed to include at least one woman on the Water Boards. It is not clear that these Boards will adequately represent the most marginalized.

Another critical challenge to the sustainability and replicability of the pilot projects is the lack of ownership of the intervention by GWCL. Although a working group with representation from PURC, AVRL, GWCL/PMU and WaterAid Ghana had been established to coordinate the implementation of the project, there are doubts about GWCL's commitment given its inability to find a replacement for their representative on the working group who had resigned from GWCL over a year before our research.

Water supply in these areas is dominated by informal private providers who stand to lose out from the introduction of the PURC projects. It is not clear how such vested interests will respond to the introduction of the pilots. When this subject was raised in stakeholder interviews, the view typically expressed was that the community would bring any illegal activity to light. It was reported that some such providers had managed to infiltrate membership of the Water Boards but had been exposed by community members. The approach of the pilots is demanding on communities.

The UWP is also providing support to PURC to rationalise lifeline tariffs to better target poor consumers living in compound houses and enhance the quality of tanker service delivery, including rationalizing the cost of service. The results of these interventions are yet to materialise. In a bid to rationalise lifeline tariffs, PURC is educating existing and prospective landlords to develop houses to allow for multiple household connections for tenants within a given house. PURC is also engaged in dialogue with tanker operators and GWCL in a bid to establish more water hydrants located in areas of poor supply to reduce cost of water supplied by water tankers.

It was originally anticipated that these pilot projects would be completed prior to the mid-term review of the UWP to enable lessons to be fed into the implementation of the SYIP but it seems that the timing will prevent this happening effectively.

At the time of this review, in November 2009, civil works had yet to start in the pilot projects and it would be several months before any kind of assessment could be made. Furthermore, the process of the baseline study and community sensitization in the three localities had taken more than a year to complete and there would not be time to replicate this process in other areas before investments in the SYIP would take place. These pro poor projects have suffered setbacks due to delays in procurement processes. PURC reported that baseline studies, community entry and sensitisation activities, technical design and tendering of proposed civil works had been completed at the time of this research (November 2009). PURC was at the time of this research in the process of obtaining a "no-objection" from the World Bank on the procurement of contractors before civil works could start. While there may be an attempt to roll out these pilots at a later date, this will not be achieved effectively in the duration of the UWP

2.4 Key Issues

2.4.1 How well does this project serve low-income households?

The bulk of project funds have been set aside for civil works. Clearly, funding for bulk water is urgently required as water provision is crippled by intermittent supply and dubious quality, but the extent to which this will benefit poor households is yet to be seen. The timing now is such that the findings from the small pro poor pilot projects will not emerge soon enough for lessons to be included in a national roll out in the SYIP. The detailed socio-economic studies that were to be undertaken were not carried out. Our findings from Obuasi indicate that resources can be wasted without careful consultation with the target communities. In addition, the reports from the baseline and community entry studies for the PURC projects demonstrate that communities can incorporate numerous interest groups which can often be conflicting. While the importance of community ownership is widely acknowledged, achieving this in practice can be difficult in transient communities that lack cohesion.

The main achievement of the UWP in terms of promoting inclusion is in boosting PURC and its social policy. While the limitations of the project in reaching poor households has been widely referred to above, the process of implementation, for example, with the PMU required to employ a Low Income Customer and Safeguard Officer (p.7), has increased the profile of reaching low-income households. The PURC pilot projects look set to make a significant impact on poor households. Most importantly, communities have been involved at all stages and so the interventions are innovative, having been designed to suit their needs. Furthermore, the approach of the PURC is to treat this as a learning experience, so results will be monitored and lessons evaluated. However, only a tiny amount of the project funds have been allocated to this.

2.4.2 Implementation: Processes and practices

Implementation has been extremely slow. The project was originally scheduled to be completed at the end of 2010 with 89% of disbursement by the end of 2009 but has since been extended to the end of 2012 (World Bank 2011a). Implementation of civil works was in part delayed because the scope of work was reviewed and additional works introduced during the early stages. Notable among these works was the preparation of a Strategic Investment Plan (SIP) to identify and assess the overall physical and investment requirements for rehabilitation and expansion of the existing 81 urban water supply systems to meet their short term (2011) and long term (2015, 2025) water demands. These studies took almost one and a half years to complete.

Slow implementation was also attributed to changes to the procurement system. The start of the project coincided with the enactment of Ghana's new Public Procurement Act of 2003, Act 663. As a result, a series of capacity building programmes on the new public procurement system had to be organised for all procurement entities including GWCL. Further to this, the World Bank nullified the award of all ten FYIP contracts awarded under the UWP through national competitive tendering due to non-compliance with the procurement process (Ref: – Interview with former Director of PMU). It was also revealed that it took some considerable time to receive a "no objection" from the World Bank for the award of contracts. The remaining three contracts for the FYIP were awarded through international competitive bidding (ICB). One of the ICB contracts was terminated by the PMU for non-performance by the contractor and the civil works for this was rolled unto the SYIP. All these reasons accounted for the loss of almost two years of the project lifespan.

The UWP follows the procurement procedures of the Government of Ghana for national competitive bidding only but refers the outcome of the procurement process to the World Bank for prior review and approbation in the form of "no objection" for contracts above determined thresholds. The World Bank uses its own rules for ICB. To speed up domestic procurement processes, the PMU has secured a special dispensation from the Public Procurement Authority for the Board of Directors of GWCL to

approve tenders rather than resorting to the Ministerial Tender Review Board in cases where the tender process is subject to external scrutiny (in this case by the World Bank). The waiver was introduced in order to fast track the procurement process for civil works under the project. While this may have led to increased speed in some areas, processes are still slow. For example, during our research we were told by the community in Teshie they had been waiting several months for approval of the contractor to start civil works.

During interviews for this research, we asked stakeholders what they thought were the main reasons for slow implementation. Some suggested that there are bottle-necks within the PMU which has a very small staff and yet is involved in all aspects of the project. Others suggested the difficulties lie elsewhere in government with documents waiting for several weeks for an approval signature. The recommendations from the 2009 Ghana Water Forum included streamlining the Government's lengthy procurement processes.[33] Still others suggest that the World Bank is the cause of delay as the process to secure a 'no-objection' can entail referral to Washington which can take a long time. Certainly, the UWP is administratively demanding as it covers the implementation of numerous contracts across the whole of the country incorporating capacity-building and civil works involving a number of institutions. The dispersion of project funds means that the amount received in some regions is small. Other donor projects tend to have a narrower focus both geographically and in their scope which may lead to speedier implementation.

2.4.3 Access, Affordability and Pricing

In Ghana, it was widely reported in interviews for this research that the main constraint for poor households was not affordability, but access. Households pay high prices to alternative water providers and are reported to be happy to pay a cost recovery price to GWCL in return for a regular safe water supply, as this is lower than the price they have been paying. This perspective has been incorporated into the tariff policy where PURC has deliberately not supported connection subsidies on the grounds that the supply constraint is with the water infrastructure and if this is improved then households can afford to connect themselves.

If the UWP does not reach poor households, IDA funds will just improve water supply for those already connected and fail to reach those most in need. However, reaching poor households is complex. First, it is not just about providing standpipes. These need to be situated and designed to support the needs of poor households. In Obuasi, these became quickly obsolete as our research indicates (e.g. due to poor water quality and availability of more attractive service options). Second, urban poor communities are often transient and reaching poor households to secure payment can be challenging. In Glefe, prior to the PURC pilot projects, GWCL established four standpipes to be managed by the community in 2006, but after a year, three of these had run up large debts to the utility and were soon disconnected (PURC proposal, undated). Our research found that some standpipes in Obuasi stopped operating soon after construction, because they were used so little that the operator had no incentive to keep them running. This does not mean that standpipes should be rejected, but that pricing and payment need careful consideration. In addition, greater discussion with beneficiary communities may lead to more sustainable and widely used investments. Finally, the bureaucratic process makes a household connection difficult to secure particularly for marginalised households mainly because of the need to have a site plan. Most poor residents are tenants. It was reported to be far easier to pay a bribe to secure a connection than to follow official procedures. These constraints to household connections are not addressed by the UWP.

[33] Statement Issued by Ministerial and Development Partners Roundtable At The 1st Ghana Water Forum, Accra, 22nd October 2009

Whilst it has become conventional wisdom in Ghana that poor households can afford to pay a cost recovery price, they just need access, there is no detailed analysis of the most marginalized households to see if this is the case. An article published by the IRC presents observations from Oyibe, a peri urban settlement in Ghana, which indicates that a small price increase, of just one pesewa equivalent to half a Euro cent, led to reductions in consumption among poor households (McIntyre 2009). While this is not a rigorous statistical study, it suggests that affordability may be a constraint to the poorest households. Evidence cited above indicates that tariff subsidies fail to reach the poor because mostly these are not connected to the piped network. But, the picture is more complex as many rely indirectly on piped supplies, and cost increases will be passed on to poor households which buy by the bucket. Providing water by tanker to areas where the distribution does not reach is an appropriate and immediate way to reach poor households. However, it is expensive and subsidies may be required to ensure affordability.

2.4.4 Targeting

There are two main elements to targeting in the UWP. First, the funds for capital investment are allocated across regions and systems according to criteria designed to ensure that they go to more deprived areas. This system of allocation shows clearly that finances are directed to areas of greatest need at the system or town level. Second, the PURC pilot projects are targeted at deprived areas. Targeting is on a geographic basis in the UWP. There are no attempts to identify particular cases by household type or income. While this makes the process simpler, there are leakages. The civil works may go to more deprived areas in terms of income and investment from GWCL, but they may not be the most deprived in terms of water. In addition, the *distribution* of water resources within regions and water systems needs to be a factor in identifying areas of water poverty. There seems to be some recognition of this in the PAD but these details do not feature in the project objectives and need to be more firmly anchored in the project structure if they are to have genuine impact.

The project objective of 50,000 more connections needs to be fine-tuned to reach poor households. The details of who benefits, and how, need greater consideration. There is awareness of this as implementation is progressing. Policy makers are now talking in terms of 500,000 more people receiving water, so there is an awareness of the fact that the type of connection is important (although this is not a specific revision to the project target). The PURC pilot projects are more sophisticated in reaching deprived areas, but our analysis above raises concerns as to whether these reach the most marginalized as the system management is at risk of capture by local elites.

2.4.5 Sustainability

It was too early to comment on sustainability of the UWP as at the time of our research, most of the project had yet to be implemented. However, what little we have seen in Obuasi raises questions of sustainability given that some stand posts are no longer operational after just a few months. Pro poor issues are at a delicate early stage in policy and need to be more strongly anchored. The pilot projects need to be carefully monitored and findings incorporated into mainstream policy.

2.4.6 Accountability for pro-poor services

Pro poor service is being led by the regulator, PURC. Part of the reason for PURC pushing the pilot projects is the need for a champion to promote equity in service delivery. PURC are leading a group of policy makers and NGOs in the promotion of pro poor service delivery which meets regularly. Reaching poor households is a learning process and PURC acknowledge this, building on earlier work for example, applying lessons from the W4L project in Teshie in their pilot projects.

The absence of GWCL in pro poor policy forums is noticeable. The PMU was supposed to have a Low Income Community Services officer, but this post was empty for some months. The PAD cites as a key risk (the first one listed) that the project will not achieve its objective the possibility that: "GWCL pays inadequate attention to the pro-poor issues thus limiting the impact of the project on improving access to the urban poor". The risk mitigation measure to address this risk is to: "Improve orientation of GWCL through capacity enhancement towards addressing pro-poor issues" (World Bank 2004e, p. 9). The risk rating with mitigation is classified and 'modest'. However, as discussed above, no such training is taking place.

It was mentioned that there may be plans to establish a pro poor unit in GWCL under AVRL, but it is not clear that it will be sustainable without more commitment from the utility. Simply establishing a unit in an institution that has shown no obvious interest in such issues may turn out to be another bureaucratic process. PURC has taken the lead in social policy in water but this needs to be implemented by GWCL. The roles of the institutions are blurred. PURC has proved an able champion for pro poor initiatives, but as a regulator, it needs to be able to hold GWCL to account for implementation.

2.4.7 Policy emphasis: Financial/Engineering/Social (including on-lending)

The emphasis of the UWP is on civil works, which receives the majority of the finance, and on the financial performance of GWCL. These two themes dominate and social policy is neglected. While project targets include an increase in the number of connections, the outcome indicator is that urban centres receiving civil works add at least 50,000 new connections or stand posts (World Bank 2004e, Annex 3). As discussed in section 3.2, the location and beneficiaries of this are not specified in the PDOs or the results indicators. While poverty is mentioned extensively in the project design (PAD, World Bank 2004e), both design and implementation pay little attention to the detail of reaching poor households. There seems to be an implicitly assumed trickle-down process that is expected to emerge from investment in capital works and setting up a management contract.

However, there are several linkages implicit in such an assumption. First, the capital investment needs to be sufficient to make a major impact. In the assessment of the project's Critical Risks, the Bank observes that the project impact may not be achieved if "Investment needs far outstrips available funding" (sic) (p.9). The Risk Mitigation measure for this is that "Restoration of GWCL to sound financial footing will improve availability of funds for investments and attract further sector investments." Even with mitigation, this risk is classified as substantial. Second, it is not clear that the management contract has restored GWCL to a sound financial footing. Certainly NRW remains high. It is not a viable policy option to wait until the problems with bulk water and the financial issues of GWCL are dealt with before addressing the needs of poor households. These need to be pursued at least in parallel if not as a priority and need not use up large amounts of resources as the PURC pilot projects demonstrate.

2.5 The role of IDA

The World Bank has played a key role in the design and financing of this project which had explicite pro-poor objectives . However the lack of follow up, socio-economic analysis, consultation and technical support has meant that in the end the project outcomes are not pro-poor. Slow implementation is also a barrier service provision for poor households. While the PURC pilot projects show promise in terms of reaching those with greatest water deprivation, it is not clear how the lessons learned from this activity will feed into the rest of the UWP.

A key feature of IDA's participation in Ghana's urban water sector – at least on paper - is a kind of excessive optimism which does not seem to be justified by reality. For example, the PAD (World Bank 2004e) is extremely positive about the approach of GWCL to low income households – in contrast to our research findings:

> "The GOG considers service to existing and new low income customers to be a major water sector priority. As such, it continually evolves policies to promote low income household connections to the piped water network and it charges for water according to a tariff schedule (both for connections and at standpipes) that recognizes low income household budget constraints. It also directs a major part of its annual investment program to increase the number of low income households with access to its piped water network" World Bank PAD p. 73.

Similarly the PAD presents a financial model based on a project case scenario where NRW falls to 44% and connections increase by 50,000 in accordance with the PDOs. The figures show, perhaps unsurprisingly that GWCL will at that point become financially sustainable. However, NRW was still more than 50% in 2009 compared with a target of 40% (according presentations at the UWP MTR).

Even in 2009, the World Bank's Status of Projects in Execution (World Bank 2009a) is upbeat about the project saying that "significant progress has been made towards achieving the objective of restoring long-term financial stability, viability and sustainability of the Ghana Water Company Limited" (p. 8) while the difficulties that have been encountered such as the two-year delay and the disagreement over baseline figures with AVRL, do not receive a mention.

This positivity regarding the ease of implementation and anticipated benefits of the UWP seems to reinforce the picture of a strong desire for the project to achieve, but with insufficient attention to the complexities involved and little regard for the impact on low-income households.

The interim project results which have been issued since the end of our research (in March 2011 – World Bank 2011b) demonstrate that reaching the poorest was not a core objective. Overall the project is rated "moderately satisfactory". This is because a number of boxes can be ticked:

- Meeting 100% of cash obligations from collected revenues in the five largest cities;
- 64 community water points constructed or rehabilitated under the project
- 9,200 new piped household water connections resulting from project interventions
- 60,000 people in urban areas provided with access to improved water sources under the project
- US$30 disbursed invested in civil works
- 5-year management contract was carried out
- A Water Directorate was established in the Ministry
- Three pro poor projects were established under the PURC in Accra
- The number of GWCL staff per 1,000 connections was reduced from 15 to 7.5

Overall, the project seems to be a success looking at this data, although much of it still has to be verified by consultants. However, these numbers do not show that the project has benefitted those on low-incomes. While 9,200 new piped household connections have been achieved, it is not possible to know who has benefitted from these. Our understanding from PURC is that households pay the costs of connection and so these new connections would have been paid for by households that perhaps are now within reach of the network as a result of UWP investments, but this rules out the most marginalised and poorest. Meeting cash obligations from collected revenues has been achieved in part by disconnections. The Water Directorate is understaffed; the three pro poor

projects are only a tiny element of the overall grant. There is no mention in the evaluation of the effects on poor households. The poverty elements that were considered so important in the early sections of the PAD have fallen by the wayside.

2.6 Conclusions and recommendations from the Ghana study

2.6.1 Conclusions

Water delivery in urban Ghana is caught in a downward spiral of poor service delivery and low payments. Weak infrastructure is inadequate to provide sufficient water for the growing demand. A strong network of illegal connections proliferates in a context of unreliable and intermittent supply with water 'entrepreneurs' siphoning water to creating a shortage and thus a market which they can then 'supply'.

While the UWP will provide much needed funds for investment in the water sector, based on our assessment it seems that targeting is more difficult than the PAD seemed to anticipate. **Indeed, the main finding is that the extent of the challenge of reaching the urban poor was not adequately addressed at the start of the project.**

There seems to be an implicit assumption that by improving bulk water and the financial performance of the utility, improvements in delivery to the poor would emerge as a by-product. However these are tenuous linkages. Special measures are required to reach poor households. Innovation and pragmatism are important.

Whilst efforts were made to target the capital expenditure to those regions that need it most, without a detailed assessment of water use in the area, our research in Obuasi suggests that this is not reaching those who need it most. Meanwhile, those in poor districts in Accra who desperately need the water supplied by the UWP have had implementation extensively delayed due to the cumbersome bureaucratic processes.

It was only PURC, the regulator, who had already started operating a social policy that have spent the funds on careful targeting to reach those most in need and this is a tiny proportion of the total project. While PURC has made significant progress in highlighting pro poor issues, greater commitment is needed from the utility itself, GWCL.

2.6.2 Recommendations

For policy level:

- The government needs to commit to time-bound targets for reaching poor households backed up with sufficient resources. Just having a pro poor policy means little without resources, detailed planning and monitoring and evaluation.

- The targets themselves need to be carefully considered. Merely establishing standpipes is not enough to secure access; as well as the siting of stand posts, water quality and regularity of supply are also important. Activities need to be focused on the specific needs of low-income households.

- While connection subsidies can be an effective means of targeting poor households, they may not be appropriate in Ghana at this stage. For a connection subsidy to provide a means for poor households to access water, it has to be the case that the cost of connection is the only obstacle to reaching the piped network. In Ghana, there are currently additional obstacles. The bulk water supply is fragile with frequent breaks in supply. Some poor households are situated far from the piped network. The bureaucratic process involved in securing a connection rules out many poor households, especially those in rented accommodation. For these reasons, a social connection fund may not be the best approach to serving poor households until some of the further constraints are removed.

- The PURC pilot projects present great innovations for reaching those most in need, but the projects need to be carefully monitored. The extent to which they represent the interests of the most marginalised needs to be assessed before the projects are rolled out across the country by GWCL

- Reaching low-income households needs to be higher up the policy agenda. This means establishing a dedicated unit. The roles of PURC, AVRL and GWCL in reaching low-income households need clarification. PURC has promoted social policy and implemented the pilot projects under the UWP. AVRL has an interest in social provision, particularly with its support for the NGO, Water for Life. GWCL has shown little commitment to reaching poor households. The utility needs to be the service provider while the regulator sets standards to hold the utility to account.

- The tariff structure needs to be reviewed and revised to prioritise low income households. The current increasing block tariff does not benefit poor households (e.g. due to multi-occupancy).

- We encountered a number of difficulties in accessing information. Transparency is essential for effective civil society engagement.

<u>For project level</u>:

- The UWP is long on rhetoric and short on detail when it comes to reaching the urban poor. While there is ample reference in the PAD on reaching the urban poor (see paragraphs 31, 48, 74) these are not followed through in implementation and fail to be mentioned in the Results Framework so there is no requirement for monitoring of the pro poor impact. Reaching poor households needs to be one of the key starting points for IDA support, of equal status with utility strengthening and financial goals, rather than assuming that greater access will be some kind of fall out from improved financial management and more investment. Without tackling the constraints that poor households reach, IDA support will simply serve more wealthy areas and households.

- The absence of baseline data has made project evaluation difficult. This needs to be a prerequisite for future interventions and to effectively monitor progress. This has also been a source of tension between AVRL and GWCL with neither side sure of the facts.

- Better background research would make the pro poor impact more effective. For example, an understanding of the constraints to access for poor households would enable better targeting. Similarly, a review of capacity needs within GWCL would clarify the limits to

which the lack of a pro poor perspective of utility staff could simply be addressed by training without regard to other more pressing training needs.

- The impact of the UWP has been diluted in an effort to broaden the reach of the project. The total amount dedicated to system expansion is around US$65m. When spread over ten regions, the average amount is just $6.5m and this high level of dispersion is a major administrative challenge, with the PMU required to execute the tendering of a large number of projects. There are trade offs between dispersion and concentration of funding allocation.

- There are mixed messages with the promotion of full cost recovery and pro poor service delivery. These are treated completely separately in the PAD and in implementation. There may be a disincentive for utilities to supply low income households where performance is measured only in terms of financial goals. Projects need to address these potential tensions. Detailed targets for expansion of access to target groups need to be incorporated in Project Appraisals at least as much as financial goals and to be carefully resourced and monitored.

- In future projects, IDA could put more emphasis on project preparation, for example in collating baseline data, in assessing training needs and analysis of constraints to access for poor households, so that project design is better tailored to improving conditions on an equitable level. The focus of the UWP has been on improving the performance of GWCL and social provision has been a side issue. An alternative approach would be to start with the impediments faced by those that lack adequate access to safe water and then to consider how Bank support could best be used to improve conditions for poor households.

3 Burkina case study

This section has been written by **Peter Newborne**, Research Associate to ODI. It draws heavily on the 2010 report from Burkina written (in French) by **Dr. Claude Wetta** of the University of Ouagadougou and **M. Djimé Fofana**, independent sanitary engineer (Wetta and Fofona, 2010), as well as the updating information supplied by Dr. Wetta in Autumn 2011.

For the purposes of the mapping exercise described in section 3.4.2.1, Dr. Wetta worked with Monsieur Michel Koné of the *Institut National de la Statistique et Démographique*-INSD and Madame Aude Nikiéma of the *Institut des Sciences des Sociétés*-INSS.

Updating

In 2011, the contextual information studied by the researchers and considered in section 3.1 and this chapter overall has been supplemented by ONEA making available the report of the international consultants, ICEA/SOGREAH, referred to in section 3.3.2.1 (ICEA/SOGREAH, 2008 - this report was not made available to the researchers at the time of the research in 2009).

In 2010 and 2011, the University of Ouagadougou has benefitted from further discussions with ONEA, at which the INSD was also represented.

Summary of chapter

In the six years of the 'Ouagadougou Water Supply Project', 2001-2007, commonly referred to as the 'ZIGA' project, the strengthening of the capacity of the water utility in Burkina, 'ONEA', resulted in significant progress in extending water infrastructure and services in the peri-urban districts of the capital city and largest urban centre, Ouagadougou. The number of people in the city with improved water access was doubled. Since 2009, a new phase of investment in urban water supply has begun. The 'Urban Water Sector Project' (referred to in the present report as the 'new' project) aims, over a further six year period, 2009-2015, to also expand distribution and access in three cities in Burkina - Bobo-Dioulasso, Kodougou and Dédougou - as well as further extending water distribution in Ouagadougou.

Together with a reduced tariff for the first tranche of residential water consumption, a key element of ONEA's policy is a subsidy to stimulate demand for household connections, called 'social connections'. This subsidy is made available to all households in the areas of the Ouagadougou beyond the centre that express the desire to connect - i.e. the subsidy is not targeted to any peri-urban districts or customer income categories in particular. The responses from focus groups conducted by the present study in surrounding areas (far from the city centre) suggest that, even with the subsidy, the reduced price is still not affordable by some poor households.

In 2007, a survey conducted for ONEA by international consultants collected data on the 'socio-economic profile' of households in Ouagadougou and other urban centres in Burkina. The consultants' report confirmed Ouagadougou as a city with identifiably different levels of wealth/poverty. In designing the new project, however, this socio-economic data was not utilised to inform a strategy for targeting low-income areas and households. The subsidy continued to be applied universally. As such, in the Ouagadougou context, it is too blunt an instrument to achieve the goal of equity set out in national water policy. Treating all customers' requests for connection to the network 'equally' will not achieve equity. By not filtering out relatively wealthy households from their current eligibility to benefit from the social connection subsidy, **people in poor peri-urban areas of the city are being made unduly to wait for improved access**. ONEA is also missing out on revenue - which does not help it in its objective of maintaining financial equilibrium.

Analysis of the socio-economic characteristics of urban districts and households needs to actively inform the provision by ONEA of water services for different water users. To-date, there has been, for example, no attempt by ONEA at poverty mapping for geographical targeting purposes, taking account of both formal and informal areas. Nor does ONEA currently organise customer data by income category. This means that, despite the progress it has achieved in installing water infrastructure and extending water services in Ouagadougou, it is unable to measure the benefits to low-income households in the city. As argued in this chapter, ONEA needs to further develop and deepen its social policy, including organising its client data so as to take account of the differing situations of the people it serves.

ONEA has sought to justify its lack of a city-wide targeting strategy by the sweeping characterisation that the population of the 'service territory' of the ZIGA project (17 peri-urban districts covering a large part of the city) was uniformly poor. This suggestion that poverty exists in Ouagadougou in a homogeneous form is surprising and misleading, e.g. significant areas in the east of the city are very poor, while some districts beyond the centre are relatively well-off. This view has not been challenged by the World Bank (section 3.6).

The objective of targeting low-income households needs, further, to be recognised in the performance contract between the Government of Burkina and ONEA, with the Ministry of Water Resources (MAHRH) supporting and incentivising the articulation by ONEA of a national plan for targeting low-income households, by a combination of geographical targeting of poor areas and targeting of poor households by household characteristics (as per Table 1.3 of the present report). Thereby, ONEA could achieve a balancing of commercial and social goals without neglecting equity.

This chapter reviews two projects in Burkina Faso carried out by the urban water utility and funded by the International Development Association (IDA) of the World Bank: one begun in 2001 and concluded in 2007 and one begun in 2009. The chapter first outlines the context of the research before moving to a review of the policies and strategies governing the water sector in the country. This is followed by a detailed analysis of the design of both projects within the context of the 'social policy' of the water company, 'ONEA'. The next section looks in detail at project implementation, referring to a water poverty mapping exercise, as well as citing findings from focus groups conducted by this research study. The subsequent assessment of the projects notes the positive achievements of the 2001-2007 project and discusses its lessons for the ongoing 2009-2015 project as well as the further development and deepening of ONEA's social policy which - this chapter argues - will be needed for targeting of low-income households in low-income areas for their inclusion in affordable access to water supply and sanitation in line with the goal of equity in national policy. The penultimate section considers the significance of the IDA support to the projects in Burkina. The final section sets out conclusions and recommendations.

3.1 Background; Context

3.1.1 The projects

The Burkina Faso case study focused on two utility projects supported by the International Development Association (IDA), **the Ouagadougou Water Supply Project 2001-2007 - commonly known as the 'ZIGA' project**[34] - and **the Urban Water Sector Project 2009-2015**, approved in 2009 - referred to in the present report as the 'new project'.

The new project includes, within its scope, several urban centres in Burkina, although this research has investigated the implications of these projects for the capital and largest city in the country, **Ouagadougou.** The new project consists of both a water supply and sanitation component. The ZIGA project was for water supply only. Water supply is the principal focus of this chapter, although sanitation issues are also discussed.

The objectives of the ZIGA project were, in outline, to construct new infrastructure, for increased bulk water supply to the city, and to extend water distribution networks within it, as well as to help strengthen institutional capacity to manage those networks. The objectives of the new 2009-2015 urban water project in Burkina are, over the further six year period, to expand distribution and access in three cities in Burkina - Bobo-Dioulasso, Kodougou and Dédougou - as well as further extending water distribution in Ouagadougou. The detailed objectives of the projects are discussed in section 3.3.

Between the conclusion of the ZIGA project in 2007 and the beginning of the new project approved in 2009, a period of some 2 years elapsed, during which urban water supply and sanitation (UWSS) operations (and some network extension) were pursued in Ouagadougou from the utility's own revenues and with donor funding other than that of the IDA, for example, funds of the French Development Agency (*Agence Française de Développement* - AFD) accorded in December 2007, and of the European Investment Bank in June 2008.

3.1.2 The utility

Responsibility for delivery of the projects lies with the ***Office National de l'Eau et de l'Assainissement*** **(ONEA),** as the state company leading UWSS. ONEA reports to the Ministry of Agriculture and Water (*Ministère de l'Agriculture, de l'Hydraulique et des Ressources* Halieutiques) (MAHRH).

[34] 'ZIGA' is the name of the village located 50 kms from Ouagadougou where river water is abstracted for the city.

Since 1994, ONEA has been a corporation owned wholly by the state, although run according to commercial principles, with a Board of Directors and, it was intended, enhanced autonomy from government to manage its activities across all urban centres of the country. The Government of Burkina (GoB) has complied with this undertaking to allow ONEA autonomy (within the parameters set by the MAHRH in its contracts with ONEA - see below), by not interfering with investment and staffing decisions and approving tariff revisions in a timely manner (World Bank, 2009b, page 30).

In 2001, when the ZIGA project commenced, ONEA was still 'a small utility, essentially devoted to serving the richest part of the urban population' (Marin et al., 2010). Urban water coverage in Burkina through household connections stood at 32%. ONEA had only about 73,000 active water connections (half of them in the capital, Ouagadougou), which served fewer than 700,000 people nationwide, with 1,600 standpipes serving another half a million (ibid).

In the first years after its creation in 1994, ONEA was criticised for management failings, including low staff productivity, low rates of bill collection and persistent problems in reconciling accounts (PAD for the ZIGA project, World Bank 2001, page 5)[35]. ONEA's productivity, in terms of staff per 1,000 connections, was low (at about 8), with a 15% failure rate in collection of bills from residential customers (Marin et al., 2010).

ONEA operates within the framework of contracts periodically signed with the MAHRH defining ONEA's duties. At the time of carrying out the present research in 2009, the contract ('*Contrat Plan*') was that applying to the period, 2007-2009. This contract is discussed in section 3.3.2.

3.1.3 Water resources in Burkina

In Burkina, bulk water for fast-growing urban centres has to be safeguarded within the context of water resource constraints[36]. Burkina is a predominantly arid country, receiving less than 900m3 per capita annually of fresh water on average and characterised by substantial variation in precipitation, both temporally and spatially. Since 1976, rainfall has been 10 to 20 percent lower than average, resulting in the lowering of the water table by about 0.5m per year. Groundwater is unevenly distributed and can only be extracted from weathered areas above the bedrock and in fractured zones by expensive boreholes with limited yields of about 10 m3/day. As for surface water, the only perennial river is the Mouhoun River. The most common way of storing water for dry seasons is by building hydraulic structures/dams to store water in surface reservoirs, even though evaporation can reach 2,000mm/year. In addition, a substantial portion of surface water resources is shared with neighbouring countries. The Nakambe River (now the main source of supply for Ouagadougou) is shared with Ghana under an action plan to coordinate the use of resources. The trend of diminishing rainfall has been associated with longer, more intense periods of drought, as well as intermittent flooding resulting from short, but intense, precipitation events. Rain-dependent agriculture has come under increasing pressure, leading to migration from rural to urban and peri-urban areas.

3.1.4 Ouagadougou and its water services

The city of Ouagadougou has grown rapidly over recent years. In the period from 1985 and 2000, the population of the city doubled, from 436,000 to 980,000 inhabitants (Wetta and Fofana, 2010).

[35] According to the key informant interviews conducted by the present study, the critics of ONEA's record of performance in the 1990s included staff of the World Bank, among other commentators.

[36] The source for this information on the water resources context is the Project Appraisal Document for the 2009-2015 urban water project in Burkina (World Bank, 2009, p. 24).

The population growth rate between 1996 and 2006 - according to the census carried out by the National Institute of Statistics (*Institut National de la Statistique et de la Démographique* - INSD) - was over 7% and the city increased over seven times in size, from 6,800 hectares in 1980 to c.52,000 hectares in 2006 (*Recensement Général de la Population et de l'Habitat*, INSD, 2006). The result was substantial expansion of the city into new areas beyond the centre, referred to as the 'surrounding areas' - '*les quartiers périphériques'* (also referred to in this chapter as the 'peri-urban' areas).

For planning and administration purposes, the surrounding areas are divided into two categories: the formal, or 'urbanised', areas which are, at a given time, part of the officially recognised city (*les quartiers 'lotis'*), and the informal, or 'un-urbanised', districts (*les quartiers'non-lotis'*). As will be seen in maps referred to in section 3.4.2.1:-

- the city centre comprises the central 'sectors' numbered from 1-13 ('*les secteurs centraux*');
- adjacent to the centre, and forming a concentric circle (roughly drawn) around it, are the surrounding peri-urban sectors numbered clockwise 14-30;
- further from the centre, are located a number of villages (named instead of numbered).

From the mid-1980s onwards, the growth in population in Ouagadougou put increasing pressure on water production and distribution capacity. The persons consulted during this study talked of, during the 1990s, more and more frequent service interruptions, with an urgent need to increase bulk water supply, including the provision of water for new residents in areas surrounding the centre, including many slum areas. These slums are of variable density. Some are characterised by dense dwellings, with narrow, winding access ways and limited space for installation of water and other infrastructure. In other areas, distance from water points (e.g. standpipes) and the water network, rather than congested space, is a key feature.

ONEA's strict mandate is to provide UWSS infrastructure in urbanised areas formally incorporated within city plans. That said, the information supplied by key informants during this study qualified this: the administrative process of urbanisation (*lotissement)* (incorporation of new districts within the official city) is slow and, whilst it takes its course, in practice ONEA has come to recognise that many people live in the un-urbanised areas[37]. In practice, ONEA has, therefore, extended its activities to include residents living in those informal areas: the project appraisal document for the new 2009-2015 urban water project in Burkina refers to the need 'reduce the access bias between formal and informal settlements where, until recently, ONEA did not provide water services' (PAD, World Bank 2009b, p. 20).

The PAD for the new project (World Bank 2009b, page 2, paragraph 6.), discussed in section 3.3.2, adds the following comment on the circumstances in these informal areas:-

> "The population of major urban centres grew annually by more than 5 percent. *Low-income* newcomers frequently settle in areas not covered or even recognised by official urban planning. As ONEA essentially intervenes in formal neighbourhoods, few of them have direct access to water through connections and standpipes and must rely on vendors" (emphasis added).

As for the reference to 'low-income' settlers, despite that stated aim, the design of the new project - just as its predecessor, the 'ZIGA' project of 2001-2007 - did not include analysis of income levels in the urban areas, formal or informal, to be served by ONEA's investments. This issue is further discussed in section 3.2.1.

[37] As will be seen in section 3.4.3, the PAD of the new project acknowledges this.

3.1.5 Poverty in Burkina

The project appraisal document for the ZIGA project provides very little information on poverty in Burkina. The PAD refers (World Bank, 2001, page 10) to urban poverty which, it notes, 'increased by 5% between 1994 and 1998' ('according to a 'national survey in 1998') with 16% of the urban population considered poor at that time (according to the same source). No other general description of poverty is provided in the PAD, which confines its comments to the status of water supply: a connection rate in Ouagadougou, the PAD notes, of 30% (ibid, page 5).

According to official census figures, by 2006 (shortly before the end of the ZIGA project), 40.1% of urban households in Burkina were categorised as 'poor' or 'very poor' by the National Statistics Institute (*Institut National de la Statistique et Démographique*-INSD) (cited by Wetta and Fofana, 2010 on page 9). In its report of that 2006 census, the INSD provided a composite indicator of poverty based on a specified set of variables (reproduced in Annex 5 of Wetta and Fofana, 2010), including nine variables relating to household living conditions (walls, roof and floor of houses; mode of lighting and supply of energy for cooking; means of accessing water and sanitation; and method of waste/wastewater disposal), plus nine variables relating to household equipment/assets. On that basis, the INSD identified five levels of poverty in Burkina, namely: 'very poor', 'poor', an intermediate category, and 'wealthy' and 'very wealthy'. As noted above, in 2006 four out of every ten urban households in Burkina were classified by the INSD as poor or very poor.

Using the same classification of households into five categories of poverty, the present research study carried out the water poverty mapping exercise described in section 3.4.2.1, which was conducted by the University of Ouagadougou in collaboration with the INSD.

As for socio-economic information gathered by ONEA, section 3.3.2.1 refers to the study which it commissioned in 2007 (the survey carried out by ICEA/SOGREAH in 2007). The (limited) extent to which the results of that study were employed by ONEA is also described in that section.

3.1.6 Water tariffs

For water customers connected to the network, the tariff system introduced from 2003 onwards, for domestic customers, included a 'social tranche' (*tranche sociale*). In August 2008, a revised tariff rate was approved. According to this[38], the tariffs for monthly consumption by domestic customers are, in increasing blocks, as follows:- 0-8 cubic metres: Francs of the African Financial Community (FCFA) 188; 9-15 cubic metres: FCFA 430; 16-30 cubic metres: FCFA 509; over 30 cubic metres; FCFA 1040. All customers also pay a monthly fixed fee of FCFA 1,000[39]. It is noticeable that the rates increase substantially between the 1st and 2nd blocks, which makes it particularly important for low-income households to watch their consumption levels.

Commercial and administrative (government/public sector) customers are charged a rate of FCFA 1,040 on all their consumption, the highest of the above tariff levels, which represents a cross-subsidy between major business/public consumers and residential customers.

[38] As per the project appraisal document of the new project in 2009, page 35.

[39] The first 50m3 of domestic consumption is exonerated from Value Added Tax (VAT) which is normally charged at 18% in Burkina (commercial and administrative customers are taxed on their full consumption).

At standpipes, the price of water paid by customers (a regulated price) stayed unchanged since 1997, at 60 FCFA for 220 litres (the size of the barrel or *barrique*, with FCFA 5 for a 20 litre bucket or *bidon*). The standpipe manager/'caretaker' (PAD, World Bank 2009b, p.35) pays a standard rate of FCFA 188 per cubic metre which works out at FCFA 41.36 for 220 litres, allowing the caretaker a margin of FCFA 18.64 per barrel. Households accessing water from standpipes pay the same rate as the tariff applying to the social tranche (for connected households), *plus* caretaker's (or vendor's) imargin.

Any volume-based tariffs such as these require metering, which (according to the interviews conducted by the present study) is a standard item of equipment installed upon new connection to the network in Ouagadougou.

3.1.7 Sanitation in Ouagadougou

As to sanitation, the researchers in Burkina report that "the reality in Burkina is that sanitation and hygiene facilities are at an embryonic state in the country… with little progress achieved to-date in terms of promotion of sanitation and hygiene" (Wetta and Fofana, 2010, page 12). Despite initiatives of the GoB, in 2008 only an estimated 17% of the urban population of the country (according to the official figures in the mid-term review of the Strategic Framework for Poverty Reduction referred to in section 3.2.4). had access to urban sanitation, according to official figures (ibid). In Ouagadougou, "the city has long faced major public health problems due to lack of infrastructure" with "problems of disposal of human excreta, wastewater and solid waste" (ibid).

To fund urban sanitation, the GoB introduced, in 1985, a 'surcharge[40] on water bills of 21 FCFA per m3 of water sold, applying to all ONEA's urban customers - a system of cross-subsidy to provide finance for construction of urban sanitation facilities, as set out in the strategic sanitation plans for urban centres including sewerage and urban drainage, as well as on-site sanitation (see section 3.2.2)

ONEA has also received support for sanitation activities from donors other than the IDA, including the African Development Bank (AfDB) and the AFD.

This research study on Ouagadougou included consideration of the status of sanitation facilities resulting from the ongoing activities of ONEA (not funded by the ZIGA project), as well as the design of the sanitation activities planned under the new IDA-supported project, although, as alluded above, the attention of the researchers was primarily focused on issues relating to water supply. Here 'sanitation' refers to *on-site* sanitation - availability of latrines (household and public, in e.g. schools and markets) - and also, to a lesser extent, on drainage/evacuation of storm water and solid waste collection/disposal.

3.2 Inclusion' in national policies and strategies

3.2.1 Water policy

In 1998, the GoB identified provision of potable water facilities to urban settlements as one of its priorities. The subsequent Letter of Sector Policy in 2001 recognised the economic and social nature of water, at the same time identifying the strengthening of ONEA, as the responsible national agency as a primary objective (Wetta and Fofona, 2010, page 20). Under the Decentralisation Law of 2004, the general responsibility to provide water and other urban services lies with local authorities (at the level of the *communes*) who are not expected to deliver services by themselves,

[40] Called in French « *frais pour services rendus assainissement* ».

but rather to delegate delivery to public or private bodies, primarily ONEA but not exclusively - as illustrated, for example, by the pilot projects for the delegation of management of parts of the outlying urban network to small, local, private suppliers.

Water law in Burkina - the Water Policy Management Act of 2001 (*La loi d'orientation relative à la gestion de l'eau*) - recognises, in Article 2 (ibid, p.19), the right to water of all citizens, according to the Constitution. The law adopts the order of priority, common in national water laws, whereby water for essential human needs comes before other uses.

In the 1998 National Water Policy (*la Politique Nationale de l'Eau*), the first stated objective is (ibid, p.20) to "satisfy sustainably, in quantity and quality, the water needs of a growing population and an economy in development…". This National Policy adds that: "The right of access to drinking water is recognised by the law. In relation to access for water for drinking, the different categories of population must be treated *equitably*…" (emphasis added).

The 2004 'Strategic Framework for Poverty Reduction' ('CSLP' according to its acronym in French) (République du Burkina Faso, 2004) - the second-generation poverty reduction strategy paper - confirmed the importance of securing water supplies for growing urban centres, as a component of the second 'pillar' of the CSLP, as part of increasing access to social services. Subsequent policy papers and plans, and a consultation process, culminated in the 2006 'National Programme for Water Supply and Sanitation' (*Programme National d'Approvisionnement en Eau Potable et d'Assainissement)*, referred to as the 'PN-AEPA' (Wetta and Fofana, 2010, p.21).

The PN-AEPA fixed the national water supply target for 2015 under Millennium Development Goal (MDG) 7, including increasing drinking water access in urban centres in Burkina to 87% by 2015, from a base in 2000 estimated at 42% (World Bank, 2009b). Based on an urban population of Burkina Faso in 2008 of 3,292,300, this goal entailed the provision of access to water in urban areas to an additional 1.8 million people overall (ibid) [41].

The PN-AEPA refers to the need to investigate low-cost solutions for provision of water services to districts surrounding town centres.

3.2.2 Sanitation policy

The sanitation target referred to in the PN-AEPA is an increase to 57% in urban centres, by 2015, from a base sanitation coverage level in the region of c.15% (judging from the 17% figure in 2008, cited above, in section 3.1.7). The PN-AEPA recognises the need to take action to provide sanitation to households in peri-urban areas.

The specific national strategy relating to sanitation, the 2006 '*Stratégie Nationale d'Assainissement*"- SNA) (République du Burkina Faso, 2006), provides (in paragraph 3.4.1) that:- "The poorest populations are those which are most lacking sanitation facilities. The National Strategy should allow for these target groups to be reached in order to facilitate their access to sanitation facilities" (emphasis added).

The same paragraph in the National Sanitation Strategy refers to means "which will be developed to satisfy the demand of this segment of the population: demand-led approach'; communication for

[41] In 1998, the urban population was 1,761,203 of a total population in Burkina of 11,007,522 at that time (i.e. 16% urban), rising to 20% in 2008.

behaviour change; adoption of appropriate technologies; micro-credit, *subsidies* and other appropriate financial methods" (emphasis added). The SNA does not, itself, elaborate on these methods. The earlier 1990 Strategic Sanitation Plans (*Plans Stratégiques d'Assainissement* - PSAO) for the two principal urban centres in the country, Ouagadougou and Bobo-Dioulasso, had referred to "a range of technologies" for on-site sanitation (*assainissement autonome*) from which households could choose "according to their financial resources" as well as their hygiene practices (Wetta and Fofana, 2010, p.22).

3.2.3 Equity

The above targets for increases in UWSS coverage establish the goal of providing improved UWSS facilities to previously unserved, or inadequately served, persons. In the PN-AEPA, however, no guidance is given for deciding who will benefit, in what order of priority, for example, there is no criterion stated for targeting the increase in access (or a proportion of the increase) to specified districts in the city, or categories of household identified, e.g. by poverty levels.

The laws and policies in Burkina relating to urban water supply include recognition of *equity* as a principle in relation to access to water supply, with investigation of low-cost solutions for surrounding areas, and talk of poor populations as a target for sanitation services according to affordability (particularly, it seems, by self-targeting). But, **in national planning relating to UWSS, no framework is stated or process is referred to by which the principle of equity will be realised**. For the principles in policy/strategy documents to be converted into practice, they would require to be developed by the GoB in, for example, the contract between MAHRH and ONEA and expressed in more detail in the plans of the utility, ONEA, by, for example, proposing criteria for targeting low-income areas or households in an equitable manner, or by determining a process for developing such criteria, with a specified time-frame.

The PAD for the new project reports that "all customers [of ONEA] and all requests for social connections are treated equally and fairly".

Given the focus on aggregate service delivery, the question arises: **on what basis did ONEA determine who was to benefit from its investments**? In the context of a fast-growing urban population, and given the challenge of extending water infrastructure to peri-urban areas (formal and informal), choices made by ONEA would entail serving some households while making others wait until a subsequent phase of investment. But **which households in which areas, and according to which (published) criteria?**

3.3 Inclusion in project design

The project appraisal documents of the ZIGA project (World Bank, 2001) and the new project (World Bank, 2009b) are important as statements of the projects' aims, supported in each case by some useful information in the PADs. For the purposes of the present study, the PADs are, however, problematic because, as will be seen below, the stated 'social' aims of the projects are not supported by analysis of poverty in different districts of Ouagadougou, nor reflected in the key project performance indicators set out in the PADs.

3.3.1 The ZIGA project (2001-2007)

In 2001, the IDA approved funding of US$ 70 million for the Ouagadougou Water Supply Project, the 'ZIGA' project, alongside the GoB and ten other sources of finance: see **Box 3.1.**

Box 3.1 The ZIGA project (2001-2007): sources/amounts of finance (in millions of US $)

1. Government of Burkina (5.36)
2. World Bank, via the IDA (70)
3. French Development Agency (*Agence Française de Développement*-AFD) (27.83)
4. European Development Fund (EDF) (23.18)
5. European Investment Bank (EIB) (20.71)
6. Kreditanstalt fur Wiederaufbau (KFW) (18.30)
7. Arab Bank for Economic Development in Africa (8.44)
8. Islamic Development Bank (6.85)
9. African Development Bank (AfDB) (6.67)
10. OPEC Fund (6.95)
11. Kuwait Fund for Arab Economic Development (9.76)
12. West African Development Bank (1.83).

Total: US$ 205.88 million

Source: the Project Appraisal Document (World Bank, 2001)

As noted in Box 3.1, the IDA was the largest single financial supporter of the ZIGA project.

The terms of financing of the IDA component of the ZIGA project, took the form of a concessional loan from the World Bank to the GoB with a maturity period of 40 years and grace period of 10 years.

The 2001 PAD describes (page 11) the 'On-lending arrangements', the terms on which the IDA funds are made available by the GoB to ONEA, namely: - in the form of a loan (US$ 28 million) "with a maturity of 20 years, including 10 years of grace period (World Bank, 2001, page 12); the service charge payable was of 0.75 percent"; and as a grant (US$ 42 million), as "contribution to equity capital [of ONEA] in cash" (World Bank, 2001, page 50). The other donor which provided finance to the ZIGA project in the form of both loan *and* grant funding was AFD.

ONEA was responsible for leading execution of the ZIGA project. Within ONEA, a project unit was created called MOZ-ONEA ('*Maîtrise d'Ouvrage de ZIGA'*).

The objective of the ZIGA project, in infrastructure terms, was to increase the water collection and storage capacity at the river source, at the ZIGA site, to build a water treatment station, to bring the increased **bulk water supply** to the city and extend the distribution network within the city, through water towers and pumping stations and over 200 kms of secondary and 500 kms of tertiary conduits - to address the problem of intermittent supply, which had caused service interruptions (60% of the service areas in Ouagadougou experiencing severe water shortages during the three hottest months of the year (PAD, World Bank (2001), page 5)).

A further objective of the ZIGA project was the strengthening of ONEA's finances, expressed as moving towards the "financial equilibrium" of the urban water sector - see **Box 3.2.**

Box 3.2 'Financial equilibrium'

The definition of financial equilibrium in the PAD refers to ONEA's capacity to meet its financial obligations as they become due, including settlement of commercial debts (to suppliers) and service of loans, including "government sub-loans from IDA credit"[42]' (the interest rate charged by the GoB - the Ministry of Finance - in relation to the on-lending to ONEA was 5.4%). The timeframe for achieving financial equilibrium was to be: "no more than five or six years", i.e. within the duration of the ZIGA project.

"The project will support the reaching of financial equilibrium of the sub-sector while keeping annual water tariff increases as low as possible by: (a) reducing operating costs in the sub-sector through increased efficiency; (b) increasing financial management capacity; (c) developing an appropriate system to ensure timely payment of water bills by the Government and quasi-government entities; and (d) establishing policies and procedures to adjust the average water tariff at the beginning of any given year in order to reach sector financial equilibrium by December 31, 2006. A *financial model* has been developed and will be used to monitor progress towards this objective" (emphasis added).

Source: the Project Appraisal Document (World Bank, 2001, page 7-8)

Among the stated aims of the ZIGA project, the 2001 PAD includes the statement that the project was to provide connections to "low-income households" (World Bank, 2001, page 3, paragraph 1) and install standpipes (*bornes fontaines*) (e.g. ibid, page 7, paragraph 3). How far this was realised in practice is discussed during the course of this section 3.

The PAD for the ZIGA project notes (ibid, p.7, paragraph 3.) that "Ouagadougou has one of the lowest connection rates to a water network in the region...". The project, it says, will finance expansion of the distribution and tertiary networks to "new housing developments and *peri-urban areas*" (emphasis added).

The PAD for the ZIGA project, further, refers to 'Benefits and *target population*' (ibid, para 3, page 10) as follows:-

> "A national survey, conducted in 1998, showed the *poverty line* to be around US$103 per year per adult. There was a 5 per cent increase in *urban poverty*, between 1994 and 1998, and 16 per cent of the urban population is considered poor according to the survey. Unplanned development along the outskirts of Ouagadougou house … most of the *poor* and these areas lack appropriate water services. According to a recent study, 70 percent of the poor households in Ouagadougou get their water from public standposts or from water vendors. The same study reveals that water vendors distribute 80 percent of the water sold at standposts to household premises…" (emphasis added).

The above outline of poverty and water access in the PAD talks in general terms, without saying where the poverty is located and without elaborating on the information in the survey. It does not say how the "target population" may be identified, other than that it is mostly located in the

[42] In full, the definition of 'financial equilibrium' is as follows: the "capacity of the water sector to meet its financial obligations, expressed in terms of flows of funds as they become due, including on-schedule payment of commercial debts (settlements with suppliers) and financial debts (reimbursement of principal and payment of interest on government subloans from IDA credits, donors' credits, direct loans from donors or commercial banks, and payment of taxes), while at the same time long enough to minimize the annual tariff adjustments necessary to reach financial equilibrium."

"outskirts" of the city (as noted above, those peri-urban districts include both formal and informal areas).

The PAD states on page 7 that the project will, first, address the lack of water access by "(a) extending the network; (b) easing access to connections by reducing the price...". The PAD explains that connections will be affordable to those low-income households (paragraph 3.): the "strategic shift in the connection policy is to reduce the connection price, which *was a major impediment for low-income households connecting* to the tertiary networks". This is a "social connection policy" ('*les branchements sociaux'*) aimed at "easing access" to household connection for previously unconnected customers. How this is intended to work is discussed in section 3.3.2.1.

As well as the connection policy, the design of the ZIGA project also aims to substantially increase the number of public standpipes.

How the stated aims of the ZIGA project above are expressed in terms of objectives is seen in the list of Key Performance Indicators (KPIs) in **Box 3.3** reproduced from the 'Project Design Summary' which is set out in logical framework format, in Annex 1 of the PAD for the ZIGA project (World Bank, 2001, pages 25-27).

Out of 20 KPIs listed in Box 3.3:-

- seven performance indicators relate to engineering/infrastructure;
- two indicators refer to training and capacity-building of utility staff;
- six indicators are financial; and
- two talk of additional water users to be served by the project (new connections and standposts); but
- there are *no* indicators specifically addressing inclusion of low-income areas or households.

The KPIs relating to the new connections and standpipes are highlighted (in italics) in Box 3.3: the increased distribution network constructed by the ZIGA project is to make possible "45,000 new house connections" and "400 new standposts", to serve 48,000 persons (defined as being at a rate of 120 persons per standpipe). The wording of the KPIs does not, however, indicate which city inhabitants are to benefit from the 45,000 new connections or the 400 new standpipes. The indicators talk in *aggregate* figures in relation to the "population" of the city. No geographical criteria are proposed to determine where standpipes are to be sited within sectors 14-30, or, alternatively, a process stated for development of criteria for targeting on a geographical basis.

In the Project Design Summary, in the first column of the logical framework which sets out the "Hierarchy of Objectives", there is reference to "social" connections, but the social element is not reflected in the indicators in the second column.

Box 3.3 Key performance indicators - ZIGA project

Outcome/impact indicators of Project Development Objectives
- Increase water reliability (24 hours per day);
- Population connected to the water network (from 300,000 inhabitants to 800,000 inhabitants in 2007);
- Recovery rate from private customers (from 86% in 2000 to 92% at end of 2004 and 95% thereafter);
- Accounts receivable of private customers (from 160 days to less than 120 days at the end of 2004 and to 90 days in 2006);
- Productivity of commercial staff (from 186 to 230 in Ouagadougou at the end of 2006 and thereafter)
- Financial statements prepared according to international standards (on time and certified for Yr 2002+).

Output from each component
- Storage capacity (5,400 m3);
- Length of network (210 kms of secondary networks and 1,200 kms of tertiary);
- Number of new connections installed (45,000);
- Number of new standposts (400);
- Average time between meter reading and invoicing (from 30 - 15 days at end of 2005 and thereafter);
- Metered consumption increased (from over 90% to over 95% at the end of 2004 and thereafter);
- Computerized administrative system for billing, collection, receivables, complaints tracking and accounting in place at the end of 2003;
- New connection policy and procedures in place at the end of 2002;
- Inventory management program for connection equipment and meters in place in January 31, 2003;
- Computerized cost accounting system in place in January 2003;
- ONEA's financial management information system in place in June 2002;
- Training program developed and implemented by June 30, 2002.

Source: PAD (World Bank, 2001), Annex 1, pages 25-27

In the third column on "Monitoring and Evaluation", the basis of monitoring of this social objective will be "surveys and beneficiary assessments". A survey was commissioned by ONEA and conducted by international consultants in 2007 (ICEA/SOGREAH, 2008), including, in the survey questionnaire, questions on the living conditions and incomes of urban households, as well as levels of satisfaction/dissatisfaction of ONEA's recently connected customers. Just how selectively the information from that survey was utilised by ONEA is discussed in section 3.3.2.1.

In the fourth column of the Project Design Summary, one of the "Critical Assumptions" is that the "Government agrees on a new connection policy regarding social connections" (World Bank, 2001, p. 28). The social element of the policy applied by ONEA during the project was subsidy of the connection price (discussed further in sections 3.3.2.1 and 3.5.2.)

In other words, other than the stated objective to provide new water infrastructure and services in, broadly, the seventeen sectors outside the centre of Ouagadougou (in sectors 14-30), the ZIGA project design (as set out in the 2001 PAD) left it up to the utility, ONEA, to decide what weight (if any) to attach to inclusion of low-income areas and households[43]. The PAD did not give, or

[43] In its written comments on an earlier draft of the present report, the World Bank states that: "the project was designed to cover the poorest areas of the city, especially the standpost and social connection program, which were almost exclusively limited to the peri-urban areas". The above reference to the 'poorest' areas is puzzling in view of the Bank's comment later in the same document that "the entire population in the service territory is poor", so that (according to ONEA and the Bank) ONEA does not need to target water supply programmes and interventions to households according to *differing* levels of poverty. This important issue is further discussed in section 3.6.

envisage giving of, guidance to ONEA in setting criteria for siting the new connections and standpipes. As far as the KPIs are concerned, **the 'social' element of connection policy is subsumed into a connection policy applying to all households.** And this characteristic of design was reflected in the practice applied by ONEA; the reduction of the connection price was a universal subsidy, accorded to *all* unconnected households in those sectors 14-30 applying for connection[44] and evaluated in those terms. The implications for low-income households are discussed in sections 3.5.2.

Looking again at the PAD, the lack of a 'pro-poor' purpose in the detailed design of the ZIGA project is confirmed in the section on the 'Project Development Objective' on page 3 of the PAD, according to which "the main objective of the proposed project is to increase access to adequate and reliable potable water supply in Ouagadougou…". There is no reference to low-income households.

As alluded to above, the ZIGA project did not include a sanitation component[45].

3.3.2 The new project (2009-2015)

In May 2009, the IDA approved funding, of US$ 80 million, for the new project, the Urban Water Sector Project (despite including a significant sanitation component), alongside the GoB funds of US$ 12.92 million.

The financing of the IDA component of the new project took the form of a grant to the GoB. This is a non-reimbursable grant, and (as per the 2009 PAD, page vii) no interest rate or other fees or charges apply. As to the transmission of funds from the GoB to ONEA in the form of a combination of on-grant and on-loan, see section 3.3.2.1.

The new project is designed to support UWSS in both Ouagadougou, and beyond: three other urban centres for the water component[46], and one other for the sanitation component[47]. The amounts of funding (IDA and GoB) available for Ouagadougou (according to the 2009 PAD) are US$ 13.33 million for water supply and US$ 18.11 million for sanitation respectively. Under the new project, there is to be a cross-subsidy from Ouagadougou and Bobo-Dioulasso to support the development of water services in the two other urban centres.

The overall objective of the new project is to increase access to sustainable UWSS services by (page 5 of the PAD): "(a) facilitating access to services through programs for constructing *social* water service connections, public *standpipes* and *on-site sanitatio*n facilities; and (b) consolidating the achievements of the reform of the urban water supply sub-sector and strengthening capacities to deliver and manage services" (emphasis added).

ONEA is the executing agency of the new project, as for ZIGA. The water supply component of the project in Ouagadougou will be the responsibility of 'DMOZ' within ONEA (*Direction de la Maîtrise d'Ouvrage de ZIGA*) and ONEA's Department of Sanitation (*Direction de l'Assainissement* - DASS) will lead implementation of the sanitation component, in Ouagadougou and Bobo-Dioulasso.

[44] As will see seen in section 3.4.1, a substantial reduction in connection price was offered by ONEA. This subsidy was made available to all households in the peri-urban districts of Ouagadougou (sectors 14-30).
[45] Although, according to a key informant interview conducted by this study, it was agreed between the GoB and the World Bank that, in parallel to ZIGA, ONEA would carry out sanitation activities.
[46] Bobo-Dioulasso, Koudougou and Dédougou.
[47] Bobo-Dioulasso.

3.3.2.1 Water services - in the design of the new project

The design of the new project makes a clear option in terms of infrastructure type, which has implications for 'inclusion'. **The design of the new project as set out in the PAD clearly prefers household connections to standpipes.** Annex 4 of the 2009 PAD (World Bank 2009b, page 40) provides that, in Ouagadougou, the new project will install water service connections for 220,000 additional people compared with access to standpipe services for 15,000 additional persons, i.e. over 14 times more persons are to be served by household connection than by standpipe. This 15,000 figure compares with the ZIGA project objective to provide standpipe access to 48,000 persons with 400 standpipes[48]. The implications of this focus on connections rather than standpipes are considered in section 3.4.3.

Page 6 of the 2009 PAD notes that: "the water consumed at standpipes is heavily subsidized" which means that "expanding the number of [household] connections will benefit the financial situation of ONEA". The footnote on the same page of the PAD elaborates on this, with details of revenues from household connection as compared with from standpipes. These are revealing. An average household of nine people connected to the water network, it says, consumes 45 litres of water per capita per day and generates a monthly revenue for ONEA of FCFA 5,025 (including the monthly fee and sanitation surcharge), whereas the same household supplied by a standpipe will generate a monthly revenue for ONEA of only FCFA 1,420. **The above figures reveal to what extent there are, in effect, two major water economies in Ouagadougou.** The water sold at standpipes is, in aggregate, low revenue-earning - much lower - yielding less than one-third (28%) of the revenue of water sold through house connection. The tariff of FCFA 188 for water at standpipes is a flat rate (no increasing blocks).

It is this key revenue issue which underlies the infrastructure option preferred in the design of the new project. The preference for house connection, rather than standpipes, obeys the financial concern of the utility to increase the number of higher paying connected customers[49]. The raising of revenues from customers who are capable of paying higher tariffs is a legitimate element in the *financial* operation of the water utility, but, as we will see, the stated aim of the new project (as per the PAD) is to reach out to water users in formal and informal settlements - the *social* element of ONEA's role. The water sold from standpipes represents a significant proportion of total water sales: "33 percent of water distributed" (page 6 of the 2009 PAD) - an average figure, applying, it seems, to ONEA's mandate in urban centres (at the time of writing the PAD). For the purposes of this research study on inclusion, the question arises as to how the standpipe part of ONEA's customer portfolio, which is much lower revenue-earning, is to be financed. Households, says the PAD, *want* to connect.

For this, the PAD refers (World Bank 2009b, page 6) to a 'Willingness-to-Pay' (WTP) study conducted in July 2007 among households in the largest cities in Burkina. The information collected by this survey - conducted by the international consultancy firm, ICEA/SOGREAH - included, alongside the type of water services to which households had access, other details on household circumstances (of a total sample of 760 households in the 7 cities surveyed). **Box 3.4** lists the aspects covered by questions in the questionnaire employed by ICEA/SOGREAH for the 2007 survey (set out in the annex to its 2008 report (ICEA-SOGREAH, 2008).

The ICEA-SOGREAH report also refers (page 3, section 2.2.2 and 2.2.3) to information published by the National Statistics Institute - INSD) (INSD, 2003), the findings of a study on the living conditions of households in Burkina (the EBCVM) (INSD, 2003). This information from INSD (as

[48] So, under the ZIGA project, the equivalent ratio was 11.66 times.

[49] The issue of which customers are good payers in terms of paying their water bills *on time* is a separate consideration from the tariff level (amount of the bill) affordable to each customer (although the entering by a customer into a contract with the water utility which results in that customer incurring water charges above his/her capacity to pay may lead to default in payment).

cited by ICEA/SOGREAH, 2008) relates to the following items: - the size of households and number of people living in each plot; the nature of title/status of occupation (owner or tenant); the type of house/dwelling; the material used to construct the walls of the house/dwelling; the type of sanitary facility and means for evacuation of grey water. These items of information in part complement, in part overlap with, the aspects of household circumstances listed in Box 3.4.

Box 3.4 Example of data collected on urban households, in ONEA-commissioned study

- Age and education of head of household and his/her spouse/partner
- Principal activity of the head of household and his/her spouse/partner
- Regular monthly income of the head of household and his/her spouse/partner
- Other working members of the household
- Total regular monthly income of the household
- Transfers to the household received from other household members
- Equipments in the possession of household members (refrigerator, gas cooker, bicycles, scooters, etc.)
- Principal energy source employed for cooking
- Principal means of lighting the house/dwelling
- Type of toilet/sanitary facility and means for evacuation of grey water
- Regular monthly outgoings: rent; food; electricity; other energy supply; transports/petrol; telephone; etc.
- Type of house/dwelling
- Nature of title/status of occupation: owner or tenant?
- Length of time in current house/dwelling
- Principal material with which the house/dwelling is constructed
- Number of persons living on the plot of land on which the house/dwelling is situated.

Source: questionnaire annexed to report of 'tariff study' (ICEA/SOGREAH, 2008)

In the ICEA/SOGREAH report (ICEA-SOGREAH, 2008) supplied to ONEA[50], the description of Ouagadougou (and the other urban centres) which is presented, including some insights on relative wealth/poverty in the city, clearly draws on responses to the questionnaire (as well as the INSD data).

In the PAD for the new project, however, the results of this ICEA/SOGREAH study are very selectively cited. The information referred to on page 6 of the PAD is limited to customer preferences as to future mode of supply (as compared with present supply) with particular attention focused on the proportion of unconnected households who are interested in a household connection[51]. That proportion is recorded as being "82 percent" (the figure is highlighted in bold). That tends to explain why the ICEA/SOGREAH work is referred to as the 'Willingness to Pay' study[52] because this seems to have been the prime (and perhaps exclusive) area of concern to ONEA. Otherwise, the information collected by ICEA/SOGREAH (and INSD) on household circumstances is not cited. In other words, **the broader socio-economic data gathered from the**

[50] Made available by ONEA to the researchers in 2011.

[51] With lesser degrees of preference for alternative service modes, including 'simplified networks' and standposts.

[52] The 2008 report of the ICEA/SOGREAH study is entitled 'Tariff study' (*Etude tarifaire*), but it is the same report as the 'Willingness to Pay survey' referred to in the PAD. That seems clear from the timing in 2007, which is the same, and the number of households studied: the figure given for the total number of households in the sample as noted on page 1 of the ICEA/SOGREAH report (*version finale*) tallies with the figure on page 28 of the 2009 PAD, namely 1,079 households in seven cities (760 HHs not connected in formal neighbourhoods, 145 households not connected in informal neighbourhoods and 174 households having recently benefitted from social connections).

ICEA/SOGREH questionnaire (147 questions in total) **has not been utilised in the project design** - at least, not visibly in the PAD.

The PAD notes that this 'WTP' survey qualifies the general preference among the urban population as being for a household connection at an *affordable* price. As to what is affordable, the results of this WTP study suggest that unconnected households "are prepared to pay on average FCFA 27,600 for connection, or FCFA 20,800 for connection to a simplified network[53]" (and FCFA 3,100 per month corresponding to a daily consumption of 38-44 litres per person per day). The issue of levels of affordability is returned to in section 3.5.2.

The reliability of 'WTP' surveys in low-income areas is unclear. For households living in precarious circumstances, for example, it may be difficult to predict in advance what will be payable in monthly bills presented retrospectively by the utility. Indeed, the 2009 PAD notes that expressed willingness to pay may be an unreliable indicator of bills subsequently paid:-

> "In addition, the current experience with social connections shows that some of the connections become *inactive* as the household incomes are not regular enough to allow them to set aside the amount of the monthly water bill" (emphasis added).

An alternative approach would have been for ONEA to develop a means to measure differentials of poverty *objectively*, so as to make choices according to income category and adapt payment terms.

Standpipes are one means of reaching surrounding districts in Ouagadougou, alongside others being piloted. The PAD refers (on page 29) to a pilot project[54] in Ouagadougou being carried out by ONEA which is testing several types of alternative service, in "low-density, peri-urban neighbourhoods and in long-standing and informal urban communities (*villages urbains*) which have not yet benefitted from water services"[55], namely simplified networks", and "local neighbourhood operators operating the tertiary networks…". From the key informant interviews, the researchers learnt that AFD has, in 2009, accorded funding to ONEA for operation of local supply networks by private operators, in six neighbourhoods of Ouagadougou including informal areas (i.e. these pilots are overseen by ONEA, although not specifically under the new project). The schemes will be tested to see whether small local operators, with lower overheads than ONEA, succeed in providing a good quality service at competitive prices, which are affordable to households in surrounding districts.

The alternative access solutions[56] should, says the PAD, be "*affordable to the broadest strata of population"* and, at the same time, "*consistent* with the financial equilibrium of the sub-sector" (emphasis added). In the 2009 PAD, the term 'financial equilibrium' is defined in the following terms (World Bank 2009b, page 3): that ONEA is "able to recover from water sales its cash operating expenditures (excluding depreciation) plus debt service and a contribution to investments, *without Government subsidies*" (emphasis added). This reflects the expectation that ONEA will operate according to commercial principles without being a burden on the national budget. One of the successes of the ZIGA project was, as per the 2009 PAD for the new project (page 2), that: "The urban water sector reached financial equilibrium in 2006".

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[53] Simplified networks use (PAD, page 28) "adapted standards (use of PEHD pipes, lower excavation) to accommodate the absence of official delimitation of properties and streets".

[54] The PAD does not state whether this pilot is part of the new IDA-supported project or an activity of ONEA funded from other sources - the timing suggests the latter.

[55] This pilot project "aims to serve about 84,000 people (through c.65 standpipes and 3,000 service connections)" (ibid).

[56] These solutions could also include special billing arrangements for low-income customers (e.g. providing for more frequent payment of bills at shorter intervals).

The 2009 PAD (paragraph 57 on page 17, entitled "On-lending Conditions") states that:-

> "The [financial] model … shows that the financial equilibrium is quite sensitive to the financing conditions of the investment program. Therefore it was agreed in the proposed project to replicate the on-lending conditions in the [ZIGA project]".

As noted above, the World Bank is to make the IDA finance for the new project available to the GoB as a grant. As to the terms of transmission of funds from the GoB to ONEA, according to the PAD 2009[57], there is to be, as in the ZIGA case, a combination of 'on-granting' and on-lending:-
- for the water component: 50 percent of the IDA financing, US$ 25.87 million, to be transferred to ONEA as a grant, and 50 percent to be on-lent to ONEA as an IDA loan[58];
- for the sanitation component[59]: all the IDA funds (US$ 24.44 million) to be transferred to ONEA as a grant, as this component does not "generate commercial revenues" (World Bank 2009b, p.17).

The PAD here could have added that some elements of the water component (standpipes) generate 9in aggregate) lower commercial revenues, but it does not. The PAD for the new project, like the ZIGA project, envisages subsidies, for both the water and sanitation components, but those subsidies are not targeted to a particular category of water or sanitation. This issue, of how the Government and ONEA choose to invest the grant (as compared with the loan) element, is returned to in Section 3.7.

The key performance indicators of the new project are reproduced in **Box 3.5** (from the second column of the "Results Framework" in the 2009 PAD (Annex 3, page 37-38), at outcomes and intermediate outcomes levels).

Box 3.5 Key outcomes - the new project (2009-2015)

Project Outcome Indicators
- Percentage of population having access to safe water: in Ouagadougou; in Bobo-Dioulasso;
- Percentage of population having access to adequate sanitation services: in Ouagadougou; in Bobo.

Intermediate Outcome Indicators
- Additional individuals in the project area having access to improved water sources through household connections and standpipes;
- Additional individuals in the project area having access to improved onsite sanitation facilities;
- Additional students in the project area having access to adequate sanitation in their schools;
- Financial equilibrium of the urban water sector maintained with the implementation of an agreed tariff policy based on cost recovery;
- Ratio of ONEA's water employees per 1,000 connections;
- Bill collection ratio of private water customers.

Source: 2009 PAD, World Bank 2009b, Annex 3, page 37 (emphasis added)

[57] For this purposes of the discussion below, the researchers carrying out the present study have not had access to the subsidiary agreements between government and water companies/utilities in relation to any of the projects, only the summary information in relation to on-lending/on-granting in the PADs.
[58] Over 20 years with a 10-year grace period and an annual interest of 4 percent.
[59] And all the funds for Components 3 and 4 on 'Institutional support and capacity building' and 'Environment and social management' respectively, at US$ 3.56 million and US$ 0.26 million contributions of IDA.

As in the case of the ZIGA project, the KPIs in Box 3.5 talk in *aggregate* figures. The indicators do not make any reference to the location of either infrastructure type, e.g. no mention of surrounding or peri-urban areas of Ouagadougou. No process is envisaged for development of criteria for targeting on a geographical basis. In the first column of the logical framework, setting out the "Hierarchy of Objectives", there is reference to "more people in *targeted* urban centres" having safe piped water and access to improved sanitation services (emphasis added), but the indicators do not elaborate on that (nor do any other items in the logical framework). The KPIs do not specify which categories of "population" and "individuals" are to benefit from the new connections and standpipes (they do not explicitly incorporate the 220,000 and 15,000 figures mentioned above and discussed in Annex 4 of the 2009 PAD).

Based on the manner of writing the KPIs, there is a risk that, again, reduction of the connection price and other 'social' elements of ONEA's policy (the subsidy to the cost of household connections) will not actually benefit low-income households in poor areas of the city. In the "Arrangements for results monitoring" also in Annex 3, on page 38, the data collection instruments for the project are to include a "household survey in YR 3". How ONEA has to-date carried out beneficiary surveys is considered in section 3.4.1.

Similarly, in **the contract between the MAHRH and ONEA** (*'Contrat Plan'*) applying to the period 2007-2009 (i.e. current at the time of the 2009 research), Article 6 on 'Service of the Population' defines only aggregate annual increases of *coverage* in Ouagadougou (and other cities). The contract **does not specify the nature of ONEA's role in relation to low-income households,** and does not require it to draw up or apply any targeting policy (cited by Wetta & Fofana, 2010, in Annex 1). So, the lack in the GoB's national programmes/plans for UWSS of a strategy for inclusion is repeated in the contract between the MAHRH (the ministry of the GoB responsible for supervising ONEA). **A clear 'inclusion gap' exists in government programming for UWSS.**

3.3.2.2 Sanitation - in the design of the new project

As regards the sanitation component of the new project, onsite sanitation options to be provided will include (PAD, World Bank 2009b, page 19): (i) improved traditional latrines; (ii) ventilated improved pit latrines with two pits and a variety of superstructures, depending on the available materials; (iii) pour-flush toilets with a variety of superstructures; and (iv) basic sanitation units that comprise a shower and/or sink and a soakway pit.

The 2009 PAD (Annex 4) quantifies the number of persons who, it is intended, will benefit from new sanitation facilities in Ouagadougou, as follows: construction or rehabilitation of 18,000 household latrines[60] and 27,000 soak-away pits connected to washing facilities, serving 158,000 people and 238,000 people respectively. Again, in the KPIs, there is no disaggregation of the population into differing categories of household who are to benefit from the sanitation investments under the new project.

The PAD refers (World Bank 2009b, page 29) to ONEA's practice of making subsidies of, on average, 40 percent of the cost of sanitation facilities. The IDA funding apparently provides for "roughly 60 percent of the total cost of the household sanitation facility" (page 49). The PAD notes the difference between household onsite sanitation facilities and water infrastructure, that the onsite sanitation facilities fully belong to the households and then also refers at one point (page 14) to the possibility that "the level of subsidies may be adjusted". Sector actors present at the mid-term

[60] I.e.: "construction of VIP latrines (double-pit) or pour-flush toilets and rehabilitation of traditional latrines".

review of this research study questioned whether the level of subsidy to be provided by ONEA for construction of improved household latrines would be sufficient for poor households.

3.4 Inclusion in project implementation

3.4.1 The ZIGA project

The 'Implementation Completion and Results Report' (ICR) by the World Bank, of June 2008 (World Bank, 2008) notes that the objectives of the ZIGA project as originally approved were not revised during the course of the project, and reports that the overall outcome of the project was rated as "highly satisfactory because the project has achieved or surpassed all its stated development performance indicators" (page 11). Reliability of water supply in Ouagadougou has dramatically improved. The bulk water supply to the city has been secured, at least for satisfying current demand[61].

The ICR continues (page 11): "In addition, [the ZIGA project] successfully turned around ONEA, a public water utility and closed the gap... with best performing water utilities in the region (Côte d'Ivoire, Senegal, Niger) which are all entirely managed by private operators" in respect of "the level of access to improved water services, reliability of the service, operational efficiency … and sustainability".

Against the performance indicators for the ZIGA project, those in Box 3.3 above which are of particular interest to this research study, the ICR rates the percentage achievement as follows:-

- 860,000 inhabitants connected to the water distribution network in Ouagadougou; percentage of achievement is 107%;
- 56,000 new connections and 400 standposts installed: percentage of achievement is 124% for connections and 100% for standposts.

In a striking paragraph, the ICR then comments, in section 3.5 on page 11-12:-

"Through the successful implementation of the Social Connections and Standpipes Program (construction of 56,000 subsidized water connections and 400 standpipes), the project provided access to safe water to about 680,000[62] additional people *mostly living in peri-urban areas of Ouagadougou and belonging to low-income groups*. As a result of the increased water production and network rehabilitation programs, service quality has considerably improved so that there are no longer frequent water distribution interruptions as it was the case before the project. These improvements *especially benefitting the poor* have improved basic hygiene practices and thus will contribute to the reduction of water related diseases" (emphasis added).

The above comment from the ICR is striking for what is *omits* to say: the words 'mostly' and 'especially' are left hanging - without the evaluation report elaborating on these statements with information to support them. That was presumably because no such information was available. The evaluators refrain from commenting on the inability of the project to say *who* has benefitted from its work. The evaluators may have thought that was curious, but, once the *number* of connections and

[61] None of the key informants challenged this in the interviews, although one informant stressed the need for review of whether/when future growth in demand in the city would outstrip the volume of the current bulk supply provided by the ZIGA project.

[62] A footnote on the same page of the ICR states: "56,000 connections X 10 pers. conn + 400 standpipes x 120 pers/stp = 680,000 person served » (On the face of the calculation as it is presented in this footnote, the figure of 680,000 seems to be a typographical error – the total served figure comes out at 608,000).

standpipes was verified, their job in relation to that element of the project was accomplished according to the terms of the KPIs set in the original project design (and not varied during the course of the project).

With regard to the social connection programme, a footnote on the same page of the ICR states that: "…beneficiaries are required to pay a reduced amount of CFAF 30,000 which represents only 24% of the real cost of the connection (FCFA 25,000)". This is a substantial subsidy. The question, however, which remains is: which areas and households took up the subsidised connection (and how long did they sustain payment for the connected supply)? The beneficiary survey to which the ICR refers[63] does not answer that question, at least as reported in the ICR - see in **Box 3.6.** As to whether the subsidy rendered the connection cost affordable to low-income households, section 3.4.2.2 reports on that issue based on the information gathered by the present research project.

The PAD for the new project (page 27) comments that demand for household connections increased dramatically after their price was reduced, from FCFA 120,000 (US$ 240) to FCFA 50,000 (US$ 100) and then to FCFA 30,000 (US$ 60). But, demand from *which* households, in *which* districts of the city, is not said.

In the ICR, the "Lessons Learned" section (pages 15-16) notes that "the financial model …has been a powerful tool to optimize investments and assess required operational efficiency gains *consistent* with the financial equilibrium of the sector and *socially acceptable tariffs*" (emphasis added). But, among the Lessons Learned there is no discussion of the social connection policy and its pricing, just this assertion of consistency.

Box 3.6 Beneficiary Survey results

The ICR states that consumer satisfaction surveys were conducted during the project, in six urban centres in Burkina. Annex 5 of the ICR sets out the "Beneficiary Survey Results" in 2007 for Ouagadougou (the date in 2007 is not stated in Annex 5). The questions related to water users' satisfaction with regard to water availability, quality and price as well as ONEA's service. The survey consulted both "households with private connections" and "households taking water at public taps". According to the results, as reported in that annex, levels of satisfaction expressed are generally good. Levels of satisfaction are higher for water quality (mid-upper 60 percent) than availability, especially during the dry season (mid-upper 50 percent). In relation to "the price of water", satisfaction is at 57 percent for those taking water at "public taps" (standpipes). The expressed level of satisfaction of connected households is lower, at 43%[64].

It is difficult to assess what this 2007 survey signifies and in particular the 43% level of satisfaction. The ICR says, on page 12, that: "there is significant customer satisfaction with … (ii) the decrease in the cost of a private connection ... to FCFA 30,000". It is not clear how this conclusion is reached, at least not from the results of the survey (ICR, Annex 5 again). It is noticeable that the above 43% figure is the lowest in the results reported in Annex 5, apart from the level of satisfaction at waiting times at pay offices (40%). As alluded to above, in the ICR, levels of satisfaction with water availability and quality are reported to have been higher, in the 50s% and 60s%. The 43% score may have some significance in relation to the issue of affordability of connection - Section 3.4.2.2 of this report returns to that. Meanwhile, in this Beneficiary Survey no specific question was asked, it seems, in relation to the reduction of the connection cost (nor on functionality of 'public taps')[65]. And, in Annex 5, it is not stated where the surveys were carried out in the city.

Source: World Bank, 2008, section 3.6, on page 12, and Annex 5 (pages 23-25)

[63] From Annex 5 of the ICR, it appears that this Beneficiary Survey of 2007 was a different exercise from the 'Willingness-to-Pay' study in July 2007 which the 2009 PAD describes on page 28 (as discussed in section 2.3.2.1)

[64] It is not clear whether "price" here refers to the connection price or the tariff for consumption, or both.

3.4.2 The UWSS activities pursued by ONEA (2007 -)

For the purpose of assessing the status of UWSS services in Ouagadougou at the time of this study, the researchers have taken into account not only the accumulated activities of the ZIGA project from 2001-2007, but also operations carried out by ONEA since the conclusion of the ZIGA project in 2007 with the support of funding sources other than the IDA[66], including sanitation activities.

As noted in section 3.2, the sector strategies - the PN-AEPA, the National Sanitation Strategy and the Strategic Sanitation Plan for Ouagadougou - provide the national policy framework within which ONEA is mandated to increase UWSS coverage rates, including investigating low-cost solutions for the provision of water services to areas surrounding town centres and reaching the poorest populations with sanitation facilities.

To contribute to assessment of the degree of inclusion of poor areas and households in UWSS services in Ouagadougou, the researchers have adopted two means[67]:-

- mapping: information on levels of poverty in Ouagadougou has been overlaid onto maps provided by ONEA showing water infrastructure including standpipes;

- survey: focus groups were carried out in five villages in surrounding areas of the city which are both urbanised areas (*quartiers lotis*) and un-urbanised areas (*quartiers non-lotis*).

This water poverty mapping exercise - carried out by the University of Ouagadougou, the *Institut National de la Statistique et Démographique*-INSD and the *Institut des Sciences des Sociétés*-INSS - seems to have been the first of its kind (at least in Burkina). This was the first time that the INSD had been approached for this purpose and INSD is the national entity which led the collection and presentation of evidence for the 2006 census, comprising (prior to the new project) the most recent and extensive set of official data on the population in the country.

The findings from this mapping exercise and a summary of the responses from the focus groups in three *quartiers lotis* (Yamtenga, Toukin and Bissighin) and two *quartiers non-lotis* (Yamtenga et Nioko 2) are set out in the two sections which follow.

3.4.2.1 Mapping

Map 1., in **Annex 4.**, was supplied by ONEA to the researchers (soon after the key informant interviews with ONEA staff in the first weeks of the study in 2009), and shows, against the background of the sectors of the city of Ouagadougou (numbered 1-30) and named villages around it, the spatial distribution of standpipes (‘*répartition spatiale des bornes fontaines’*) up to 2009. Those standpipes installed before 2003 are marked in red, and those constructed between 2003 and 2009 are marked in blue. It is clear, first, that the activities of ONEA during and since the ZIGA project have substantially increased the spatial coverage of standpipes which constitutes **substantial progress overall in terms of extension of standpipes in Ouagadougou.**

According to this Map 1, the post-2003 standpipes are located especially in the districts of the city outside the central sectors 1-13, in sectors 14, 16, 17, 19, 20-27, 28-29 (at the limits of the latter two sectors, on the frontier with their zone of extension) and sector 30.

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[65] Were there questions posed to non-connected households, e.g. as to why they had not connected?

[66] The interval period of c.2 years between conclusion of the IDA-supported ZIGA project in 2007 and commencement of the new IDA-supported project from 2009, as referred to in section 3.1.

[67] As mentioned above, the 2008 report of the ICEA/SOGREAH survey carried out in 2007 was not made available by ONEA to the researchers at the time of the research in 2009 (it was supplied later, in May 2011).

According to Map 1., there are *gaps* in provision where few standpipes were installed between 2003 and 2009, e.g. in sector 15 and the extension of sectors 28, 29 and 30 which are (unurbanised) districts called Tabtenga and Yamtenga (discussed in section 3.4.2.2).

The question which arises for the purposes of this study is as follows: **what rationale (if any) is evident in the siting of the 2003-2009 standpipes?** What approach to geographic targeting, if any, is detectable?

To explore this question, the University of Ouagadougou, INSD and INSS drew up **Map 2**. in **Annex 5,** based on information on poverty levels in different parts of Ouagadougou from the 2006 census - the most recent available information for calculating the poverty indices of the city[68]. In Map 2, the areas coloured in green are the poor areas of the city (the darker the green, the poorer) which surround the wealthier central sectors of the city which are coloured in beige to red (the darker, the more wealthy, as per the index of poverty used by the INSD, as described in section 3.1.5 of the present report).

The overlaying of the levels of poverty/wealth with the information supplied by ONEA on the spatial distribution of water infrastructure, including standpipes, allowed the researchers to analyse how far the extension of infrastructure corresponded, or not, to targeting of poor areas (reading Maps 1 and 2 in combination[69]). The mapping exercise stimulated a further exchange between the University of Ouagadougou and ONEA. After the key informant interviews and production of Map 2, ONEA subsequently made available to the University the **Figure** in **Annex 6**. This Figure is a bar chart of the number of standpipes (‘*bornes fontaines’*) installed by ONEA in numbered sectors and named ‘villages’ surrounding Ouagadougou in the period between 2003 and 2009.

The following are the insights from the mapping exercise and the Figure in Annex 6:-

- ONEA’s focus (2003-2009) was on districts outside the central area (beyond ‘sectors’ 1-13): only five central sectors are listed in the Figure in Annex 6. and each received less than five standpipes; meanwhile seventeen sectors in areas beyond the centre are listed by ONEA’s as receiving standpipes;

- it is possible to identify levels of relative wealth and poverty, district by district, in Ouagadougou, using existing data (from the 2006 census): despite the extent of poverty in Burkina as a low-income country, it is not true - or at least not analytically useful - to say that the entire population of the peri-urban areas in sectors 14-30 is ‘poor’; a substantial part of east Ouagadougou, for example, is very poor; at the same time, not all districts beyond the central area are poor: two surrounding districts which received standpipes (sectors 18 and 24) are relatively well-off, and two other outlying areas (sectors 21 and 14) are in the intermediate category;

- the remaining thirteen districts which received standpipes are poor or very poor; the siting of water infrastructure contains a targeting error from an equity perspective, in that it has excluded poor persons (what is called in Wetta and Fofana, 2010, a ‘Type I’ error[70]), based on information supplied by ONEA, in sectors 15, 16, 20, 23, 25 (all marked on Map 2 as poor or very poor areas), as well as in the extension of sectors 28, 29 and 30;

[68] The mode of calculation of the poverty index of each sector is simple (Wetta and Fofona, 2009): the number of poor persons per sector is divided by the total population. So, in a given sector, if the number of poor is (to make the example simple) 20 persons out of a total of 100 persons in the sector, the poverty index is 20 percent.

[69] On Map 2, areas well covered by water infrastructure (“*couverture > 80%”)* are marked in wide hatching and areas “not equipped” (“*zone non-équippée*”) with narrow hatching.

[70] E.Lavallee, cited by Wetta and Fofana, 2010, refers to Type I targeting errors which are errors where poor persons are missed out, and Type II targeting errors where more wealthy persons are included.

- the siting of standpipes has also included non-poor districts and persons (a 'Type II' targeting error): especially in sector 21 (the outer part) and (based on Map 1) sectors 14 and 24;

- it is noted that some unurbanised districts (*quartiers non lotis*) have been reached by standpipes installed by ONEA, to the east, west, north and south of the city, e.g. Saaba (evidence of the de facto policy of ONEA to work in informal areas);

- the water-poverty Map 2 suggests that the sectors are not the same size (in hectareage), so one would not expect the number of standpipes to be the same in each; but it is clear that further investment post-2009 is required to install more standpipes in sectors 16 and 25, and especially 15, 20, 26, 28 and 29[71].

- Sectors 28 and 29 are examples of very poor districts where this analysis by the University of Ouagadougou and INSD suggests that standpipes are relatively lacking;

- ONEA said (May 2010) said that siting of standpipes in peri-urban areas had taken account of, *inter alia*, population density, and also existence of standpipes pre-2003 (presumably functioning standpipes only);

- **the logic of the allocation of standpipes is not clear**: there is no strategy document articulating ONEA's rationale for targeting of standpipes in peri-urban areas; e.g. it is not clear why sectors 15, 20 and 26 (each poor) and sectors 28 and 29 received less than 10 standpipes; in other words, the mapping exercise suggests (with ONEA not giving an explanation to the contrary) that, in terms of inclusion of low-income areas, extension of standpipes to Ouaga surrounding districts was 'patchy';

- as discussed in section 3.4.2.2, the focus group discussions (FGDs) in two areas raised questions of the *affordability* of household connection cost[72].

Map 3. in **Annex 7** is another map supplied by ONEA and cited in the report of Wetta and Fofana. It shows elements of the water distribution network in Ouagadougou - its actual status and planned extension in the period of 2008-2011 ('*Etat actuel et Programmation de l'équipement en réseau de distribution pour la période 2008-2011)* . This map does *not* show standpipes, but, usefully, it includes areas of extension of the city *beyond* the city limits as portrayed on Maps 1. and 2. (e.g. sectors 15 and 17 in the south and sector 18 to the west), i.e. it is cartographic indication by ONEA of the directions in which the city is growing. Given that the city continues to evolve, the issue of where water infrastructure is sited to reach new areas continues under the new project.

3.4.2.2 Focus groups

The following is a note of the information collected from the focus groups in surrounding districts of Ouagadougou in named villages, as shown on Map 2, in three urbanised districts (*quartiers lotis*) - Yamtenga, Bissighin and Toukin - and two un-urbanised areas (*quartiers non-lotis*) - Nioko 2 and Tabtenga [73]. **Table 3.1** provides a summary of the responses from these focus groups.

[71] As a measure of average incomes, Wetta cites the estimate of the INSD that the average household budget available for daily expenses in Ouagadougou in 1998 was 611 FCFA.

[72] And/or provide for a viable alternative service mode affordable to low-income households.

[73] In a subsequent exchange between the University of Ouagadougou and ONEA, ONEA staff have commented that *other* areas outside the centre are better equipped than the five villages selected by the present study - those other areas are, comments ONEA, well covered by water infrastructure (e.g. Map 2: "couverture > 80%").

In the *un-urbanised* districts, as shown in the right-hand column in Table 3.1, the situation is especially concerning (« *particulièrement préoccupante*", Wetta and Fofana, 2010). Poor households in these districts face major difficulties of access:-

- they travel long distances to collect water from standpipes situated at the boundaries of neighbouring urbanised areas;

- households who can afford their own barrels on wheels (200 litre *barriques*) , generally pay the standard price of 60 FCFA per barrel at standpipes (at all seasons of the year);

- the persons consulted in these un-urbanised districts expressed their demand for nearby installation of standpipes, as the means of gaining water access - a standpipe every 200 metres along the access roads in the district;

- without that close access, poor households who cannot buy the 220 litres barrels are obliged to collect and carry water in small quantities (buckets or *bidons* of 20 litres) or acquire water from vendors, at prices of FCFA 200-300 (increasing to FCFA 500-600 or more in the dry season[74]); in other words, households can find themselves paying ten times the 'regulated' price at standpipes, e.g. in standpipes located closer to those households;

- there are non-functioning standpipes (e.g. in Tabtenga, all 8 standpipes) which raises the question of sustainability ('*pérennité)* and possible concerns regarding the rates of functionality of standpipes in other areas of the city.

In Burkina, the poverty threshold (*la ligne de pauvreté*) was (at the time of the 2009/10 research) determined to be 0.5 US$ per day (Wetta and Fofana, 2010), which is the equivalent of 225 FCFA. Based on the above cost of a 220 litre barrel of 60 FCFA, according to Wetta and Fofana, each individual can supply 10 persons with 20 litres of water per day, i.e. at around 6 FCFA for those 20 litres - in other words, the price of 60 FCFA is affordable (Wetta and Fofana, 2010).

In the three *urbanised* areas, the water supply situation has seen improvements. The persons consulted said that successive activities of ONEA, during and since the ZIGA project, had succeeded in bringing about better water access, including installation of new standpipes. The number of standpipes varied in the three districts - see the left-hand column in Table 3.1 - e.g. just two in Toukin where the residents reported that those standpipes were sited on the opposite side of a major road which had to be crossed, at considerable risk.

The respondents in the urbanised areas reported that the number of households with a connection to the water network had increased, although the proportion remained small. In Toukin, for example, an estimated 1 in 8 households currently had a household connection.

According to the responses to the focus groups (Wetta and Fofona, 2010), for the majority of households in both urbanised and unurbanised areas, "the cost of connection is too high". For example, in Toukin (urbanised): "as regards the cost of connection, even though the ZIGA project has allowed for a reduction in the price, it still remains inaccessible to the residents of our neighbourhood"[75]). The financial investment which is required by each household, for connection and water consumption, was mentioned as the principal obstacle to increasing the number of connections - rather than the waiting time of three months for installation of the connection to the house.

[74] Unlike in, for example, Ghana, there is apparently in Burkina (according to one key informant) no system for delivery by water tanker of water at times of great water shortage.

[75] To quote the focus group respondents, « *Concernant le coût du branchement privé, même si le projet Ziga a permis de réduire ce coût, il reste encore inaccessible aux habitants de notre quartier* ».

According to the responses gathered during the focus groups, variations in availability of supply from taps (household or standpipes), caused by water shortages and equipment breakdowns, often cause long queues, which give rise to wasted time and tensions among water users.

The focus groups reported back a desire to be more involved in the management of funds for UWSS, so their capacity to manage the water infrastructure and service is increased - according a greater degree of sustainability (*gage de pérennité*).

As regards sanitation, the lower section of the Table 3.1 summarises the situation in the urbanised and un-urbanised districts[76].

In the two *un*-urbanised districts of Nioko 2 and Tabtenga, there are, currently, very few sanitation facilities, household or public - open defecation is the norm. There is demand for more public sanitation facilities, in markets, schools, which they would like to see every 500 metres along access roads. There is little expressed demand for improved household sanitation - households are not aware of efforts by ONEA to inform residents of the need for sanitation - a minority of households possess TVs or radios.

[76] As noted above, in section 3.3.1, the ZIGA project did not include a sanitation component, but ONEA did, as noted in section 3.4.2, have some resources available for pursing the sanitation part of its mandate, from sources other than IDA, as well as from the surcharge on water bills (section 3.1.5).

Table 3.1 Summary of the responses of focus groups in five surrounding districts of Ouagadougou – - from urbanised districts (*quartiers lotis*) and un-urbanised districts (*quartiers non-lotis*)

	URBANISED AREAS (Yamtenga, Toukin et Bissighin)	UN-URBANISED AREAS (Nioko 2 et Tabtenga)
WATER SUPPLY (at the time of the research in 2009)		
Household connections (*branchements particuliers*)	e.g. Toukin : 1 in 8 households	To-date there is no network in these un-urbanised areas.
Cost of connection	For most households in these areas, the price of connection is too high.	
Standpipes (bornes fontaines)	Standpipes exist in each of these districts: Toukin: 2, on the other side of the road; Yamtenga: 15 in total (10 within the area, 5 at the border with neighbouring area); Bissighin: 15 standpipes.	Critical lack of infrastructure in these areas: standpipes do not exist, or are non-functioning (in that case households use wells). Access to functioning standpipes is to those located on the boundary with neighbouring urban areas.
Cost of water at standpipes	60 FCFA for barrel of 220 litres (all seasons)	60 FCFA for barrel of 220 litres (all seasons)
Access to standpipes	Poor households cannot afford their own barrels on wheels; they resort to vendors	Poor households cannot afford their own barrels on wheels; they resort to vendors
Cost from vendors	200 FCFA : normal price 500/600 FCFA+ : price in dry season	200/300 FCFA : normal price 500/600 + FCFA : price in dry season
	The further a household is located from a standpipe, generally the higher the cost of accessing water via vendors	
Demand	A standpipe every 200 metres on the larger access roads (not tarmaced)	More standpipes and a lower water tariff at the standpipes: 35/40 FCFA for a barrel
Communication/ information	Information from ONEA is «inaccessible»; lack of radios/TVs in households	Information from ONEA is «inaccessible»; lack of radios/TVs in households
SANITATION (at the time of the research in 2009)		
Latrines - household	Few sanitation facilities: about 3 in 10 households have benefitted from support to construction of improved latrines. Others practise open defecation, except those with a traditional latrine.	Very few sanitation facilities - generally open defecation is practised.
Latrines - public	Exist in some public places.	A few latrines exist in public places, built by collective community initiative.
Drainage	None, even beside major roads	None at all
Demand	There is demand for public latrines (schools, markets, clinics, major roads). Residents are ready to contribute in kind to private latrines	There is demand for public latrines (schools, markets, clinics, major roads). Residents are ready to contribute in kind to private latrines
Communication/ information	Information from ONEA is «inaccessible»; lack of radios/TVs in households.	Information from ONEA is «inaccessible»; lack of radios/TVs in households

(Source: Wetta and Fofana, 2010 - the report includes sketch maps of UWSS facilities in each of the five districts)

The sanitation picture is a little better in the three *urbanised* districts. The FGDs in Yamtenga, Bissighin and Toukin reported that a minority of households, about 3 in 10, had, up to the date of the survey, benefitted from support for construction of an improved latrine (with 40% subsidy to costs of construction). The remainder used either traditional household latrines, or practised open defecation.

There was - at least at the time of the research in 2009 - no roadside drainage in either the urbanised or un-urbanised districts. After the intense precipitation event on 1st September, 2009, these districts suffered flooding.

3.4.3 The new project

Given that the new Urban Water Sector Project was approved in May 2009, it was too early at the time of this research study to assess its implementation.

As set out in section 3.3.2, the new project is designed to increase access to UWSS in urban areas and continue the strengthening of capacities to deliver and manage UWSS services.
There are aspects of the design of the new project (as set out in the 2009 PAD) which, this report has argued in section 3.3.2.1, require to be clarified and further developed, not least the *disconnect* between project objectives on engineering/infrastructure, utility strengthening (including financial performance) expressed in the key performance indicators and other objectives (social) which by their absence from the KPIs, are effectively de-prioritised to a secondary status of stated, but not monitored and measured, aims of the project. Out of the USD 52 million budgeted for infrastructure, USD 32.7 million was for infrastructure (stand posts and social connections), but, as shown in this chapter, the 'social' policy of ONEA has so far failed to take account of disparities in income/wealth.

As noted in section 3.3.2.1, a key aspect of design of the water component of the new project is that it plans to focus on serving an additional 220,000 via network connections, as compared with only serving 15,000 extra persons by standpipe. Given the low revenue-earning status of standpipes, there will be little incentive for ONEA to install standpipes - unless a specific Government subsidy (financed by the IDA grant) is targeted towards this part of the water economy- see Section 3.7.

In paragraph 69 of the 2009 PAD entitled 'Social', it is stated (emphasis added):-

> "The *primary goal of the proposed pro*ject is to contribute to a sustainable improvement of hygiene and environmental health by improving access to safe drinking water and sanitation in *poor fringe areas* of Ouagadougou, Bobo-Dioulasso, and other urban areas where high prices are currently paid to alternative water service providers. As such, the proposed project will seek to *reduce the access bias between formal and informal settlements*, where, until recently, ONEA did not provide water services. Beneficiary assessments[77]; and a Willingness-to-Pay (WTP) study[78] helped to design access mechanisms (social connection programs and alternative types of services) that will be tailored to local neighbourhood conditions and to customers' willingness-to-pay" (World Bank 2009b, page 20) .

The above is a key part of this section on 'Social' issues (which is short - covering less than one page). The term 'goal' is used to refer to the intention to improve access in poor fringe areas of Ouagadougou. The desirability of reducing the access bias between formal and informal settlements is borne out by the results of the focus groups conducted by this research project (section 3.4.2.2). Yet, the status of this social goal as a 'primary' goal of the project is not reflected in the KPIs.

[77] Presumably the reference here to "beneficiary assessments" is to such as the survey described in the ICR, at page 12 cited in this present report, in section 3.4.1.
[78] Namely, the study (ICEA/SOGREAH 2008) discussed in section 3.3.2.1 of the present report.

3.5 Assessment: achievements and weaknesses of the ZIGA project

This section assesses the achievements of ZIGA project, which were considerable, as well as its weakness when viewed through the 'lens' of inclusion (it is too soon to assess the new project).

3.5.1 Achievements: water infrastructure and services

The following were the achievements of the ZIGA project:-

- the ZIGA project applied the donor and GoB funds to substantially increase the bulk water supply to the 'gates' of the city of Ouagadougou; the production capacity was increased threefold, from 40,800 m3/day in 2001 (2001 PAD, World Bank, 2001, page 5) to 122,000 m3/day in 2007 (2009 PAD, World Bank 2009b, page 1);

- thereby, **the bulk water supply produced by the ZIGA project was sufficient to meet demand**[79]. According to a senior government official in the MAHRH, the situation will be reviewed in 2015, taking account of the rate of growth of Ouagadougou in the intervening five years[80];

- in terms of delivery of water services, the number of persons with access to the water network in Ouagadougou more than doubled in six years, from 300,000 in 2001 to over 800,000 in 2007, an increase of one-third of the city's residents at the time of the 2000 Census, according to which the total population of the capital, including peri-urban areas, was around 960,000[81];

- as to spatial distribution, the water infrastructure (connections and standpipes) installed during and following the project has focused on the seventeen districts outside the city centre (on sectors 14-30) which are in most cases (not all) poorer than the central districts (sectors 1-13); in that sense, the statement in the evaluation of the project (World Bank, 2008) that standpipes are "mostly" located in poorer districts is correct, although not analytically useful, because of targeting errors (described in section 3.4.2.1) ;

- the project introduced a social connection policy to reduce the cost of connections by 50% and later 75%; this substantially increased demand for household connections;

- the ZIGA project saw a substantial turn around in the financial and operational management of ONEA; the 2009 of the new project describes the "main measurable improvements in ONEA's performance" as set out in **Box 3.7.**; in the period from 2003-2007 (financial years), ONEA's total revenue increased by an average annual rate of 12%, well above inflation (WSP, 2008);

[79] The 2009 PAD (page 6): "the production and storage capacity installed under the [ZIGA project] is sufficient for the time being". The new project provides, instead, for sub-components to increase water production and storage capacity in *Bobo-Dioulasso, Kodougou and Dédougou*, as well as expand distribution and access in those cities (and in Ouagadougou) (World Bank 2009b, p.7-8).

[80] Given Burkina's water resources context (as summarised in Box 3.1), such a review will need to consider competing demands on water resources, for example between agriculture and urban use.

[81] Source: INSD.

Box 3.7 Improvements in ONEA's performance - according to the 2009 PAD

- **Bill collection**: the bill collection ratio increased from 86 percent in 2002 to 95.4 percent in 2007. Accounts receivable from private consumers have decreased from 21 8 days to 73 days[82].
- **Unaccounted-for-water**: UFW was stabilized at 18 percent of the production, which is one of the best performances in Sub-Saharan Africa; expressed in terms of losses per km of distribution network, UFW decreased from **5.5** m3 per km per day to 4.8 m3 per km per day;
- **Staff productivity**: the commercial staff productivity index, which stands at 810 connections per employee by the end of the project, by far exceeded the target of 230 connections per employee initially set for 2007;
- **Financial reporting**: "ONEA's annual financial reports are being prepared in a timely fashion, in accordance with international standards";
- **Information**: "the quality of information increased dramatically": the Technical Auditor validated 95 percent of the business indicators in 2007 as compared to only 48 percent in 2004;
- **Financial equilibrium:** the financial equilibrium of the urban water sector was restored in 2006 as initially expected.

Source: 2009 PAD (World Bank 2009b) page 29-30

- however, ONEA's debt serviceability remains a source of concern; the World Bank (2009b, p.14) details one of the 'critical risks' to further progress by the utility: 'The financial equilibrium that was achieved in 2006 may be jeopardized by the increasing debt service requirements and to a lesser extent by the payment arrears from public customers'.

3.5.2 Equity

Considering the progress of the ZIGA project from the perspective of inclusion - i.e. how far low-income households have been served by the project (2001-2007) and the activities of ONEA financed by other sources (2007-2009) - the following observations arise.

This research study suggests that, in relation to extension of the distribution network within the city of Ouagadougou, service of poor areas has not been systematically planned according to a logic of inclusion; from that perspective the result has been patchy. The mapping exercise carried out by the University of Ouagadougou and the INSD/INSS points to *some poor areas* of the city surrounding the centre (*les quartiers périphériques*) which were included by ONEA in its programme of extension of standpipes, whilst others have been omitted. Given the rate of growth of the population of Ouagadougou and the dimensions of the challenge of extending water infrastructure to the surrounding area, choices made by ONEA will presumably entail making populations in some areas **wait** until the next phase of investment**. But, which areas, and according to which criteria, articulated and applied in a transparent manner?**

To-date, there is no evidence of a strategy for geographical targeting by ONEA of surrounding areas based on an analysis of levels of poverty. As discussed in section 3.3.2.1, the socio-economic data gathered from the ICEA/SOGREAH study does not appear to have been utilised by ONEA (except, very selectively, as an argument in support of its household connection policy).

Similarly, as to how far poor *households* have benefitted from the investment to-date in extension of water services in Ouagadougou since the commencement of the ZIGA project, it appears that no

[82]A study by the Water and Sanitation Program (WSP, 2008) qualifies this, pointing to a problem of late payment by some government agencies and other major water-consuming customers.

information is available, at least, none disaggregated and quantified by ONEA (and supplied to the researchers). Like many African utilities, ONEA does not organise customer data by income category. This means that, despite the progress it has achieved in installing water infrastructure and extending water services, it is unable to show the benefits to low-income households.

During the key informant interviews, a comment was made to the researchers by ONEA personnel that Ouagadougou was composed of mixed wealth communities, such that it is "impossible for a utility to distinguish between rich and poor areas". Before the results of the poverty mapping became available, there was a doubt in the minds of the research team as to whether the mapping exercise would, or would not, be useful. In line with the above comment, it could have been that rich and poor households in each sector would average each other out, so as to produce a similar poverty level in many areas of the city. As shown in Map 2, the mapping exercise has, however, pointed to differing levels of poverty in the city, with a pattern of poorer populations in surrounding areas.

That differing levels of poverty/wealth in Ouagadougou exist is noted in the ICEA/SOGREAH:-

> "The capital, despite concentrating wealth, is itself characterised by *major income inequalities* and the proportion of very poor people is significant" (ICEA/SOGREAH 2008, p.15, emphasis added).

As its source for this information, ICEA/SOGREAH cites the same body to which the present research project had recourse for authoritative data, namely the INSD.

Map 2 is proposed as a simple tool on which to base a discussion between sector stakeholders on **geographical targeting** strategy - to which other actors can bring/add their own analysis[83].

An example of potential of geographical targeting as considered in relation to an IDA-funded project in West Africa is given in **Box 3.8**, citing from the ICR in 2009 of the water project in Dakar (World Bank 2009c).

In Ouagadougou, Map 2 should be seen as a first step[84]. Further study, including development of this poverty mapping tool[85], would be useful to advance knowledge and improve the level of insight into methods of targeting of poor areas and households in Ouagadougou and other cities in Burkina.
ONEA has employed, across all areas, richer and poorer, and to all households, a 'social connection' strategy of reduction of the cost of connection to the water supply network. House connection (when functioning) eliminates time/labour of water collection from standpipes, but connection, to be preferable to households, has to be affordable. The reduction was made in stages, first from 100,000 FCFA to 50,000 FCFA; then, later in the ZIGA project, to 30,000/25,000 FCFA (World Bank, 2008, page 7). The further reduction, down to FCFA 30,000, was made in the penultimate year of the ZIGA project (the first years of ZIGA were devoted to constructing the primary main to bring the bulk supply to the city, with the works on the distribution network within the city beginning in 2006).

The ICR comments that the lower connection price helped to reach the target for connections (and surpass it, by 11,000), but (as elsewhere in the document) the ICR makes no comment on the socio-economic status of connected households.

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[83] The University of Ouagadougou could usefully, for example, develop discussion with the Water and Sanitation Program (WSP) in Burkina on the findings of the present study, thereby benefitting from WSP's activities in Burkina and its accumulated knowledge of UWSS in the SSA region.

[84] A dialogue between the University of Ouagadougou, the INSD and ONEA has continued in 2010 and 2011.

[85] Including adjustments and refinements which can be added over time. The exercise could be linked to reflection on other targeting approaches, e.g. by household characteristics.

Box 3.8 Geographical targeting - as considered in Dakar, Senegal

The objective of this long-term Water Sector Project was "to assist the Borrower in achieving sustainable improvements in the delivery of urban water and sanitation services in un-served and low-income areas of Dakar" (source: PAD for the project).

"Poverty impact: the project replicated the experience of the PSE (*Projet Sectoriel Eau*) Water Sector Project, which demonstrated that providing low-cost connections was critical for increasing direct access to piped water by low income families. Through the social connection program financed under the project, qualifying households obtained a connection free of charge against the payment of a refundable deposit equivalent to US$38 representing less than 20 percent of the connection cost, on a first-come first-served basis. The only criterion used for assessing eligibility is the geographical location [*Note 5*] but areas planned for network densification get priority. Households located in Dakar's low-income neighbourhoods and all households located in secondary urban centres were eligible for a social connection. Between 2001 and 2008, about 98,000 household connections have been constructed under the project in peri-urban areas of Dakar and secondary centres" (from section 3.5 on page 13 on 'Overarching Themes, Other Outcomes and Impacts, (a) Poverty Impacts, Gender Aspects, and Social Development').

Note 5 (on p.13): "Eligibility criteria to ensure better targeting of the poor were thoroughly debated in the design of the social connections program, which concluded that the current country conditions could not warrant the use of individual household criteria and that a *poverty ranking of urban neighbourhoods* would be an acceptable proxy. A specific study of the targeting of the programs was carried out at the end of the project to check whether the approach was valid and whether other criteria might be adopted in the future. The study concluded that the approach was realistic: the water connection rate in the targeted neighbourhoods was at the end of the project, much closer to the city average. The study also proposed individual criteria for future programs (particularly to consider the monthly electricity bill as a revenue indicator). SONES-*Société Nationale des Eaux du Senegal* and SDE-*Sénégalaise des Eaux* (the water utility and contractor) are reviewing the recommendations that they intend to discuss with representatives of the civil society".

Source: World Bank 2009c - the ICR for the Senegal project, December 2009 (emphasis added)

The responses from the focus groups conducted by the present study in surrounding areas (far from the city centre) suggest that the reduced price of FCFA 30,000 needs reviewing, that it is still not affordable by poor households (in both urbanised and unurbanised areas). For many households in those areas, public standpipes, are, and will continue to be in the short and medium term, a key source of water. The decision to focus a larger proportion (compared with the ZIGA project) of investment of the water component under the new project on new household connections, instead of standpipes, is, from an inclusion perspective, a move in the wrong direction.

The responses from the focus groups in the five areas studied in Ouagadougou - Yamtenga, Bissighin and Toukin, and Nioko 2 and Tabtenga - indicate that, in the (first) three urbanised areas, the water supply situation has seen improvements from the installation of standpipes. However, in the un-urbanised areas, beyond the limits of the formal city, few standpipes are installed, with serious implications for households in those areas. For those without a nearby standpipe, or without the means to buy a 220 litre barrel on wheels (barrique) to collect water, a serious problem arises, due to the price charged by vendors which varies, but is high (at best, 3 times, and, at worst, 10 times the rate at the standpipes, depending on the season). Meanwhile, the focus groups indicate that rates of functionality of standpipes in some sites are low (e.g. Nioko 2 and Tabtenga).

It has been seen that the ICR comments (section 3.4.1) that the financial model is a "powerful tool" for reaching financial equilibrium and socially acceptable tariffs. As to how far it will be possible, through ONEA's financial model, both to reach poor households with an affordable service *and* balance ONEA's books, with a positive balance of revenues over the costs of ONEA - doubts were raised by the report on "African Water Utilities: Regional Comparative Utility Creditworthiness Assessment", commissioned by the Water and Sanitation Program (WSP 2008).

This WSP-commissioned report applauds the "substantial" turn-around in financial management which ONEA has achieved, through "strong leadership", whilst at the same time commenting on ONEA's debt serviceability (coverage of interest payments) in 2006/07 which it notes is negative, as well as ONEA's gearing (debt relative to earnings before interest, tax and depreciation) which, it notes, is high. The issue of debt service is also referred to in the PAD for the new project. One of the 'Critical Risks' (World Bank 2009b, page 14) is that:-

> "The financial equilibrium that was achieved in 2006 may be jeopardized by the increasing debt service requirements and to a lesser extent by the payment arrears from public [sector] customers".

In the course of 2011, the first repayment of capital under the loan element of the IDA funding to the ZIGA project will presumably become due (due to expiry of the 10 year grace period). This is a question mark relating to the consistency of the financial and social goals of the new project, as designed.

What is striking, as compared with the attention to ONEA's financial model in the 2009 PAD, is that, there is no comparable attention in that document to a social 'model'. As noted above, the section on 'Social' aspects is short and a gap exists in terms of analysis by ONEA of the distribution or income levels of the poor. The ICEA/SOGREAH study carried out in 2007 (ICEA/SOGREAH, 2008) provided information on income levels and the 'socio-economic profile' of a sample of urban households (as described in section 3.3.2.1), but ONEA did not make use of these data to design a strategy to target low-income customers. As seen in section 3.3.2.1, the grant element of the funding for the new project does not appear to be destined for a particular category of households.

Who, then, is assuming responsibility for ensuring that poor populations receive services? It has been seen that ONEA's contract with the MAHRH does not include a relevant performance indicator. Nor do the KPIs of the new IDA-supported project. The prevailing impression is that the focus of the new project is to increase the number of connections[86] and the surrounding areas are seen as comprising a source of new clients of the utility *irrespective* of differing levels of income - rather than (or more than) a focus on provision of affordable services for a large number of poor water users. **Where the subsidy to household connection benefits relatively wealthy customers, ONEA is missing out on revenue.**

The priority under the new project seems to be that ONEA stays a well-performing utility: while this is a *necessary* condition of sustainable UWSS services to surrounding areas of Ouagadougou, for inclusion of poor areas/households within affordable and sustainable service improvements it is not a *sufficient* condition.

[86] World Bank, 2009b, page 1: in Ouagadougou, "only 50 percent of the total urban population has access to water services through household connections, compared to 61 percent in C6te d'Ivoire and 76 percent in Senegal".

3.6 The significance of IDA support - to the projects in Burkina

We have seen, in section 3.3.2, that the 'inclusion gap' begins with the GoB: despite its own statements of principles relating to equity and "target groups" set out in national policy, based on law (as described in section 3.2. of the present report), the national planning and programming relating to UWSS does not specify the means by which low-income areas and households are to be targeted or establish the parameters within which ONEA is to develop a strategy to accomplish that.

Further, a key finding of the analysis above is that involvement of World Bank did not take effect to address that design issue, at least not so as to remedy the design flaw which exists in the two UWSS projects assessed by this research project. As discussed in section 1.6, either, then, the World Bank personnel who worked with (in this case) the GoB on design of the projects: (a) did not see the inclusion gap; or (b) did not consider it was a flaw in design; or (c) saw the gap and tried to remedy it, but were not able to do so.

As for determining which of the above scenarios applied, the researchers were not privy to discussions between the GoB and the World Bank. Civil servants and Bank staff supplied information to this study, *without* generally making comments on the conduct of recent meetings and other exchanges between the Bank and GoB. As noted in section 1.6, without published information on the tenor of project design discussions, any debate which occurred on inclusion issues - among team members and with the GoB - including any differences of view, is not visible. The PAD records the position arrived at the conclusion of any such debate.

It is, nevertheless, clear from the written comments of the World Bank on the preliminary (July 2010) draft of this report that the Bank did not consider the lack of a strategy for targeting of low-income areas/households to be a design flaw: the view taken by Bank staff was that all the residents of the districts outside the centre of Ouagadougou were poor, so that there was no need to make specific provision for pro-poor targeting. In the written comments, it is stated that:-

> "Pro-poor obligations are not required, as the entire population in the service territory is poor". The "overall setting of the project" is that "Burkina is a low income country with about 60% of its population living below the poverty level. In urban towns, most of the poor live in peri-urban areas in difficult social conditions including the lack of access to improved water supply and sanitation services".

This suggestion that poverty exists in the 'service territory' of the project in a homogeneous form is surprising and misleading. The mapping exercise described in section 3.4.2.1 clearly shows that it is possible to identify levels of relative wealth and poverty, district by district, in Ouagadougou, using existing data (from the 2006 census) and this is echoed by ICEA/SOGREAH in its 2008 report. **Despite the extent of poverty in Burkina as a low-income country, it is not true - or at least not analytically useful - to say that the entire population of the peri-urban areas in sectors 14-30 of Ouagadougou (the service territory referred to in the above quote from the Bank's written comments) is 'poor'.** Those seventeen sectors cover a large part of the territory occupied by Ouagadougou, as the maps in Annex 5 and 7 to the present report indicate (if those maps are to scale, then more than half the geographical extension of the city). A substantial part of east Ouagadougou, for example, is very poor; at the same time, not all districts beyond the central area are poor: two surrounding districts (sectors 18 and 24) are relatively well-off, and two other outlying areas (sectors 21 and 14) are in the intermediate category, while the remaining thirteen districts which received standpipes are poor or very poor - all as shown in the different colours on the map in Annex 5.

The outcome of the sweeping characterisation by ONEA that the service territory of the Ouagadougou project was, in some way, uniformly poor - a view which was evidently not challenged by the World Bank - is very unsatisfactory. Based on the design of the new project as set out in the 2009 PAD, a key lesson of the ZIGA project has not been learnt. The focus of the new project, 2009-2015, is to increase the number of connections, and the surrounding areas are seen as comprising a source of new clients of the utility *irrespective* of differing levels of income - rather than (or more than) a focus on provision of affordable services for low-income households. Like the ZIGA project, the design of the new project assessed by this research study is skewed towards financial objectives, to the detriment of social aspects. The challenge of finding a balance between the goals of utility performance and 'inclusion' is skated over, as opposed to being elaborated, in the PAD. And, the PAD incorporates in its text the inconsistency that a social goal which is stated to be a "primary" goal of the project (World Bank 2009b, p.20) is not reflected in the key performance indicators in the Results Framework (ibid, pages 37-38).

The question arises how the social goal of the new project will be monitored, without disaggregated figures specified in the Results Framework? The implications of this have been seen in the evaluation of the ZIGA project in June 2008: after a similar omission from the KPIs of the ZIGA project, no assessment was conducted of how households of *differing* socio-economic status benefitted. Will the ICR of the new project, following its completion in 2015, include an un-quantified assertion of the kind seen in the ICR for the ZIGA project ('mostly' in paragraph 3.5)? It seems it will, unless concerted action is taken by the GoB and the Bank during the course of the new project.

As discussed in section 3.3.2.1, a key issue is how to deliver subsidies close to the people who need them - given that it is reasonable, and desirable, to subsidise UWSS (in order to ensure water supply, and sanitation, to low-income households, and because of externalities affecting the city as a whole, such as threats to public health. Under the new project, the World Bank is making the funds for the new project available to the GoB as a grant, and (according to the PAD) the IDA funds are to be on-granted as well as on-lent to ONEA, which means that IDA funds are available to finance subsidies for water and sanitation users. The 2009 PAD does envisage subsidies for the water (and sanitation) component (like that for the ZIGA project), but those subsidies are not targeted to a particular category of water or sanitation users (as far as is indicated by the information supplied to the researchers). An opportunity has been missed by GoB and Bank staff to direct IDA grant monies to financing the standpipe part of ONEA's customer portfolio which is lower revenue-earning.

As for the stance adopted by the World Bank in relation to the social policy of ONEA, the written comments of the Bank to the earlier draft of this report state (on page 1):

> "The *social connections and standpipes programs* introduced in Burkina Faso under the [ZIGA project] is a well known practice in the sub-region (Cote d'Ivoire, Senegal and recently in Niger) to facilitate access to piped water to poor populations in peri-urban areas. Burkina Faso decided to replicate this experience which demonstrated that providing low-cost connections was critical for extending direct and affordable access to piped water by low-income families.

Bank staff appeared to be satisfied with ONEA's social policy on the basis that it is similar to that which had been adopted in other West African countries such as Senegal and Côte d'Ivoire, without considering how this model might be further developed and refined. Yet, as noted in section 3.5.2, the potential of geographical targeting using a "poverty ranking of urban neighbourhoods" in Dakar, was explored in the water sector project in Senegal which was completed in 2009 (see Box 3.8).

3.6 Conclusion and recommendations - arising from the Burkina case study

3.6.1 Conclusions

- The laws and policies in Burkina relating to urban water and sanitation (UWSS) include recognition of equity as a guiding principle in relation to water supply, and refer to poor populations as a target of sanitation services. In those documents, however, no strategy for achieving equitable inclusion of poor areas or households is stated, or process envisaged for creating one.

- The plans of ONEA, the UWSS utility in Burkina Faso, include activities to extend water and sanitation services to areas of Ouagadougou surrounding the city centre, but those plans do not include articulation of a targeting strategy, with a defined set of criteria for targeting of low-income areas/households. Currently, ONEA is capable of characterising the socio-economic characteristics of these surrounding areas (seventeen districts of the city in 'sectors' 14-30) in a 'broad brush' and unsystematic manner only.

- The sweeping characterisation that the population of the 'service territory' of the ZIGA project was uniformly poor was not challenged by the World Bank (as discussed in section 3.6).

- The project appraisal documents setting out the design of the two projects studied, namely the 'ZIGA' project (2001-2007) and the new project approved in 2009, state the intent to include low-income households. They do not, however, fix this aim in the key performance indicators of the projects. According to the PAD of the new project, the 'primary goal' of the project is to improve access in "poor fringe areas" of Ouagadougou and the project will "seek to reduce the access bias between formal and informal areas". But that primary goal is not reflected in the project KPIs.

- The evaluation of the ZIGA project in June 2008 (as recorded in the Implementation Completion and Results Report of the World Bank) noted that the key indicators for that project which related to utility performance, including financial aspects, were "relevant, unambiguous, quantifiable and measurable" (World Bank, 2008, page 8). As discussed in section 3.3.1 of the present report (and evident from Box 3.3 which reproduced the 'ZIGA' KPIs), in relation to *social* aspects of the project, the same *cannot* be said of the ZIGA KPIs.

- ONEA's stated intention of implementing a 'social' policy was not realised by the ZIGA project, or at least *not demonstrably* realised because there was no disaggregated information available and utilised - equity *may* have be done, but it was not done transparently - and in some areas/sectors, it seems (subject to ONEA's explanations in each case) that equity was *not* done (e.g. the sectors which received less than 10 standpipes in 2003-2009, namely sector 15 (poor), 20 (poor), 26 (poor), 28 (very poor) and 29 (very poor).

- The improved water services provided by ONEA under the ZIGA project until 2007 and, later, up to 2009, benefited hundreds of thousands of people, affording them improved access - a significant achievement - and thereby contributing towards the MDG water target. But the lack of disaggregated information means that ONEA is unable to show clearly how its objective of providing improved services to *low-income* households has been fulfilled - nor is it able to report on the *extent* to which there are errors of inclusion of relatively wealthy areas/ households within its existing social policy.

- Until this equity gap is addressed, it risks undermining MAHRH's and ONEA's record of substantial performance in tackling the challenge of extending improved water services to peri-urban areas of Ouagadougou, both urbanised and un-urbanised.

- Information on poverty levels in Ouagadougou, from the 2006 census, has been applied by this research study to carry out a preliminary mapping exercise (discussed in section 3.4.2.1) to review the locations of extension of water infrastructure, and particularly standpipes, to surrounding areas of Ouagadougou. That has yielded a first water poverty map which suggests that extension of standpipes to surrounding areas of Ouagadougou exhibits 'patchy' inclusion of poor areas in the city.

- To-date, ONEAs' approach to reaching poor households is by reductions in the price of household connection, plus a subsidy to improved latrine construction - and the 'social tranche' of the water tariff.

- Responses from the focus group discussions conducted by this study suggest (at least in the five peri-urban areas where this study carried out FGDs[87]) that the cost of connection is too high for low-income households in poor areas even allowing for the substantial reductions in price offered by ONEA (at least in those areas where conditions are equivalent to those five areas).

- The design of the new project favours (private) household connection over (public) standpipes (at a ratio of 14:1). Whilst alternative means of making available connections are being tested, and until they are proven (simplified networks and local neighbourhood operators), the populations in those five peri-urban areas[88] will continue to demand access from functioning standpipes, sited within their nearby areas.

- ONEA has supplied information to this research study recording the substantial increase in household connections after the reduction of the price of connection below FCFA 50,000; a key question, however, is *which type of households* have constituted the new connected clientele of ONEA (including remaining connected).

- In the design of both projects studied by this research study, the overall impression is that the engineering/infrastructure perspectives and utility capacity-strengthening have prevailed over the social. ONEA's efforts are, it seems, principally motivated by maximisation of household connections, irrespective of for whom - the key question is *for whom* has the progress in laying out water infrastructure (undeniably achieved by the ZIGA project) been afforded?

- The project design has effectively resolved tension between the utility capacity-building objectives, including 'financial equilibrium' of ONEA, on the one hand, and the social objectives of the projects on the other hand by making the social aspirations (inclusion) subordinate to the former objective - the system of subsidy as currently designed in its universal application is too blunt an instrument of social policy.

- As noted in section 3.6, a key issue is how to deliver subsidies to the water users who need them it. A system of targeting households of different income/socio-economic categories (at least two) with *different* connection prices would be more geared to equity. An opportunity has also been missed to direct IDA grant monies to financing the lower revenue-earning, standpipe part of ONEA's customer portfolio.

[87] As noted in section 3.4.2.2, these five areas were three urbanised districts (*quartiers lotis)* - Yamtenga, Bissighin and Toukin - and two un-urbanised areas (*quartiers non-lotis*) - Nioko 2 and Tabtenga.
[88] Yamtenga, Bissighin, Toukin, Nioko 2 and Tabtenga.

- Standpipes have been installed in such areas, or on the outer boundaries of neighbouring 'urbanised' districts. Despite the benefits of connection for households able to bear the cost, as well as for ONEA in terms of increasing its connected customer base, the FGDs provide a key lesson in terms of Burkina's social policy – that of the remaining importance of standpipes in peri-urban districts as a medium-term solution to meeting the needs of low-income households.

- As to sanitation, under the new project (the ZIGA project did not fund sanitation) the intention is to propose a menu of on-site sanitation options. Sector actors present at the mid-term review of this research study questioned whether the level of subsidy to be provided by ONEA for construction of improved household latrines would be sufficient for poor households.

3.6.2 Recommendations

For the Government of Burkina Faso, and ONEA as UWSS utility:-

- More attention to levels of affordability of low-income households is needed; it seems that ONEA did not make use of the information on the socio-economic profiles of households which exists in the report of the study by the international consultants ICEA/SOGREAH commissioned by ONEA in 2007, as well as the data in the hands of the National Institute of Statistics (INSD).

- The household survey to be carried out in the third year of the new project (as referred to on page 38 of the PAD) will need to be formulated by ONEA so as to collect information which allows comparison of levels of satisfaction expressed by households of *different* income levels, and so as to specifically question households in the surrounding areas of Ouagadougou (both urbanised and un-urbanised areas) as to how the policy of ONEA is operating, in relation to connections (including subsidy of the connection price) and standpipes.

- As noted above, the IDA funds are both on-lent and 'on-granted' to ONEA. While the loan element is regarded as an instrument of financial rigour for the utility, the grant element of IDA under the new project provides a means to finance subsidies to UWSS. In order to deliver a subsidy to the poor households in the surrounding areas of Ouagadougou who need it, one option would be for the GoB, via the Ministry of Finance, to compensate ONEA for all (or a 2/3 proportion) of water sold through standpipes (e.g. the Treasury paying for that water in retrospective payments at agreed intervals)[89]. This would remedy the current disincentive which operates to discourage ONEA from installing standpipes - the number of standpipes to be installed under the new project could be reviewed upwards. This compensation system could be seen as a transitional measure to help ONEA bridge the gap between the lower-paying, lower revenue-earning water economy on the one hand and the connected water economy on the other.

- As regards review of the social connection policy, a possibility to explore is a system which offers *free* connection, *targeted* to households in the (very) poor areas of the city, based on poverty mapping, i.e. **geographical targeting**. Or, alternatively, offering a reduction of the connection price to FCFA 10,000 (or even FCFA 5,000) plus a contribution by households in kind, since the focus groups indicate that households in both the urbanised and un-urbanised

[89] As noted, this would be limited to the *grant* element of the funds from the IDA. It would be an exception to the current principle, interpreted as a rigid rule, that ONEA should be self-sustaining financially - supportive of ONEA's financial equilibrium.

areas are ready to contribute their labour, and basic materials (such as sand/gravel when these can be acquired). Another possible course would be to consider subsidies for purchase of the 200 litre barrels (*barriques*), although the implications for the future of water vendors (their legitimate livelihoods) would need to be taken carefully into account.

- The possibility of carrying out **targeting by household characteristics** (proxy means testing) may be explored; Box 3.4 in this chapter gives examples of the type of household characteristics which could be used to devise a set of criteria for testing as possible proxy indicators for identifying wealthy households.

- In relation to sanitation services, given the widely recognised need to stimulate demand for sanitation, communication for behaviour change (referred to in the National Sanitation Strategy, page 22) needs to be stepped up by ONEA. The focus groups indicate that information has to-date not reached surrounding areas, or not consistently (not to the five areas where FGDs have been conducted).

For the Government of Burkina, ONEA and the World Bank, in collaboration:-

- The design of the new project provides (PAD, World Bank 2009b, page 8) for institutional support to ONEA including to "review the impact and sustainability of access options proposed to households" (e.g. in mid-term surveys). It is recommended that ONEA, with the support of MAHRH, engage in open discussion with key sector stakeholders in a process of drawing up - with the guidance of the World Bank/WSP - a strategy for targeting of poor areas and households, to apply to Ouagadougou and the other urban centres within the scope of the new project, articulated in unambiguous, quantifiable and measurable indicators.

- In line with the Accra Agenda, both the World Bank and the GoB should work to strengthen the management of results under the new project, through disaggregation of data on water users, duly reflected in project monitoring and evaluation. This research study has stimulated a dialogue between the University of Ouagadougou and ONEA including with the INSD, based on the preliminary mapping exercise, which can usefully be pursued. Such collaborations, as part of broader policy communities - beyond just government representatives, Bank staff/consultants and ONEA executives - allow access to a broader pool of skills.

4 Tanzania case study

This section has been written by **Josephine Tucker,** Research Officer, ODI**, Paula Tibandebage and Festo Maro,** both of the Economic and Social Research Foundation, Dar es Salaam. It draws heavily on the report from Tanzania written by Paula Tibandebage and Festo Maro.

Research for this case study was conducted in Dar es Salaam between September and December 2009, and involved key informant interviews, focus group discussions with water users, and analysis of available documents. In September – November 2011 a rapid follow-up assessment was conducted by Festo Maro and Josephine Tucker, using further key informant interviews to (a) pursue specific new information provided by the World Bank following review of the original report in 2010-11, and (b) provide an update on any important sector developments, such as new policies, strategies or pro-poor programmes, which had been adopted since the time of the main research. Newly available documents, such as the project Implementation Completion Report, were also reviewed through a follow-up desk study.

The follow-up review was limited in scope, however, so unless more recent sources are indicated, most findings relate to the situation in 2009.

Update at December 2011: Inclusion in policy and strategy

Since the time of the original research there have been no new water policies or strategies issued at national or agency level or for serving low-income populations. A new National Sanitation Policy has been developed but has not yet been approved by the Cabinet so is not yet publically available; it reportedly focuses largely on rural sanitation. However, there have been some developments, and some progress has been made on actions which were newly initiated at the time of the original study:

- The pro-poor unit at DAWASCO is now active with three staff members. Its main activity to date has been to start an inventory of kiosks across the city in order to understand the need for kiosks better. However, the unit's activities are said to be constrained by lack of funds;
- DAWASA has adopted a new pro-poor management system for boreholes and kiosks in non-networked areas, which centres on the establishment of water committees`.
- The GIZ-supported baseline study of low-income areas of Dar es Salaam has been completed in October 2011, and geo-referenced data is now available for use.
- The Energy and Water Utilities Regulatory Authority (EWURA) is in the final stages of developing guidelines for the formalisation of informal water providers, viewed as a temporary measure until networked water services improve.
- DAWASCO is also working on new regulations for supply and distribution by water tankers.

4.1 Background and context

This case study focuses on the Dar es Salaam Water Supply and Sanitation Project (DWSSP), supported by the International Development Association (IDA), African Development Bank (AfDB) and European Investment Bank (EIB). The project ran from 2003 until November 2010 (following several time extensions from the originally programmed end date of December 2008) It aimed to "provide a ***reliable, affordable and sustainable*** water supply service and improve the sewerage and sanitation in the "Service Area" of the Dar es Salaam Water and Sewerage Authority (DAWASA)" (Project Appraisal Document, World Bank 2003a, hereafter referred to as the PAD). The principal components of the project were rehabilitation of infrastructure and institutional reforms, and it also included a number of specific measures intended to benefit poor populations. The institutional reforms involved the delegation of water and sewerage operations in Dar es Salaam (DSM) to a private operator (CityWater) under a lease-affermage contract. This contract was terminated in 2005 following failure of the operator to meet its commitments. Since then, water and sewerage operations have been leased to the publicly owned Dar es Salaam Water and Sewerage Corporation (DAWASCO) under a similar contract.

The project has been much publicised as a failed privatisation attempt. Past research has identified a number of reasons for the failure of the CityWater contract, including: unrealistic expectations about the commercial viability of water operations in DSM by CityWater; poor data on the customer and service base in DAWASA; lack of information-sharing and trust among all parties; ineffective regulation; failure by government to tackle non-payment of water bills; and failure by donors to adequately assess the state of the utility and its suitability for private sector participation (see WaterAid Tanzania 2008).

The present study did not seek to revisit these issues or debate the wisdom of the decision to privatise, rather it focused on the specific question of how well the DWSSP has served poor households and the success of its 'pro-poor' components. However, the failure of the contract with CityWater is important for a number of reasons. Firstly, it highlights the serious underlying weaknesses in the sector when the DWSSP commenced in 2003, and the challenges the project faced in terms of the state of infrastructure, low revenue collection, lack of basic information and the low capacity of sector institutions. Secondly, as acknowledged in the World Bank's own Implementation Completion Report (ICR) for the DWSSP (World Bank, 2011c), it indicates a failure in the project design phase to pay sufficient attention to these serious risks and an undue optimism about the turnaround that could be achieved in the sector under the new institutional arrangement. The knock-on effects of the failure of the CityWater contract are still felt in terms of delays in project implementation and an unclear institutional relationship between DAWASA and DAWASCO (see section 4.6 including 4.6.2).

As mentioned above, the DWSSP included components for sewerage and sanitation, but, since the majority of elements targeted to poor populations were for water supply rather than sanitation provision, water supply is given more focus in the present study.

4.1.1 City context

Dar es Salaam is the largest city and the chief industrial and commercial centre of Tanzania. Since 2000, the city has been administratively divided into three municipalities: Ilala, Kinondoni and Temeke). All of these include a mixture of formally and informally developed areas. The population of Dar es Salaam has grown rapidly in the last thirty years, =from 843,000 in 1978 (DCC, 2004a) to an estimated 2.9 million in 2007 (URT, 2009a), i.e. over three times in as many decades. Available socio-economic data at the time of research was sometimes several years old, but reflects the situation around the start of the DWSSP in 2003. A summary of this information is given in Box 4.1.

4.1.2 Water supply services

At the time of project initiation, Dar es Salaam's piped water supply was from two main sources – the upper and lower Ruvu river schemes – as shown in the map in **Figure 4.2,** and a small surface scheme on the Kizinga river [(as marked on the map in Figure 4.1)], with additional supply from over 30 boreholes. The Lower Ruvu treatment plant supplied 70% of the water in the network. Average water production at the time of the study was about 260,000m^3/day and fell far short of demand, which was estimated at 450,000m^3/day in 2007 (DAWASA, 2009b). Water rationing was therefore standard practice, services were intermittent, and pipes in some areas were completely dry at the time of the present research. Even those with a network connection were thus not receiving adequate service (see below).

Box 4.1 Socio-economic data for Dar es Salaam, 2000 – 2007

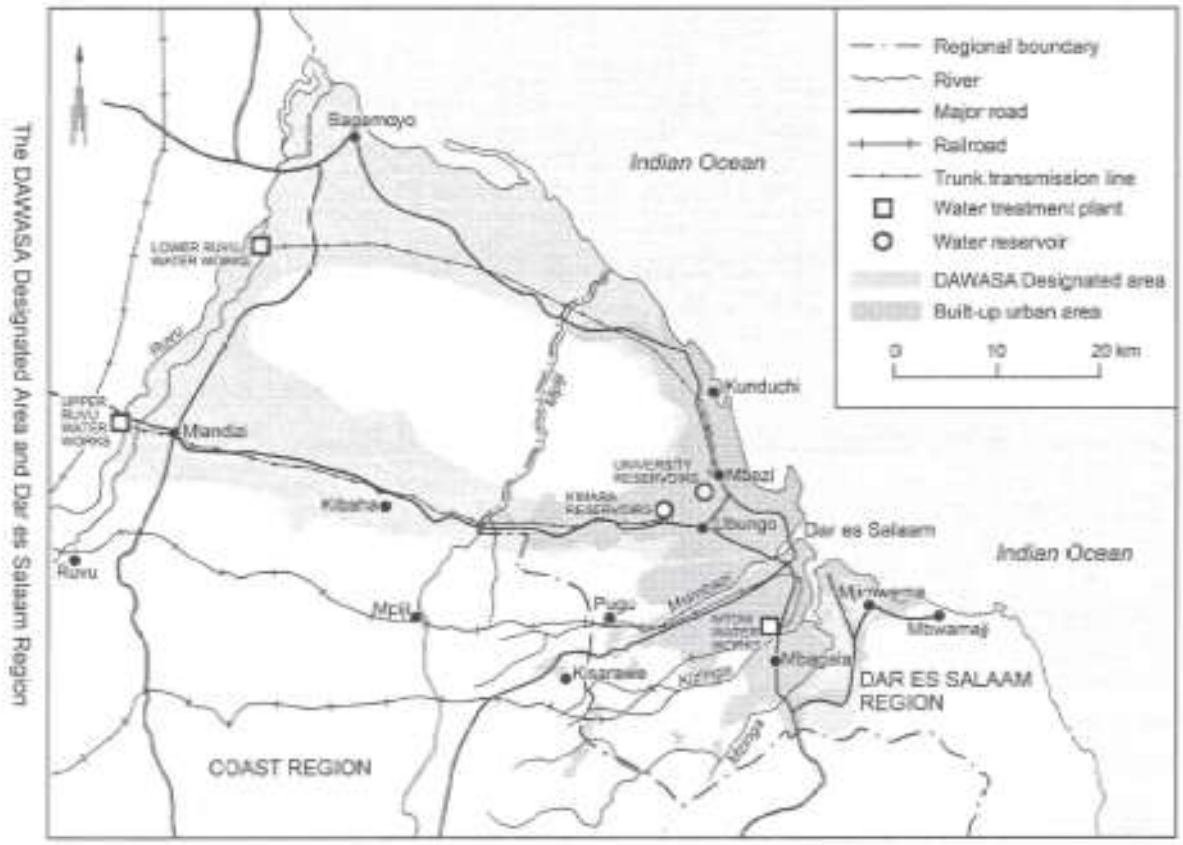
National data show that in 2000/01 the incidence of basic needs poverty in Dar es Salaam was 17.6% (URT, 2002a). In 2007 it decreased slightly to 16.4%, however, due to population growth, the number of people living in poverty in fact rose from around 325,000 in 2000/01 to around 474,000 in 2007 (URT, 2009a). Of the three municipalities, Temeke in the south-east has the highest poverty incidence at around 28% (URT, 2005a).

In 2002, an estimated 70% of Dar es Salaam's residents and the majority of low-income households lived in unplanned areas, which are typically congested and underserved with basic infrastructure (World Bank 2002). However, unplanned areas are also occupied by middle-income households and are considered by many to be 'mixed-wealth communities'.

According to the 2004/5 Demographic and Health Survey, of the approximately 200,000 households living in Temeke, 195,000 relied on traditional pit latrines for sanitation, 139,000 had no electricity, almost 80,000 had homes made of mud or sun-dried brick, and less than 50,000 had more than two sleeping rooms. The average household size was just over four people (URT, 2005a).

According to DAWASA (2009b) water supply coverage of its service area (which includes the city of Dar es Salaam, Kibaha and Bagamoyo towns in the Coast region, and settlements within a corridor of 5km either side of the two transmission mains of Upper and Lower Ruvu - see Figure 4.2) is about 85%, of which only 78% currently receive water and only 58% have reliable and regular water supply. Most of these households receive water for less than six hours a day. The figures include 45% of households which do not have their own connection, but buy re-sold DAWASA water from neighbours, tanker trucks or vendors.

Figure 4.1: DAWASA Service Area



Source: image provided by DAWASA

In 2008, DAWASCO had only 140,000 connections on its books for a population of around 3.5 million in the service area (DAWASCO, 2008). Many households in DSM accessed water from their neighbours' household or yard connections, from drilled private boreholes, from public kiosks and from vendors of various kinds; according to the World Bank, in 2006 9.9% of the population of DSM relied on buying water from vendors (World Bank, 2011c).

At national level, the 2007 Household Budget Survey showed that 63% of the wealthiest quintile had access to water, compared with 42% of the poorest. Furthermore, while the wealthiest quintile spent 3.0% of their income on water, the poorest quintile spent 9.8% (URT 2009b).

4.1.3 Sanitation

Few of Dar es Salaam's residents (7% of the population) were connected to the sewer network with the remainder relying on septic tanks or, in the majority, pit latrines (DAWASA 2009b). As noted above, the focus of this study is on water supply.

4.1.4 Institutional arrangements in the water sector

The water policy and institutional framework in Tanzania was reformed during the 1990s. Responsibility for service provision was devolved to lower levels, and space opened up for private sector participation, while the role of central government changed from that of sole investor, regulator and service provider to policy maker, facilitator of investment, and regulator. Service provision in

urban areas is the responsibility of Urban Water Supply and Sewerage Authorities (UWSAs) which are supposed to work on a cost recovery basis as far as possible, or move in that direction.

At the national level, the **Ministry of Water (MoW), previously the Ministry of Water and Irrigation (MoWI)** sets the overall policy direction and monitors services. Through its Urban Water Supply and Sewerage Services Division, the Ministry is responsible for overseeing and supporting the activities of the UWSAs. It holds a development contract with DAWASA for services in Dar es Salaam.

DAWASA, established in 1997, owns and is responsible for investment in water and sewerage infrastructure in the DAWASA service area. This area includes the city of DSM, two townships in the nearby Coast region, and corridors along the two main transmission lines from the Upper and Lower Ruvu Water Works (see Figure 4.1). According to its Development Contract with the MoWI, DAWASA is supposed to finance its own operating costs and debt servicing, and also contribute to the capital costs of infrastructure construction. Within DAWASA a Community Liaison Unit was established under the DWSSP, to manage non-networked services to peri-urban communities under the Community Water Supply and Sanitation Programme (see below).

DAWASCO is in charge of all water and sewerage operations, including installing new connections, but not investment, under a lease agreement with DAWASA. According to the terms of its lease, DAWASCO pays DAWASA a monthly rental fee and a portion of the revenue from every unit of water sold (the "lessor tariff"), and retains a further portion to finance its own operations ("the operator tariff"). An Informal Settlements Department had just been established within DAWASCO at the time of research. Its role was not yet clear in 2009, and its capacity seemed to be limited, but it has since begun to review certain pro-poor strategies (see section 4.6.3 for more details).

Urban water supply and sewerage is regulated by the **Energy and Water Utilities Regulatory Authority (EWURA)**. EWURA was set up in 2002 with a vision of "quality, affordable and sustainable energy and water services for all". EWURA is responsible for technical and economic regulation including reviewing and setting tariffs, which includes public consultation. As of 2008, EWURA was regulating 124 UWSAs across the country.

4.1.5 Donor support in the sector

The World Bank is one of the main donors in the water sector in Tanzania, and provides support to the sector under the Water Sector Development Programme (WSDP) Basket Fund, under a Sector Wide Approach (SWAp) which was established in 2006, as well as a number of standalone projects. As the single largest donor supporting the WSDP and a major player in its design, the World Bank is an important actor in the sector.

4.2 Inclusion in policies and strategies

The National Water Policy (NAWAPO) characterises access to water and sanitation as a right: "*water and sanitation are critical components of development, thus access to UWSS [urban water supply and sanitation] is a right of every Tanzanian*" (URT 2002b).

UWSS entities are to ensure that *"appropriate social equity considerations are made and a basic level of water supply and sanitation services is provided to the poor at affordable cost"* (ibid, p.40).

One of the stated goals of the policy is *"To improve water and sanitation in low income and peri-urban areas"* and, to achieve this it is stated that, among other provisions, *"low-income groups will be identified and plans and programmes to provide water supply and sewerage services to peri urban [areas] shall be drawn by utilities"* (ibid, p.44). Other measures recommended to improve access to

services by urban low-income households include: awareness-raising on safe water use in peri-urban areas; use of small bore and shallow sewerage systems in peri-urban areas; the negotiation of pro-poor dimensions in any public-private partnerships; and encouragement of NGOs and CBOs to engage in service provision in low income areas; and more affordable sewerage and water connections.

The policy requires "full cost recovery" from utilities but gives no specific guidance on how to achieve this goal while simultaneously providing low cost services to the urban poor (for example providing "more affordable" connections). There is no discussion of possibilities for cross-subsidy, for example. Full cost recovery is not defined in the policy (the implication is that it should cover operations, maintenance and upgrading of infrastructure, but it is unclear whether capital investment costs are also included). In the case of DAWASA, as mentioned above, the performance contract specifies that it is should finance its own operations and debt servicing and contribute to the capital costs of infrastructure.

The 2005-15 National Water Sector Development Strategy (URT 2006), in a similar vein, states that "Low-income groups will be identified and provided with appropriate water supply and sanitation services. However, these groups will be expected to contribute to the cost of the provision of these services in line with their ability to pay" (ibid, p.50), i.e. not free, but affordable water. The steps required of utilities are slightly more detailed than those in the NAWAPO:-

- "establish criteria to define low income groups;
- promote the use of appropriate and cost-effective solutions to the provision of water supply and sanitation services in the relevant areas, including promotion of the protection of traditional sources;
- determine affordability criteria in order to establish subsidy requirements and mechanisms"(ibid, p.50)

But, again, no guidance is given in this strategy document on what the criteria should be, on how to assess affordability, or on suitable strategies for achieving both commercial and social goals. These are left to utilities to determine, though the strategy notes that in the past "improving the services to low income earners has been constrained by difficulties in defining and identifying low income groups" (ibid, p.50).

During interviews with informants from the MoWI, it was explained that all water authorities were supposed to work with local leaders to identify low-income households, and are required to ensure that those households identified as poor receive eight buckets of 20 litres of water per day for free [90]. However no mention of this policy was found in the policy or strategy documents described above. There are said to be around 2,000 beneficiaries so far, but none yet in DSM; it is not clear how this would be organised in such a large city. No further details were made available to the researchers of any guidelines in place to support UWSAs in reaching poor populations.

Looking beyond sector policies, at the time of project implementation the 2005 – 2010 National Strategy for Growth and Reduction of Poverty (NSGRP) in place at the time of research (the second-generation Poverty Reduction Strategy Paper, also known by its Kiswahili acronym MKUKUTA) identified the urban poor as a priority group for targeted interventions to reduce poverty and promote social well-being, including access to basic services (URT 2005b). One of its operational targets was to achieve 90% water coverage by 2009/10, with strategies proposed to achieve this including: a lifeline tariff for vulnerable households; rights awareness programmes; and monitoring of water supply organisations on, among other things, approaches to supplying water to vulnerable people. The

[90] At the time of the present research this free water service had not been applied in Dar - it did not feature in design of the DWSSP.

third-generation PRSP (MKUKUTA II) was issued in 2010. This sets out a revised target to increase urban water coverage from 84% in 2010 to 95% in 2015. For DSM, it notes that access remained at 68% from 2005 to 2010, as population grew at a rate of 8% per year and bulk water supply did not increase sufficiently to meet demand. A target of 75% access by 2015 is set for DSM, and strategies to achieve this focus on increasing bulk water supply and reducing losses from the network. In comparison with MKUKUTA I, MKUKTA II does not propose specific measures for the water sector to ensure access for low-income populations, but does set out a target for public services and infrastructure in general to introduce 'mechanisms for targeting the poor and vulnerable groups', and to 'cover 65% of the poor and vulnerable groups currently excluded from public service delivery' (URT, 2010, p.87).

In summary, both national and sector policies at the time of research treated access to adequate and affordable water supply as a right. They recognise that the urban poor are a priority group for interventions and show an understanding of the serious impact of a lack of services on their lives and livelihoods. A strategy for inclusion is outlined (but not elaborated) in terms of the need to identify poor populations, assess affordability, and target low cost services and subsidies accordingly. However, the design and implementation of these assessments, and the subsequent development of appropriate strategies for serving low-income households, are left entirely to utilities. For the principles expressed to be converted into practice, they would need to be developed in more detail in the governing documents and plans of the utilities.

DAWASA's draft 2009-2012 Rolling Plan sets out its mission: "To provide timely and appropriate investments and strategic support and guidance to [the] Operator in an efficient and cost effective manner for the provision of affordable, reliable and sustainable water supply and sewerage services" (DAWASA 2009b). "Equity in provision of services" is listed as a core value of DAWASA, while one of eight corporate goals is to "ensure that services are provided to all categories of the population". However, there is no elaboration in this document of how low income groups are to be targeted. DAWASCO's stated mission is 'to provide quality and *affordable* water and sewerage services exceeding customers [sic] expectations through well motivated staffs' (DAWASCO website, accessed February 2012, emphasis added), but its lease contract is focused on general service standards and lacks specific pro-poor commitments (see below).

Furthermore, although regulation is supposed to specifically assess the provision of water to vulnerable groups according to the NSGRP, an informant at EWURA reported that they do not currently collect disaggregated information on services to poor populations. They only collect the number receiving the eight free buckets. It appears that utilities are not being given either strong regulatory incentives or strategic support from government to improve services for low-income households. (Comments received from the World Bank referred to the existence of 'UWSS guidelines', however these could not be accessed and their status and content remain unclear'.)

4.3 Inclusion in the design and implementation of the DWSSP

4.3.1 Project aims and components

The principal goal of the DWSSP, as stated in the PAD, was to "provide a ***reliable, affordable and sustainable*** water supply service". The project's major components were rehabilitation of infrastructure and institutional reform, both intended to improve the quality, reliability and sustainability of services. **Table 4.1** shows the project components and (indicative) budget.

These include, among others, a set of stated measures aimed at providing more affordable water to low-income households:

- a low-cost "lifeline" volume of water for domestic networked customers;
- free connections for low-income households, financed by a levy on water bills;
- construction of water kiosks, for those in networked areas without a connection (part of Component 1);
- standalone community-managed schemes in areas far from the network (Component 3, the Community Water Supply and Sanitation Programme).

The CWSSP was, as the name suggested, intended to provide both water and sanitation facilities in non-networked areas. However, according to DAWASA staff very few of the communities expressed a demand for sanitation services, and in practice the investments have been almost entirely in water supply. The main sanitation component of the DWSSP centred on rehabilitation and extension of sewerage, which did not involve explicit pro-poor goals. Furthermore, at the time of the research it was reported that implementation of the sewerage component was lagging behind implementation of the water components of the project. For these reasons, this assessment has focused largely on water supply rather than sanitation.

Table 4.1 Project Components and Indicative Costs (US$ million)

Component (with contingencies)	Source of finance	Indicative Costs	% of total
1. Rehabilitation and Extension of Water Supply This was to involve rehabilitation of production facilities, rehabilitation of transmission mains and services, rehabilitation of primary distribution mains, and rehabilitation of secondary and tertiary distribution mains.	ADB, IDA, EIB	106.05	64
2. Rehabilitation and Extension of Sewerage and Waste Water This component was to involve rehabilitation of existing sewers and construction of new ones, rehabilitation of waste water pumping stations, stabilisation plants, and an existing ocean outfall.	EIB, AFDB	22.40	13.60
3. Community Water Supply and Sanitation This was to involve the support in terms of grants by DAWASA to 50 beneficiary communities for water projects based on point source or bulk supply from the main network. The objective is to provide a minimum service to low income communities that may not immediately be served by piped water network. The project was also to support on-site sanitation facilities. DAWASA was to implement this component with assistance of specialized NGOs in supporting communities in formulating grant requests, implementing WSS projects and building capacity for post construction management.	AFDB, IDA	3.85	2.30
4. Institutional Strengthening The institutional strengthening program: This was to includes (a) an assistance to the Operator to help finance its initial operating costs; (b) technical assistance to DAWASA: engineering, financial, legal, assets revaluation, audits, communication, environmental monitoring, independent assessments of the institutional framework and activities aimed at the prevention of HIV/AIDS; (c) training of DAWASA and MoWI staff, (d) operational equipment and repairs of emergency nature to be financed by DAWASA under the Lease Contract; and (e) technical assistance to the Wami/Ruvu Basin Office. DAWASA was to implement all components; MoWI was to supervise component (e).	IDA	25.00	15.20
5. Preparation of a Medium Term WSS development program This component was to support a series of studies aimed at preparing the medium term capital works programme.	IDA	6.15	3.70

Total Project Costs		163.45	
Refinancing of Project Preparation Fund		1.15	0.70
Total Financing Required		164.60	100

Source: World Bank (2003a) DWSSP Project Appraisal Document

The total approved cost of the project was US$ 164.6 million, with IDA as the largest donor contributing US$ 61.5 million. Table 4.1 below shows the breakdown of costs of the different components as set out in the PAD. It is not possible to determine exactly the amount to be spent on the pro-poor initiatives, as some of them form part of much larger components. However, Component 3 for Community Water Supply and Sanitation (CWSSP), was probably the most significant (in monetary terms) of the pro-poor components due to the infrastructure construction involved although it only was to receive 2.3% of the total project budget. Investments in network rehabilitation and institutional strengthening (which included the preparation for privatisation) are the core project activities, between them receiving almost 95% of the budget. Investment in increasing bulk water supply and reducing losses was urgently needed to improve supply for the whole city, in order to meet existing demand and extend access, and so was a necessary, though not sufficient, investment in terms of ensuring better access to services for the city's poor residents. The institutional strengthening programme was intended to improve operational performance, efficiency and revenue collection from a low base.

4.3.2 Financial arrangements

Financing from IDA was disbursed to the Ministry of Finance of the Government of Tanzania (GoT) on a concessional lending basis[91], and in turn to DAWASA, who were the designated Implementing Agency responsible for project implementation. Finance for consulting services and for 60% of the infrastructure components was provided by GoT to DAWASA on a grant basis (totally US$ 40 million), and the remaining 40% of infrastructure financing was in the form of an on-loan from GoT to DAWASA (US$21.5 million). (PAD, World Bank 2003a: P.10). IDA funds were to be on-lent in local currency with a 15 year term, a 5 year grace period and an interest rate of 11.5% (PAD, World Bank, 2003a). According to World Bank staff interviewed, the basis of the split between on-lending and on-granting was that finance for activities which were not expected to generate income for DAWASA (technical assistance, investments in sanitation and the CWSSP) was on-granted, while finance for investment in networked water supply, which was expected to generate revenue, was on-lent.

An on-loan of US$ 5.5million of IDA funds was also made from DAWASA to CityWater, to finance its start-up costs, to be repaid over 15 years at a rate of 11.5%, with a 5-year grace period (the same conditions as for the on-lending from GoT to DAWASA). This loan is unlikely to be recovered from the now-bankrupt CityWater, partly because – as noted in the the project ICR - a performance guarantee from its parent company was not included in the final agreement, in spite of the high-risk context and initial recommendations from both DAWASA's financial advisor and the World Bank team which reviewed the bid, that such a guarantee should be put in place (World Bank, 2011c). The decision to on-lend a portion of the finance reflects the priority given to cost recovery in national policies and DAWASA's development contract. According to World Bank informants, the conditions

[91] On standard IDA terms: 40 year term with a 10 year grace period (it has not been possible for the researchers to ascertain what concessionary interest rate applied).

of on-lending were assessed to ensure that it would not unduly affect the financial situation of the utility or drive tariffs up to unaffordable levels. On-lending terms were set at the start of the project based on projections of the financial performance of CityWater and DAWASA, and "set at levels deemed affordable by the Customer Tariff as specified in the Development Contract" (Project Information Document, World Bank, 2003b).

According to these projections, as documented in the PAD, collection efficiency (% value of billed issued which is paid by customers) was expected to reach 90% by Year 5, increases in billing rates (the proportion of water supplied which is billed) were expected, and the number of household water connections was expected to rise from 92,000 in 2004 to 146,000 in 2009. Together with reducing losses in transmission and distribution, this was expected to enable cash flow from operations for DAWASA to increase more than four-fold from around 1bn Tsh in 2004 to over 4 bn Tsh in 2009. Overall, in or around 2013, DAWASA was expected to become profitable. The PAD repeatedly underscores the importance of the capital investment programme being delivered on schedule to the achievement of these projections (see World Bank 2003a, p.41-47).

It will be seen below that these projections proved vastly too optimistic, for various reasons, with the result that DAWASA will be unable to meet its debt repayment obligations to the GoT in the foreseeable future (see further in section 4.7.2).

4.3.3 Social and affordability analysis in the project design

The "Summary Project Analysis" chapter of the PAD describes the process which informed project design. This includes an analysis of *"key social issues relevant to the project objectives"* (ibid, p.16-17). The depth of this review is limited, and there is a considerable gap in terms of any analysis of the distribution or income levels of poor households, appropriate targeting methods, or of how the project's resources could be best deployed to serve the maximum number of poor households across the city.

A basic affordability analysis was conducted, which is set out in Annex 4 (ibid, p..33-34), but its conclusions raise some concerns. It observes that households reliant on vendors were spending 2-4% of their income on water, which could be reduced to 1.3% if they took up a household connection and did not change their consumption level. If, however, they were to use the full $5m^3$ per month available at the lifeline tariff (termed "lifeline" because this is considered a minimum volume), it is noted that they would still spend 3.4% of their income on water, because consumption from vendors is assumed to be very low.

The analysis is contradictory in its discussion of kiosks and standposts. At one point, these are presented as a means to improve affordability (ibid, p.2) but elsewhere in the PAD (ibid, p.34) it is stated that charges from kiosks will be higher than those of piped water because of the need to cover the costs of the caretaker. For this reason, the PAD notes that *"a low income household will have an interest in requesting an individual connection"* (ibid, p.34). Indeed, from the start the PAD notes that a *"commercial policy that will favor connections of households"* will be implemented (ibid, p.2). There is no analysis of the affordability of the deposit payable for a free connection subsidy which, at TSh 20,000, is equivalent to almost half the minimum urban monthly wage of TSh 48,000. There is no affordability analysis at all in relation to the CWSSP.

This cursory review of affordability, taking up one paragraph, is in contrast to the detailed financial analysis and forecasting which was undertaken and which occupies an annex of eight pages. Greater priority seems to have been given to ensuring that the project would be a success in terms of financial balance and utility performance than to ensuring that its social objectives would be achieved.

It is possible that analysis was conducted which is not captured in the PAD, but no details of other social analysis conducted during the design phase (either collection of new data or analysis of existing data from national surveys, census data or similar) e were made available to the researchers.

The rationale for the set of pro-poor components was described by World Bank staff as an attempt to do something for four broad 'segments' of low-income populations: those already connected (lifeline tariff); those seeking a household connection and living in networked areas but for whom connection was prohibitively expensive (subsidised connections); those living in networked areas but unable or unwilling to obtain a household connection (kiosks); and those living outside the networked area (CWSSP). However, it is not clear what data, if any, was used to assess the priorities, needs, existing modes of access or willingness/ability to pay of these different groups, other than in the analysis described above.

4.3.4 Project monitoring and evaluation

The PAD sets out performance indicators by which the project will be monitored and evaluated. The DWSSP has 5 performance indicators for outcomes/impact and 31 for outputs, of which the *key* performance indicators are shown in **Box 4.2.**

One of the five outcome/impact indicators and three of the 12 key output indicators relate to the pro-poor elements of the project:

- A life-line tariff for domestic customers is fully implemented;
- At least 80% of new domestic water supply connections installed under the project are financed from the Connection Fund by year 2008;
- About 250 new water kiosks built by 2008;
- About 50 community WSS schemes built and operating by year 2008

This suggests that some priority is attached to the successful completion of the pro-poor aspects. However, these indicators focus only on the installation of schemes or connections and not on where they are located, who or how many people they serve, or whether they provide an affordable and good quality service to users. There is thus no clear requirement for evaluations of the project to investigate the effectiveness of targeting of the benefits to poor people. This view is supported by the project ICR itself, which notes that rigorous beneficiary surveys to assess project impact were "foreseen" but were not carried out, and suggests that completion of such surveys should have been included in the PAD and in output indicators (World Bank, 2011c).

As the DWSSP included institutional restructuring and a change in DAWASA's role from service provider to asset-holder, DAWASA's key performance indicators (KPIs) closely mirror those in the PAD. There is no further elaboration of pro-poor indicators in DAWASA's development contract. DAWASCO's Lease Contract does not include any pro-poor targets, but focuses on service standards (both technical and customer service) and financial performance. DAWASCO's KPIs are given in **Annex 9.** It is clear that the priority was to build DAWASCO into a well-performing, efficient utility. This is understandable given the poor state of operations when it was established in 2005, and ultimately such improvements will underpin more sustainable service delivery, but it leaves an accountability gap in terms of ensuring that the pro-poor components for which DAWASCO was responsible – the First Time Connection Fund and kiosks – were well-managed and implementation targets met.

Box 4.2 DWSSP Key Performance Indicators

Outcome / Impact Indicators

- 70% of customers obtain 24 hour water supply service under adequate pressure
- 100% of water samples taken meet the water quality standards specified in the Lease contract
- 80% of sewage collected is treated and 95% of effluent samples meet specified standards
- A life-line tariff for domestic customers is fully implemented
- Revenues from water and sewerage services cover all operations and maintenance and allow for a 10% contribution to the construction costs of the project.

Output Key Indicators

Component 1. Water supply facilities rehabilitated and extended

- Production capacity guaranteed at *9,000* m^3/d (Mtoni); 82,000 m^3/d (Upper Ruvu) and 180,000 m^3/d (Lower Ruvu) by year 2008;
- About 1,040 km of distribution pipes installed by year 2008;
- At least 80% of new domestic water supply connections installed under the project are financed from the Connection Fund by year 2008;
- About 250 new water kiosks built by 2008.

Component 2. Sewerage and wastewater facilities rehabilitated and extended

- 26,000 m^3/day of collected sewage is treated to specified standards before discharge into environment by year 2008;

Component 3. Community water supply and sanitation programme operational

- About 50 community WSS schemes built and operating by year 2008;

Component 4. Technical, commercial and financial capacity of institutions strengthened

- Combined collection ratio of private and public water supply and sewerage bills increased to *90%* by year 2008;

Component 5. Future WSS projects prepared

- Water resource management and corresponding environmental assessment carried out by year 2007; study and preliminary design completed by year 2007:
- Water supply feasibility study and preliminary design completed by year 2007:
- Strategic sanitation plan completed by year 2006;
- Sanitation feasibility study and preliminary design completed by year 2007;
- Urban WSS sector development strategy prepared by 2005.

Source: World Bank (2003a) DWSSP Project Appraisal Document

4.4 Progress on main project components

According to the DWSSP task team leader from the World Bank, project expenditure was almost at planned levels at the time of the research, and expected to be complete by June 2010 (the extended end date of the project). The ICR concludes that "most of the major construction works were achieved by project closing".

4.4.5 Rehabilitation and extension of water supply facilities

This component includes the rehabilitation of treatment works, transmission mains and primary distribution network. It also includes the "Delegated Works", under which contractors were employed

by DAWASCO to rehabilitate, replace and install household connections in designated area work packages as well as install zonal bulk meters in the network. Against a target of 170,000 connections (135,000 to be rehabilitated and 35,000 to be newly installed) the ICR gives a figure of 112,329 connections achieved by June 2010. Disaggregated information on rehabilitated versus new connections was not available, but according to DAWASA (2009b), 25,000 *new* domestic connections (serving new customers) had been installed by June 2008.

As for bulk water production, the achieved increase in volume of water produced has been 96% of the target figure, though this represents a relatively small increase from 224,000 to 268,252m^3 per day from 2003/4 to 2008/9. In terms of the quality of water produced, rehabilitation of treatment works has led to marked improvements in water quality leaving the plants, with water quality compliance at 95% in 2008/9. Under Component 5 of the DWSSP, studies have been undertaken for future capital investment planning. In particular, plans have been developed for significant new groundwater development and the expansion of the Lower Ruvu water treatment plant, to help alleviate the ongoing bulk water shortage in DSM (DAWASA, 2009a).

Less progress has been seen, however, in reducing unaccounted-for-water. This stood at at 65% in 2003/4, and fell to 55% by 2008/9 against a target of 35% (DAWASA, 2009b), while the ICR reports non-revenue water levels of 53% (World Bank, 2011c). The ICR also notes that critical infrastructure improvements which would permit better leakage management (including network rehabilitation, installation of bulk meters and delineation of distribution zones) were only completed in mid-2010 due to overall delays in project implementation (ibid).

4.4.6 Rehabilitation and extension of wastewater facilities

The investments in wastewater and sewerage under the DWSSP are limited compared with those in water supply, being budgeted around 13% of project costs compared with 64% (see Table 4.1 above). The focus was on rehabilitating sewage treatment works and existing sewers, with 10km of new sewers to be constructed; according to the latest progress report at the time of the research these works were in large part complete (DAWASA, 2009a). Although this additional pipework will facilitate household connections to sewerage, there is no target among the project key performance indicators for new connections to sewerage, only on volumes treated (World Bank, 2003a). A Strategic Sanitation Improvement Plan has been developed by a consultant under Component 5 (DAWASA, 2009a) which centres on sewerage extensions into unserved areas. During follow-up interviews in 2011, DAWASCO staff commented that areas home to poor households were prioritised for extension, but it was not possible to review the plan in more depth and verify this.

4.4.7 Institutional strengthening

It was widely agreed by stakeholders interviewed that DAWASA had undergone considerable improvements in management, efficiency and staff capacity under the DWSSP. However, improvements have been slower in DAWASCO according to both DAWASA and World Bank staff. This assessment is borne out by the DWSSP ICR (World Bank, 2011c).

4.5 Pro-poor project elements: design and implementation

As mentioned in section 1.3.3, the project includes a set of measures aimed at providing more affordable water for low-income households, by: a low-cost “lifeline" tariff/tranche, free connections

for low-income households, water kiosks in networked areas, and standalone community-managed schemes in areas far from the network.

4.5.1 The "Lifeline" tariff design

As part of the institutional redesign under the DWSSP, a new tariff structure was adopted for piped water customers. The tariff comprises three components: the "operator tariff" retained by DAWASCO to finance its activities; the "lessor tariff" which is passed on to DAWASA; and a "social connection tariff" used to subsidise connections for low-income households through the First Time Connection Fund (see below). As a measure to promote affordability, domestic customers pay only the operator tariff for the first $5m^3$ of water consumed each month. **Table 4.2** gives the tariff breakdown at the time of project initiation, and following increases in 2006 and 2009. These increases were built into the project design with the aim of gradually working towards a cost recovery tariff.

While the consumption subsidy built into the tariff structure would benefit poor households with a connection by reducing the cost of water, the subsidy is a universal one, provided to all households with a private network connection regardless of wealth, and would only disproportionately benefit poor households if they consume little water. It is benefiting relatively few people, however; according to the ICR, only 17% of households had an individual piped water connection in 2009 (World Bank, 2011c). Many poor households access resold water by buying from neighbours or vendors, and most of this water would be charged at the full tariff as consumption would quickly rise above $5m^3$ from a shared connection. Informants from DAWASCO, among others, also observed that when poor households obtained their own household connection, they often struggled to control consumption and still found bills unaffordable. Further attention may therefore be needed to the affordability of piped water for poor households, including through shared connections, as well as to methods of billing, especially given the health benefits of higher levels of consumption. Finally, any volume-based tariff such as this requires metering, which is not universal in DSM. Under the DWSSP 135,000 rehabilitated connections and 35,000 new connections were to have meters installed. According to the most recent available progress report at the time of research, around 75,000 meters had been installed by June 2009 (DAWASA, 2009a, p.22).

Table 4.2 Domestic tariff structure from 2003 to 2009

Tariff components (TSh per m^3)	**2003**	**2006**	**2009**
Operator Tariff	337	488	637
Lessor Tariff	89	137	176
Social Connection Tariff (levy on consumption which finances the FTCF)	25	29	37
Customer tariff (first $5m^3$)	**337**	**488**	**637**
Customer tariff (over $5m^3$)	**451**	**654**	**850**
Mean per capita monthly income in Dar es Salaam, 2007, for comparison (NBS 2009)	80,144		
Minimum urban wage in Dar es Salaam quoted in the PAD (World Bank 2003a)	48,000		

Source: DAWASA (2009b) 3-year Rolling Plan 2009-2012

(Exchange rate at time of research US$ 1 = c. TSh 1338)

4.5.2 First Time Connection Fund design

Revenue raised from the social connection tariff was to be deposited in to a "first time domestic water supply connection fund", also known as the First Time Connection Fund (FTCF), to be managed by DAWASCO and used to subsidise new connections for low-income households. According to performance targets in the PAD, 35,000 new connections were to be installed under the DWSSP and

80% of these (28,000) should be funded by the FTCF. **Box 4.3** sets out the criteria for eligibility for the FTCF.

Box 4.3 The First Time Connection Fund

In order to qualify for a subsidised connection under the First Time Connection Fund, households had to meet the following two criteria:

- No more than three water points or taps within the dwelling
- Maximum 20 metre distance from the mains pipe.

Eligible households would receive a free connection, subject to making a deposit of TSh 20,000 (approx US$ 14.50) on future water consumption. The cost of a connection without subsidy was TSh 145,000 (approx US$ 105).

Source: World Bank (2003a) Project Appraisal Document

The Fund was designed to be targeted in that specific criteria were drawn up for the use of the fund, which are relatively practical in terms of ease of assessments (although an informant from DAWASCO observed that in the case of new buildings, it was hard to assess the eventual number of taps and there might be deception). However, as will be seen below, the criteria did not, in practice, function well for targeting of low-income households. An informant from an NGO commented:

> *"The criterion of three water points or less is not well targeted to the poor and is likely to benefit the middle class. Often the poor have no taps at all. Landlords may be the main beneficiaries as after they get a free connection they can increase rent and the poor tenants are forced out".*

When interviewed, utility staff suggested that it was not important to target the criteria tightly to the poorest households because the fund would be used in areas with an existing network, where they assumed that any household lacking a connection was too poor (without subsidy) to afford it, and should receive the subsidy. Once network extension takes place into unserved areas, however, this argument will no longer apply. It was also said during interviews that the fund would be big enough to pay for *all* households with three taps or fewer, so there was no need to target it narrowly. It therefore appears that fund was partly intended to maximise connections in general, rather than purely to improve affordability for the poorest households. If this is the case, there is a need for greater clarity and transparency around the purposes for which subsidies are to be used. Given the emphasis that the DWSSP and sector policies place on achieving cost recovery, income which could be collected from wealthier households by their paying the full connection cost would be a means of enabling the utility to achieve greater cost recovery. In other words, the pro-poor focus in practice of the FTCF is in doubt. Furthermore, many areas of the city, and in particular informal areas, lie more than 20 metres from the existing distribution mains. Until a major network expansion programme is undertaken, this will limit the number of beneficiaries.

4.5.3 Implementation of household connections and the FTCF

At the time of research, the FTCF had never been applied. A key informant from DAWASCO explained that the design of the fund was problematic in practice as very few potential beneficiaries could be found who lived less than 20m from an existing water supply. Demand for new connections from households meeting the criterion of having fewer than three taps was said to be only high in non-networked areas. While there were low-income households in networked areas, many of these

reportedly (source: key informant interview) did not want a household connection because they felt unable to pay a monthly bill.

However, the main reason for non-utilisation of the fund was the decision, taken early on in implementation, to make all new connections under the delegated works component free. According to an informant from DAWASCO, this approach was taken in order to ensure that connections targets were met and reduce the risk of illegal connections, because fewer households came forward to apply for connections in these areas than was expected. While it is quite possible that some low-income households benefited from these free connections, this approach raises questions about whether, in the use of subsidies, the priority was to benefit the poorest households. Rather subsidies seem to have been employed, here, to rapidly increase the number of connections, irrespective of for whom, and to reduce losses to the utility through illegal connections. These goals are understandable in terms of improving DAWASCO's revenue stream and financial sustainability, but they do not represent a channelling of the subsidy element to low-income households.

Since the FTCF has not been used, it is difficult to say how many low income households have benefited from connections. The data on connections provided under the project are not disaggregated by household income levels or any other socio-economic criteria. According to an informant from DAWASCO, the criteria for selecting the delegated works packages were: areas where adequate water could be supplied; areas where there was high demand and willingness and ability to pay ('good business prospects'); and areas with illegal connections.

4.5.4 Water kiosks: design

Under the DWSSP, 250 kiosks were to be constructed to supply water in poorer areas of the city which have a water supply network, but where many people do not have household connections, under the Delegated Works programme of the project.

The kiosk component was governed by an MoU between CityWater (later replaced by DAWASCO), DAWASA and the Dar es Salaam City Council (DCC). DCC was simultaneously implementing the Community Infrastructure Upgrading Program (CIUP), a subcomponent of the World Bank-supported Local Government Support Project (LGSP), which aimed to upgrade infrastructure and services in unplanned areas. This project included drainage, sanitation, solid waste collection and street lighting, but not water supply. The MoU indicates that communities had all identified water supply as of their highest priority needs, so it was decided to integrate construction of kiosks financed under the DWSSP with the implementation of the CIUP programme (DCC, 2004b).

The CIUP had previously identified 31 priority project areas within the city in need of improved infrastructure, and under the MoU water kiosks were to be constructed within these areas using 'a similar community based approach and communication channels as established for CIUP but on the basis of criteria established by CityWater aimed at ensuring commercial sustainability of each and every kiosk' (DCC, 2004b). Operation of kiosks was to be licensed by CityWater to individuals nominated by beneficiary communities. The detailed process by which CIUP implementation areas were selected could not be ascertained, but according to the LGSP Project Appraisal Document (World Bank, 2004f) the intention was to identify areas where the greatest benefit could be achieved for the budget available.

Within the 31 CIUP zones, DAWASCO, DAWASA and the municipal authorities reportedly worked together to identify priority streets where kiosks should be sited, based on three main criteria: severity of water unavailability; accessibility of the street from other nearby streets; and the frequency of outbreaks of water-related disease. DAWASCO and the DCC then worked with the local government authority at street level to agree exact locations for construction of kiosks, with local government responsible for convening a residents' meeting at which final location was agreed. It was difficult to establish clearly what criteria were applied by DAWASCO for ensuring commercial sustainability

and how this was incorporated into the CIUP targeting process, but an informant from DAWASCO explained that contractors surveyed households across each work package (zones to receive connections and kiosks were divided into work packages for contracting purposes) to establish which would receive a connection and which would not, and used this information to site kiosks. It is not clear what questions were asked during the survey, although researchers asked for details of both survey formats and findings, or how the results were incorporated into the CIUP targeting process.

This informant also said that in practice contractors did not always adopt the exact locations proposed, but simply constructed kiosks where convenient land was available, as it was the number of kiosks to be constructed - rather than the location –that was specified in their contracts (though the researchers were unable to view these contracts to confirm this):

> *"Contractors were not given specific places for placing kiosks. Whatever space was found, kiosks were set up, including on private land regardless of whether there was adequate water supply or not".*

There is evidence that when this happened, however, both DAWASA and the World Bank exerted positive pressure to ensure that land problems were resolved and kiosks were built in their original proposed locations (letter from DAWASA to Construction Supervisor, Feb 21st 2007, provided by the World Bank in May 2011).

Other informants reported that the location of kiosks was determined by DAWASCO using aerial maps to identify suitable patches of land.

It was impossible to resolve these conflicting accounts and determine exactly how final decisions about the location of kiosks were made in practice. Especially within DAWASCO, there was a great lack of clarity over the process and no documentation was made available to the researchers.

On the positive side, an effort was made to target kiosks to areas of need using a combination of geographic and community-based approaches, and the integration of kiosk provision with wider programmes of urban upgrading was a progressive feature of design. However, these methods do not seem to have been systematised or incorporated into DAWASCO's standard procedures, and few staff in DAWASCO seem to be aware of them. .. This suggests that limited priority was attached to the design of the kiosk programme within DAWASCO, and that opportunities for capacity building of staff in pro-poor approaches and perhaps developing a broader approach to jointplanning of pro-poor services with the DCC, for example, were missed.

4.5.5 Kiosks: implementation

It was difficult to obtain a consistent figure for the number of kiosks constructed out of the planned 250. A 2009 survey conducted jointly by DAWASCO and WaterAid found that 184 had been constructed; however a key informant from DAWASCO stated that the number was about 255, whilst a list of kiosks provided by DAWASCO listed only 177. It is in itself concerning that there appears to be no accurate record in DAWASCO of the kiosks constructed.

The WaterAid/DAWASCO survey data, as well as the researchers' own experience during fieldwork, indicate that the majority of the water kiosks are not functioning. Out of 177 kiosks on the list obtained from DAWASA, only 43 (24%) were indicated as operating. The survey paints an even worse picture, having found that only 79 out of 184 kiosks were receiving water supply at all, and of those only 26 were operating. Of this 26, only 12 (less than 7%) were receiving water at high enough pressure to function reliably. (WaterAid Tanzania, 2009). During fieldwork, it was found that some of the kiosks listed by DAWASCO as functional were not actually in operation at the time of the visit.

As mentioned above, according to the survey, the main reason for the non-functionality of so many kiosks is that the network lacks water. Many of them are in areas with no water, or intermittent water: according to the survey 49% are in areas where the main supply lines are not functioning (ibid). In

spite of the priority given to source rehabilitation to increase bulk water supply to the city under the DWSSP, this problem remains severe, but the development of new sources is planned (see section 4.4.1). An informant from an NGO stated that the areas to receive kiosks were originally determined on the basis of planned extensions to the network, but even though these extensions had not been made, kiosk construction went ahead in the same areas. Delays and bureaucratic hurdles from DAWASCO's side have also reportedly meant that two-thirds of kiosks that could have been operational (where there is water in the mains) are not functioning because operators have not been commissioned (ibid). Problems have also been encountered with the management of some kiosks, particularly where they were located on private land; according to an informant at an NGO, the landowners often insisted on becoming kiosk operators, and then could not easily be replaced if they performed badly.

Since this comprehensive survey of functionality had recently taken place in 2010, interviews and focus groups conducted by the present study did not revisit the functionality question in detail, but focused on (a) the targeting and location of kiosks in terms of reaching low-income households, and (b) whether the kiosks which are functioning are providing a good service for poor users on the ground. Although there are currently very few functioning kiosks, according to the WaterAid/DAWASCO survey, a further 14 partly functioning kiosks and 68 non-functioning kiosks have the potential to become operational "in the foreseeable future" (ibid). This means that the findings on services provided by the few existing functional kiosks will have wider relevance and could offer lessons for the management of these other kiosks, if and when they become operational.

FGDs revealed that access to water at functioning kiosks has been constrained by a number of factors, with consequences for low-income households:

- Sourcing and cost of water: a number of kiosks were being operated privately using water supplied by tankers, because of inadequate public water supply. Due to the cost of tankered water, the operators explained that they had to sell water at TSh 50-100 per 20 litre bucket to make a profit, while kiosks receiving piped water can charge just TSh 30 (the latter price was confirmed at a kiosk receiving bulk water in Mnazi Mmoja sub-ward). At the time of the interview this operator was in fact not supplying water at all, because even at Tsh 100 he was not making a profit, yet his view was that if he charged a higher price he would have no customers – even TSh 100 is not affordable to all, he said. The price of water from tankers was reported to vary from Tsh 22,000 to 45,000 per 10,000 litres. At times of water shortage in particular, it becomes very expensive. Operators do not appear to be raising prices in order to make large profits; at these prices, they would break even charging Tsh 44-90 per 20 litres.
- Waiting times/queues: in two of the three sub-wards, each of which had only one functioning kiosk, heavy congestion was observed at the functioning kiosks. The lack of geographically-adequate coverage of functioning kiosks is causing queuing and delays at those which do function (see Figure 4.3). FGD participants from a ward with a functioning kiosk receiving bulk supply and selling at TSh 30 per bucket said that they sometimes had to queue for four hours, especially on days when water pressure in the system was low and buckets take a long time to fill, because the kiosk was the most affordable source of water in the area. Due to non-functionality of other kiosks, people travelled from up to half an hour away to buy water at this kiosk.
- Financial management of kiosks: there also appeared to be problems in the financial management of some of the kiosks operated by WUAs. In two of the subwards visited, it was reported that WUAs did not provide financial reports to members. This was attributed by FGD participants to a lack of capacity in the WUA to prepare reports, but the reported refusal, in one case, of outgoing committee members to provide any records of revenue collection or to hand over bank details to new committee members could have been a sign of misuse of funds. Whether or not misuse occurred, it appears that current training and monitoring arrangements

for WUAs are inadequate. According to DAWASCO, some WUAs are functioning well and benefit from a formal constitution, while others are rather weak. Complaints made by some WUA leaders to DAWASCO are evidence that these associations are effectively performing the function of representing community concerns. All WUAs are said to have received training courses on managerial, financial and technical aspects of their work from the DCC and to have been supplied with written guidelines and reporting formats.

It is clear from the above situation that the majority of residents in neighbourhoods with kiosks have not benefited substantially from improved water services and remain reliant on alternatives such as vendors. According to the DWSSP ICR, the percentage of the population of DSM reliant on water vendors has fallen slightly from 9.9% to 8.4% between 2006 and 2009 (World Bank, 2011c).

Furthermore, the problems experienced may have had a serious effect on the attitude to kiosks among utility staff. An NGO informant expressed this concern:

> *"Kiosks are a good way to target the poor because they target geographically and by service level. A sad thing with the kiosks in Dar es Salaam is that now many people say kiosks do not work, whereas in fact it is just that badly planned kiosks do not work".*

This fear seems to be justified, as several utility staff said during interviews that they did not think that kiosks were an effective approach, and preferred to focus on household connections. Some made the argument that kiosks were now redundant because free connections were given under the delegated works. While this could be true in some areas, and while many households access water from neighbours' connections which may be more convenient than using kiosks, such blanket statements suggest that **better understanding of the situation and needs of low-income households is required to inform policy.** In the focus group sites, there was clear demand for water from kiosks, illustrated by both the frustration of users at the non-functionality of so many kiosks and the large queues at those which were functioning.

Although kiosks seemed to be low on the agenda at the time of the original study, it has since been reported that the Informal Settlements Department is undertaking an inventory of kiosks in Dar to reach a better understanding of needs, and that EWURA has stipulated a new, lower tariff for water sold at kiosks, with funds collected to be used to increase the density of kiosks.

Figure 4.3 Queue at the only functioning kiosk in Mnazi Mmoja sub-ward

Credit: Paula Tibandebage

4.5.6 Community Water Supply and Sanitation Programme (CWSSP): design

Under the CWSSP, WSS projects were to be designed and implemented, in partnership with NGOs, for low-income communities in areas outside the main network (in each of the three municipalities and along the transmission mains corridors) which could not rapidly benefit from the extension of WSS services. 50 schemes were planned, to serve communities of on average 2,500 people. A two-stage process was used to select communities, which is set out in **Box 4.4.** In the end schemes were implemented in the three municipalities only, not along the transmission mains corridors, because an NGO could not be successfully engaged there. It was said in interviews that NGOs were engaged to benefit from their experience in implementing community projects, which was a new area for DAWASA.

There is a clearly designed targeting method for the CWSSP which aims to select low-income communities particularly in need of improved WSS services, where there is high demand and willingness to pay for improvements. The shortlisting process, working with a university professor and local councils who know their communities well, to select low-income areas with a high need for services, is a reasonable approach to targeting where hard data on income and access is not available, although there is a risk that the selection could be captured and fail to represent the most marginalised. The second stage, of mobilisation by NGOs, is more problematic, as there is a risk that the poorest communities would have struggled to raise the 5% contribution as quickly as better off areas. DAWASA said that this had not happened and the amount was affordable to all communities, but this could not be verified. In addition, a significant proportion of the shortlisted communities (25 out of 66) were mobilised and started to raise funds with an expectation of improved services, but in the end were not selected.

Box 4.4 Selection of communities under the CWSSP

First, 22 communities were shortlisted from each of the three municipalities in Dar es Salaam (66 in total) by DAWASA working with a university professor, in conjunction with City, Municipal and District Councils, according to the following criteria:

- Low income households with inadequate access to services
- Cholera-prone areas
- Hazard-free land
- Areas seriously deficient in water supply
- Areas distant from existing/proposed water sources.

Following the shortlisting, three NGOs were contracted, one in each of the three municipalities, to 'mobilise' the shortlisted communities: Plan International in Ilala, Care International in Kinondoni and WaterAid in Temeke. The NGOs mobilised the communities to raise 5% of the construction costs of a scheme. In each of the municipalities, approximately the first twelve communities to raise these funds (the number depending on community size) were selected for construction of a water or sanitation scheme. As a key informant from one of the contracted NGOs observed, the second stage of selection was ***"first come, first served".***

Source: DAWASA (2004) DWSSP Operation Manual Part F (Community Water Supply and Sanitation)

4.5.7 CWSSP: implementation

A dedicated Community Liaison Unit (CLU) was established in DAWASA to manage the implementation of the CWSSP. The CLU now also manages other community WSS projects for which DAWASA has obtained funding from other donors. The CLU receives technical support from the Water and Sanitation Programme (WSP) to develop its approaches to managing community schemes.

Following mobilisation and selection of the selected communities, the three supervising NGOs continued to support the process, under contract to DAWASA: supporting communities to form and register WUAs; training WUA members in scheme management, operation and maintenance; assisting the design of schemes; and supervising construction of boreholes and distribution systems.

Although 50 projects were originally planned, a total of 41 communities were in fact selected and schemes implemented. According to DAWASA's most recent progress report at the time of the research, the target population to be served by CWSSP was 120,000 but it was already serving 406,000 (DAWASA 2009a). This seems high given that only 25 schemes were then operational (ibid). It is not known how DAWASA reached this figure, but it may reflect population growth and high demand for water in the served communities. Some schemes have extended the number of distribution points beyond their design. Supervising NGOs reported that a further six schemes listed by DAWASA as operational were not yet in operation. The reasons why schemes were not functioning include lack of power supply, faulty pumps, theft of pumps, unavailability of meters, and inadequate water supply (DAWASA, 2009b and interviews with supervising NGOs).

The schemes which are functioning have improved water access considerably for their users, according to focus groups in three sites (selected to be among the poorest CWSSP sites, one in each municipality). Water users felt that the rate charged of Tsh 30 for a 20 litre bucket was affordable, especially considering that water from other sources was much more expensive (see **Table 4.3**). In all three schemes the initial charge when the schemes started was Tsh 20 for a 20 litre bucket, but this had been increased to Tsh 30 in order to meet operating costs. The water was also said to be safe in terms of quality.

Table 4.3: Water charges for a 20 litre bucket by source in three communities

	Charges for a 20 litre bucket (Tsh)		
Scheme location	**CWSSP borehole**	**Private boreholes**	**Water vendors**
Majumba sita (Mogo sub-ward)	30	50	100 - 200
Kongowe sub-ward (Toangoma)	30	(not indicated)	250
Ngilangwa (Kisiwani sub-ward)	30	150 - 200	300 – 1,000*

*Depending on water availability and distance.

However, none of these schemes were without problems. In all three sites there was much higher demand for water than supply. In two sites, participants said water from the boreholes was not sufficient, whilst in the third there had been a rapid increase in population in the area. All schemes were pumping water only twice per day, so water was not available continuously to users. In two of the communities, participants also noted that the two storage tanks provided, of 10,000 litres capacity each, were not sufficient. In a fourth scheme visited, at Yombo Reli in Temeke, low water pressure meant that out of eight distribution points only four were working at all and only two could be used at a time. Households living near the defunct distribution points were said to be angry because they contributed to the scheme but have not benefited, and instances of vandalism have been reported. These households preferred to buy water from local vendors than walk the distance to the functioning distribution points.

Other problems encountered include a lack of sufficient revenue generated by WUAs to pay for major costs, such as replacing faulty or stolen pumps, and a lack of good financial management and reporting practices by WUAs. As with the kiosks, arrangements for financial accountability by WUAs do not seem to be strong. In some schemes lack of adequate water supply means that WUAs are struggling to cover their costs.

DAWASA has been quite responsive to these problems, although it has to contend with a lack of resources. A new borehole is promised in Yombo Reli to improve supply, and DAWASA has replaced pumps in some cases and in others acted as a guarantor for WUAs to obtain credit. However, there was a perception among WUAs that more support should have been provided, particularly in terms of faster construction/contracting and more training for WUAs – especially as there was sometimes a long delay between initial training of the WUA and scheme construction, or turnover of members.

DAWASA's response to the management problems has been to introduce a new management system, developed with support from the Water and Sanitation Programme (WSP) under which WUAs will hire a professional operator to manage the scheme. The transition to the new model was underway at the time of the research, but had not yet been completed in any of the schemes visited, though in some cases training had been provided on both approaches, causing some confusion among WUA members. It is too early to test the effectiveness of the new model; it might well serve to improve financial accountability and management, but it is not clear how WUAs, some of which are already struggling financially, will pay the salary of the operator and what effect that will have on water prices to consumers. DAWASA also exercise control over a share of the WUA's funds in a joint bank account, from which both parties must authorise withdrawals.

In spite of some ongoing management problems, it is to DAWASA's credit that they have sought to learn and identify appropriate arrangements, and have also commissioned a census to better

understand the impact of the CWSSP. The CLU showed ownership of the programme and have even started to extend the model.

The CWSSP was in one sense very "inclusive" as services were managed by community Water User Associations (WUAs). However, one NGO informant questioned whether the communities had real ownership as DAWASA retained ownership of the infrastructure. In fact, according to key informants in DAWASA's Community Liaison Unit, the 5% upfront contribution was not to be used to pay for infrastructure, but as a starting fund for the WUAs to perform necessary maintenance and payment of kiosk/standpipe operators before funds were built up from user payments.

DAWASA informants explained that the CWSSP is an interim solution, as they envisage that piped water services will eventually be extended to the entire city. The technology used in the CWSSP networks was, therefore, designed to be easily integrated into the main water supply network in the future. However, it is accepted that this expansion will require major future investments and will not happen in the short to medium term. The fact that DAWASA have engaged in providing this kind of decentralised service to peri-urban areas rather than focusing solely on improving and extending the main network is a very positive step, as such approaches will be necessary to ensure that urban residents outside the main networked areas receive services within a reasonable timeframe.

Update - Autumn 2011: CWSSP

Since the completion of the research in 2009, an in-depth review of the CWSSP was released by WSP (Kimwaga, 2010). The World Bank's Implementation Completion Report for the DWSSP (World Bank, 2011c) also gives a view on the effectiveness of the CWSSP.

These two reports support many of the findings of the present study. The WSP review confirms that the CWSSP has raised the proportion of households with access to safe water, with subsequent benefits in terms of health and reduced drudgery. It also confirms the price charged for water, and that this is considered to be affordable by users.

It is difficult to find agreement on the exact number of people served by the CWSSP. The WSP study gives an estimate of 165,000 while the ICR cites a figure of 275,000 from a survey (termed 'census') conducted by DAWASA at the end of the project. Both are lower than the previous DAWASA figure of 406,000 but still represent a substantial achievement. The WSP review found that 32 schemes were fully functional rather than the 25 listed by DAWASA in 2009. If this is accurate, it suggests considerable progress in bringing schemes into functionality in the few months between these studies.

The WSP review notes many of the challenges for the CWSSP which were identified in the present study, in particular the low levels of revenue collection by WUAs (only slightly higher than expenses, with little being set aside for major repairs or other large costs) and ongoing weaknesses in financial management. It recommends that bridging finance may be needed for O&M over the first years of operation. The new management teams, where introduced, are also said to be facing capacity gaps in many cases. The ICR, in contrast, concludes that the CWSSP schemes appear to be financially sustainable because revenues are currently sufficient to cover operations, maintenance and expansion (some WUAs have reinvested in construction of sanitation facilities). It therefore seems that some schemes are performing well financially, while others may require additional support.

Finally, in spite of some problems identified, the WSP review notes that the involvement of many stakeholders in the CWSSP design and implementation, including NGOs in project management and municipal councils in community selection, was instrumental to the success of the programme.

Source: Kimwaga, 2010; World Bank, 2011c.

4.6 Assessment: how far have low-income households been served by the DWSSP and what lessons can be learned?

Some elements of the DWSSP have been effective in reaching poor households. For example, as seen in section 4.4, the CWSSP has improved access to water services, in terms of both quality and affordability, to a significant number of poor urban residents in non-networked areas[92]. In spite of some problems, the CWSSP has improved the situation of poor residents in areas where there was clear need and, as mentioned above, the move into such decentralised modes of provision is a very positive step.

Meanwhile, as another measure, the kiosks were targeted to areas of need and the link with broader programmes of urban upgrading is to be commended. However, limited priority has been given to tackling serious levels of non-functionality, which are only partly the result of ongoing shortages of bulk water. Poor functionality rates mean that the real benefits for poor populations have been limited. The support and monitoring needed by WUAs for both kiosks, and CWSSP also, seems to have been somewhat underestimated, although considerable efforts were made under the CWSSP in partnership with both local NGOs and WSP. It should be recognised that this is not a traditional area of expertise for utilities, and DAWASA has shown willingness to learn and refine its approaches, commissioning a number of studies and piloting different management approaches.

In Dar es Salaam, some informants argued that it is not straightforward to identify and target poor households because they often live in mixed neighbourhoods, while proxy indicators relating to the type of housing are of limited use because many of them rent rooms in larger houses. However, there are areas which are, broadly speaking, considered poorer than others These areas are generally unplanned and are characterised by narrow streets, congested layout, poorer quality housing, and poor drainage and infrastructure. This situation – though poverty levels could be more scientifically verified, e.g. using census data - suggests that in fact the combination of the geographic targeting and self-targeting adopted under the DWSSP design (with a mixture of household connections and kiosks provided in identified CIUP and CWSSP areas) is quite appropriate, with connection subsidies available plus kiosks in poorer and mixed areas. Modifications would be needed, to some of the targeting criteria envisaged, in particular for the first-time connection fund, but the DWSSP's problems lay more in the overall implementation than in the design of pro-poor components *per se*.

The various targeting approaches (for the CWSSP, kiosks and FTCF), as well as the identification of priority zones under the CIUP, could provide a *basis* for developing a citywide strategy for pro-poor service delivery. However, there is as yet no evidence that this is occurring or that the information generated by the CIUP zoning exercise is being used for planning purposes by DAWASA. Furthermore, implementation of targeting did not always follow design, and detailed targeting processes have not always been documented or systematised. This means that opportunities to scale up, learn from and strengthen existing approaches are probably being missed. The ICR further notes that although DAWASA commissioned the National Bureau of Statistics to conduct surveys of water access and socio-economic indicators in 2006 (baseline) and 2009 (follow-up), with a view to understanding impacts of the DWSSP, these surveys did not provide key information which could have been used to tailor services more closely to the needs of customers, (for example affordability of water from different sources, time spent in water collection or volumes used – confirmed by viewing survey findings annexed) and there is no evidence that the results have been used for strategy development or regulatory purposes (World Bank, 2011c, to which the report of the 2009 survey is annexed (annex 5)).

In terms of affordability, the tariff design means that water obtained from a household connection remains the cheapest option as shown in **Table 4.4.** While kiosks and CWSSP schemes offer water at considerably lower prices than vendors or private boreholes, they are more expensive than piped

[92] It is difficult to estimate the exact figure but DAWASA figures of over 400,000 seem high as discussed above.

water – even piped water at the higher price band outside the lifeline tariff - even though piped water users are almost certainly better-off.

Table 4.4 Prices of water from different sources (at time of research in 2009)

Source of water	Price per m^3 (TSh)	Remarks
Household connection - first 5m^3 per month	637[1]	Cheapest volumetric rate. Even so, it was said that many poor HHs struggle to pay bills once connected because it is harder to control consumption than with buckets (but higher consumption is probably good for health)
Household connection - over 5m^3 per month	850[1]	Still cheaper than water from kiosks or CWSSP. Includes lessor fee, regulator fee and FTCF subsidy.
CWSSP schemes	1,000 – 1,500[2]	Price set by WUAs. Considered reasonable by FGDs. Some give free water to elderly and widows - discretion Still more expensive than network tariff.
Kiosks receiving bulk water	1,500[3]	More expensive than network tariff because of need to pay operator. Private operators reportedly charge more.
Kiosks using tankered water	2,500 – 5,000[3]	Due to low pressure in the water network, kiosks often rely on tankered water, driving up the price.
Private borehole	2,500 – 10,000[4]	Cheaper than vendors but quality not trusted.
Water vendor	5,000 – 50,000[4]	Most expensive option. Vendors said to raise prices when other sources fail (when others function, they lower prices to compete)

Sources:
1 = Key informant interview with DAWASCO Chief Operations Officer, confirmed by documents viewed
2 = Focus group discussions with users and managers
3 = Focus group discussions with kiosk users and managers, confirmed by WaterAid/DAWASCO survey (WaterAid Tanzania, 2009)
4 = Focus group discussions with users of both CWSSP and kiosks

As for bulk water, the project's investment in improving water supply in the piped network and strengthening overall utility performance was much needed. There was, and remains, an urgent need for increased bulk water supply to the city and rehabilitation of the network. DAWASA and DAWASCO have also improved their performance in a number of areas which will underpin future improvements in services, although severe problems remain particularly in terms of bulk water supply, non-revenue water and hours of supply (see **Box 4.5**). Progress in developing institutional

capacity has been held back by the failed public-private partnership attempt, which caused significant delay in the implementation of project components (including establishment of new connections needed to generate revenue) and led to the creation of an unsatisfactory institutional model which stakeholders feel limits the incentives for DAWASCO to improve performance (see section 4.6.2 on accountability and voice).

There is not a contradiction *per se* between investing in the main network and utility capacity and improving services to low-income households. However, in themselves these investments have not yet provided better access to many poor residents of DSM. This is in spite of the upfront statement in the PAD that "affordability of the WSS service by lower income groups" is one of the DWSSP's three core objectives (World Bank 2003a). The other two objectives, reliability and sustainability, appear to have been given precedence.

Box 4.5: Comparing DAWASCO's performance in 2005 and 2009

This box compares DAWASCO's performance against selected indicators in May 2005 and August 2009. Some achievements are noted in the table below. Set against these are the facts that non-revenue water remains extremely high at 53%, and the number of customers receiving 24 hour service has in fact fallen from 40 to 30% since the start of the project (World Bank, 2011c).

Performance Indicator	May 2005	August 2009
Water production (m^3)	6,717,930	8,139,584
Days receivable ratio (months)**	27	12
Bill distribution efficiency (%)	80	100
Total number of customers billed on actual meter readings	4,935	52,324
Average response time to customer complaints (hours)	24	7

* % of bills paid
** Average time for a bill to be paid

Source: DAWASA (2009a) DWSSP Quarterly Progress Report No. 25 (July to September 2009)

The project showed a clear prioritisation of private connections over kiosks in both design and practice. The appropriate balance of private and community infrastructure is location-specific, but it is not clear that a thorough analysis of the right balance was conducted here during project design. Affordability was only fully analysed for piped household connections, while affordability problems with kiosks were predicted, but apparently not addressed in project design.

It is also apparent that subsidies have not been used for the most pro-poor purposes. The 'universal' subsidy embedded in the lifeline tariff in fact benefits only the minority of residents of DSM who have an individual household or yard connection (17% according to the ICR), who are likely to be disproportionately better-off than households without a connection of their own. The cross-subsidy in the water tariff was to be used only for connections, not standpipes or network expansion to poor areas, even though utility staff believed that there would be enough money available in the fund to spend on providing free connections to middle class households, suggesting that the subsidy was intended to increase the number of connections as much as benefit the poorest households. Meanwhile, available subsidies were used in part to increase connections (and hence revenue) by providing free connections to all under the delegated works rather than being channelled into pro-poor components (another case of 'universal' rather than targeted allocation of subsidies). The emphasis on connections makes sense in the context of a drive to increase revenue flows and improve the

financial footing of DAWASCO and DAWASA. This may be a justifiable strategy, but there is a need for greater transparency around the use of subsidies, especially given the rhetoric in the sector around cost recovery, and for such measures to be accompanied by the development of suitable strategies to meet the needs of low-income residents.

4.6.1 Financial incentives for utilities to serve low-income households

The fact that poor households currently pay more for their water, on a unit basis, than those with a household connection, suggests that the networked tariff would be affordable to these households and that low-income households would be viable customers for the utility from a commercial perspective. This is recognised by DAWASCO, as the Chief Operations Officer commented, *"The poor are not lost money; they are paying".*

As discussed earlier, however, some poor households have struggled to pay their bills once connected because they started to consume higher volumes of water. Flexible payment mechanisms allowing more regular payments (e.g. weekly instead of monthly) might help somewhat, but if poor households control their consumption to keep costs down and consume less water than better-off households they will still represent a less commercially promising prospect to a utility than a high-volume user, especially when the additional costs of serving them are considered (for example more frequent billing, and the need to extend infrastructure into unplanned areas lacking other infrastructure and where losses from illegal connections might be higher).

This said, the utilities in Dar es Salaam could learn lessons from cities such as Kampala, where services to poor households have been extended through both household connections and pre-paid water meters, or from towns in Tanzania such as Lindi, where the utility reportedly set aside 1% of its income to spend on establishing a network of kiosks and saw its income rise 16% (according to an interview with GTZ staff). There is already some interest in pre-payment meters in DAWASCO.

4.6.2 Accountability and voice

There is a strong view among sector stakeholders that accountability for the performance of DAWASCO is undermined by the current institutional arrangements, which derived from the CityWater lease and are not well suited to a contract between two public bodies. In particular they do not allow DAWASA to effectively hold DAWASCO to account for its performance against commitments in the lease; chief executive officers (CEOs) of both organisations are ministerial appointments, while DAWASCO is not subject to penalties in the case of non-performance. A stakeholder workshop was held to discuss possible changes to the current arrangement (see Annex 6 to the ICR, World Bank, 2011c), but the text of the ICR notes that the GoT has not yet taken steps to implement change.

Accountability mechanisms to ensure that low-income households in particular receive services are rather weak in DSM. In theory, pro-poor services should be monitored by EWURA. EWURA attaches conditions to tariff increases, and has the power to refuse tariff increases if utilities are not meeting targets, or in serious cases to revoke utility licences and take senior managers to court. EWURA staff expressed interest in promoting better services for poor households, and EWURA has recently worked with GIZ to collect baseline information which will support better monitoring of pro-poor services, but, at the time of research in 2009, it was apparent that EWURA had its hands full regulating over 100 utilities on existing performance indicators. **Further supervision and support is likely to be needed to make regulation of pro-poor aspects a reality.** The collection of disaggregated information on services for low-income households is also a prerequisite for greater accountability. Currently, information held on customers and services appears to be weak, illustrated by the fact that

it was difficult for the researchers to obtain consistent data on numbers served by the project. Capacity strengthening and a clear requirement to collect, and report information against a few key indicators is likely to be necessary.

EWURA regulates tariffs in a process which includes consultation through public meetings. If areas are identified as underserved at public meetings, EWURA staff said that they would then often insist that the utility construct kiosks in these areas. As far as the researchers understand, the consumer consultative council, which includes representatives of business, domestic customers and NGOs, is responsible for communication with customers and representing their concerns to EWURA as part of the tariff review. It is not clear how far the consumer consultative council represents low-income households, although EWURA stated that any customer was free to stand for a place on the council. EWURA also regulates connection charges, but the priority here is cost recovery in line with national policy and because, in the view expressed by EWURA staff, utilities cannot afford much in the way of subsidies or even cross-subsidies in their current financial position.

In terms of consultation of users before implementation of the DWSSP components, the picture is mixed. Officials reported that residents were involved in decisions about the location of kiosks, but some kiosk users said during FGDs that very little consultation had been done and that the construction of the kiosks was discussed only with street authorities and the owners of private land where kiosks were to be constructed. The CWSSP implementation had a higher level of community involvement and consultation, although a few FGD participants still said that they were not aware of how the schemes were designed and financed. The DWSSP did not have an explicit focus on strengthening accountability and voice for poor water users. DAWASCO staff reported, however, that WUAs managing kiosks are in some cases raising user complaints to DAWASCO.

4.6.3 Prospects for sustainability of services for low-income households

In this section conclusions are drawn about the likely sustainability of services for low-income households achieved under the DWSSP, considering the approaches taken by the project and experience so far, as well as current developments in the sector. It should be noted that this is a time of some flux. A change in institutional arrangements is being considered, as discussed above. At the same time an Informal Settlements Department (ISD), widely referred to by informants as a "pro-poor unit" has recently been established within DAWASCO. Its mandate and its relationship with other sector institutions (including in particular the Community Liaison Unit within DAWASA) are not yet clear.

Pro-poor services are more likely to be sustainable if: they have a clear and adequate future source of financing, and are "owned" and prioritised by a responsible sector institution; they form part of sector monitoring, review and lesson-learning processes; and the sector dedicates adequate resources and skilled staff to support them. Prospects in DSM currently seem mixed, with some positive signs and a number of reasons for concern.

Some aspects of the DWSSP design offer good prospects for sustainability. The FTCF, based on a cross-subsidy from water tariffs, will be continuously renewed and grow as DAWASCO's customer base increases, offering a sustainable source of financing for new connections for poor households into the future without dependence on donors or government. The technical design of the CWSSP, which can reportedly be easily integrated into the main network, is another example of attention to long-term sustainaibility.

In general, all informants agreed that over the course of the DWSSP, DAWASA, and to some extent, DAWASCO, have made significant improvements in management, efficiency and staff capacity. **This is an important achievement and means that the sector is in a better position to deliver and sustain pro-poor services in DSM than previously, though there is still a long way to go to overcome severe constraints relating to bulk water supply, losses from the network, tariffs set**

below cost recovery levels, inadequate revenue collection and rising costs (see ICR, World Bank 2011c).

The establishment of the ISD in DAWASCO offers an opportunity to institutionalise pro-poor services. It will manage the FTCF and at the time of research was reportedly discussing whether the FTCF targeting criteria could be improved and whether the fund could be used to subsidise a wider range of approaches, not just household connections, in order to serve poor households more flexibly. In 2011, it was said that the ISD is undertaking an inventory of kiosks to assess needs. The ISD has high-level support within DAWASCO from both the Chief Executive Officer and the Chief Operations Officer, by whom is directly managed. Finally, the baseline survey recently undertaken by EWURA/GIZ offers an opportunity to improve monitoring, regulation and lesson-learning on services for poor households.

However, the relatively low priority given to services for low-income households in terms of implementation to date, and the lack of systematic thinking on how utilities can meet the needs of poor households, is a concern for sustainability. It is not yet clear whether the ISD will have the necessary capacity or clout to act strategically and change mindsets in the sector. The department is also likely to need considerable support, technically and possibly financially, building on guidance it is currently receiving from WSP. Developing new approaches to meet the needs of poor households and incorporating these into the technical and financial models by which utilities are governed is a very challenging task and one the ISD with its few staff will not be able to achieve alone.

The problems encountered in management of both kiosks and CWSSP schemes by WUAs also do not bode well, particularly as several are struggling to cover their costs while selling water at an affordable rate. It may be necessary to reconsider the financial model and to examine what additional support is needed for these schemes to function on a sustainable basis. The high demand on functioning kiosks and schemes, which in some cases are being used beyond their design capacity, also increases the risk of scheme failure. However, if bulk supply to the network is increased, some of these problems should be alleviated for kiosks.

Finally, the effectiveness and sustainability of pro-poor services will be constrained as long as DAWASCO and DAWASA continue to struggle with inadequate water supply and financial resources. The implementation of steps already identified to help alleviate these problems would therefore contribute to extending and sustaining services for low-income into the future, if accompanied by specific pro-poor measures with a clear allocation of resources.

4.7 The significance of IDA support to the project in Tanzania

The following is an analysis of the roles of the World Bank and the GoT in relation to the DWSSP, so far as it has been possible to capture this from analysis of documentation and the key informant interviews. As in Burkina Faso (as discussed in Section 2), the researchers were not privy to discussions between the World Bank and GoT or DAWASA. The financing arrangements for the DWSSP are then considered.

4.7.1 Influencing, guidance and support

The strong influence of the World Bank on project design, in terms of making privatisation a condition for debt relief and providing technical assistance and advice geared towards privatisation, has been previously documented (e.g. ActionAid, 2004) and the strong support provided to the privatisation policy by the World Bank is acknowledged in the project ICR which states that 'The

Bank's policy favored PPP [public-private partnership] as the most promising approach for improving the performance of services' (World Bank 2011c, p.6).

A DAWASA official saw the Bank as authoritative and influential in the sector, saying: *"whatever the World Bank discusses, we tend to go along with them*". It is not clear to what extent this reflects active efforts by the World Bank to push policy in particular directions, as opposed to perceptions among DAWASA/government staff that the World Bank is an authoritative voice whose suggestions should be given weight. Either way, the World Bank clearly holds an influential position.

The same official observed that this influencing capacity had been used to push for more attention to pro-poor issues:

> "*In discussions they enquire as to what is being done to ensure the poor have access to clean and safe water"*.

An informant from the World Bank also expressed the view that before the Bank became involved in DWSSP design (which was already under discussion by GoT and the other donors), there was no mention of serving the poor. Certainly the AFDB (a co-financer) seems to place less emphasis on the DWSSP's pro-poor dimensions of the project, stating in *its* ICR that the "primary target of project design [was] upgrading commercial operations and enhancing the financial situation of the Utility" (highlights of the AfDB Project Completion Report, annex 8 to the World Bank ICR, World Bank 2011c), although a detailed review of AFDB project documents was not conducted.

These comments suggest that incorporation of 'pro-poor' elements into the project design was the result of influencing by the World Bank - an example of active support to 'inclusion'.

However follow-through in terms of detailed design, implementation and in particular monitoring has been less strong. As described in section 4.3, the PAD is underpinned by detailed financial, economic and technical analyses, but very limited social analysis (and no evidence of further social analysis was made available to the researchers). The project performance indicators in the PAD, which are part of the contractual agreement between the World Bank and the Ministry of Finance, also reflect the lesser priority attached to social impacts compared with financial and technical performance, as discussed above. The indicators include only the number of kiosks and CWSSP schemes constructed, with no measure of whether these have been well targeted or provide a good service and no requirement for impact assessment

4.7.2 Financing arrangements

As to the financial projections of the project, key informants of GoT and the World Bank agreed that these were too ambitious. This is borne out by figures available at the time of research. DAWASA's cash flow from operations was projected to be over 4bn Tsh in 2009 according to the PAD (World Bank, 2003a), yet in reality stood at -2bn in this year (DAWASA, 2009b). It was projected that DAWASA would continue to operate at a loss until around 2013, yet the loss for 2009 was expected to have come down to around 3.25bn Tsh and in reality was over 14bn Tsh (ibid).

DAWASA's reports and plans explain that both DAWASA and DAWASCO face serious revenue constraints and are currently not even covering DAWASCO's operating costs (DAWASA, 2009a, 2009b). As a result, DAWASA's draft 2009-2012 plan (the final document was not available at the time of research) points to a perceived problem in relation to debt service. It notes that:

> "*Starting 2009/10 DAWASA will start serving principal and interest due on its loans from the Ministry of Finance*," and then "*It is for this reason the cash balances are lesser in the years 2009 and 2010 and negative cash balances are projected for the FY [financial year] 2011*".

According to financial projections in the plan, DAWASA will pay TSh 18.278bn in loan repayments in 2010-11, and slightly less each year over the following three years. This figure is equivalent to roughly 20% of DAWASA's projected cash flows from government and donors, and more than 150% of its projected revenue from operations in 2010-11 (DAWASA 2009b). The huge discrepancy between projection and reality is made clear in the ICR, which observes that "there is simply no possibility of the debt being successfully serviced under current conditions... and the government will have to take on the debt service until the utility is able to generate sufficient revenues".

It appears that the projections for turnaround in the sector which informed the decision to approve an on-loan to DAWASA with an interest rate of 11.5% and a relatively short grace period of five years were far too optimistic. In reality, connection of new customers, reduction of non-revenue water and tariff increases have lagged behind what was projected, and as a result DAWASA continues to operate with heavy losses.

This also raises a related issue: has the particular financing model adopted by the World Bank (a concessional loan of which part was on-granted and part was on-lent with more stringent repayment conditions) had adverse implications for how far the project could support pro-poor approaches.? It has already been noted that a project receiving loan funding from the World Bank has to be "bankable", according to informants from WSP, i.e. it must make money back so that the government can repay the loan, even on concessional terms. A counter argument is that the on-lending arrangement is in line with the national policy of cost recovery, and that if the utilities had improved their performance to expected levels, repayments would not have posed a problem. From this perspective, on-lending is an instrument to promote financial rigour.

A lengthy examination of DAWASA's financial model to determine the impact of loan repayments on service provision could not be conducted as part of this study. It is also plausible that these impacts would come into play not when DAWASA is already operating at a substantial loss (and is *de facto* subsidised by government), but once revenues have increased to a level where repayment of debts is actually possible. What is clear, according to the documents cited above, is that the level of debt service is a concern for the utilities.

The on-lending agreement was made between the Ministry of Finance and DAWASA, but was approved by the World Bank at the start of the project. The World Bank reported that they were concerned that debt repayments should not pose a risk to DAWASA's financial sustainability, and have therefore urged the Ministry of Finance to reduce the interest rate on the on-lent funds. However, according to the ICR this request has been rejected.

4.8 Conclusions and recommendations from Tanzania

4.8.1 Conclusions

- Policies and strategies in Tanzania state that poor urban populations are a priority group for interventions to improve access to water and sanitation, and they mandate utilities to develop approaches to targeting and serving them. However, these policy statements are not translated into a documented strategy for achieving inclusion of poor households in Dar es Salaam, either in DAWASA's development contract or its current plans. The intention expressed in the 2005 – 2010 National Strategy for Growth and Reduction of Poverty (NSGRP or MKUKUTA, URTb) for monitoring of pro-poor water supply was also not fully applied.
- In general, documentation of pro-poor services is weak. There is a lack of information on what investments have been made and who has benefited. It was not possible to get accurate up-to-date lists from DAWASCO or DAWASA of kiosks or CWSSP schemes. Nor were connections

under the delegated works broken down into existing and new. This reflects a wider lack of good monitoring and information systems for water and sanitation services in Dar es Salaam.

- There is a lack of accountability arrangements for services for low-income households. DAWASA's and DAWASCO's contracts focus on general performance, financial and technical indicators, reflecting the priority given to improving utility performance and achieving financial stability during the DWSSP years. EWURA is not currently monitoring service levels to poor households, though it is building an information baseline that could support this. Meanwhile the current institutional arrangement does not provide adequate accountability or positive incentives for DAWASCO to improve its performance.
- The DWSSP included a dedicated pro-poor component– the Community Water Supply and Sanitation Program (CWSSP) – with a well-developed targeting system. This has been fairly successful and has provided improved and affordable services to up to 400,000 people (though some estimates are lower) in low income areas. It is a very positive development that DAWASA has moved into providing decentralised services outside the main networked area. However, the financial sustainability of CWSSP schemes remains to be seen; external funds may be needed for major repairs or infrastructure replacement.
- The CWSSP benefited from the involvement of NGOs experienced in community projects, the inclusion of municipalities in the community selection process, and from a dedicated fund and management team in DAWASA who have shown commitment to improving the management of CWSSP schemes.
- However, the CWSSP is relatively small and the bulk of the project (over 95% of the budget) focuses on improvements to the piped network and utility performance in relation to networked customers. Here the pro-poor elements have had much less impact. The lifeline tariff, first-time connection fund and kiosk construction are designed to help poor households access water. However, in practice it seems that low priority has been given to these. The first time connection fund has never been applied, in part due to design weaknesses. Kiosks have been constructed, but only 7% of them were functioning reliably and providing a good service at the time of the research. This was due in part to insufficient bulk water in the system and high losses, which the DWSSP has taken some early steps to address, but also to various management issues which are awaiting resolution.
- Although most kiosks do not yet provide a good service, the principle of constructing kiosks in priority zones identified by a parallel project (the LGSP) shows responsiveness to community demands and an integrated approach which could form the basis of a strong pro-poor targeting strategy in future.
- Social analysis informing the project was very limited in comparison with technical and financial aspects.
- Subsidies have been used to provide universal free connections in project areas and subsidise consumption by all households, in spite of policy statements about cost recovery accompanied by specific pro-poor measures.
- The design of project key performance indicators is weak in terms of ensuring pro-poor goals are met. The KPIs refer only to construction of kiosks and installation of connections, not *who* has benefited or any measure of the impact on low-income households. Of the stated goals of the DWSSP, "affordability" is neglected in terms of translation into KPIs. There is no formal requirement for an assessment of project impacts for beneficiaries.
- The World Bank played a positive influencing role in pushing for the inclusion of pro-poor elements in the DWSSP. In particular, the incorporation of the CWSSP is commendable and the combination of targeting approaches selected for use across DSM is broadly logical. However,

this initial positive influence was not adequately followed up by translation of the pro-poor elements into monitoring arrangements and utility contracts; these prioritise technical performance, service standards and financial sustainability over pro-poor goals.

- Utility revenues remain far below expected levels due to highly ambitious projections of performance, in a context of poor information and high risks, and due to delays in implementing infrastructure components because of the failed privatisation early in the project. In this context, utilities are concerned about the effect of loan repayments with high interest rates on their financial position.

4.8.2 Recommendations

For the Government of Tanzania, DAWASA and DAWASCO:

- It is recommended that DAWASA and DAWASCO (possibly led by the new Informal Settlements Department of DAWASCO, depending on its eventually agreed role), with the support of MoWI, convene a discussion with key sector stakeholders to draw up a city-wide strategy for targeting of poor areas and households. The discussion should bring together relevant available data, e.g. the GIZ-supported baseline study, CIUP zoning data and perhaps census data (such as has been used for poverty mapping in Burkina Faso, see Chapter 2), and consider how it could be used to develop targeting methods. It should also bring in actors outside the water sector such as the planning departments of the three municipal councils and DCC, and experts in poverty, social planning and economics from universities and research institutes.
- Support should be given to the utilities to translate the pro-poor ambitions expressed in policies and strategies into concrete plans, in the context of developing an overall city plan for serving low-income households. At the same time, EWURA should be resourced and empowered to regulate utilities against pro-poor objectives.
- DAWASCO's Informal Settlements Department should be adequately staffed and resourced to provide strategic thinking on how services to low-income households could be improved in Dar es Salaam. Its work should be mainstreamed into the activities of DAWASCO and the sector as a whole. This is a long-term process and utility incentive structures should be designed to reward long-term support to such a unit, even if it is not revenue-generating (providing water to poor households will, of course, be revenue generating).
- Poor households could be viable connected customers for DAWASCO, and flexible payment systems should be developed, for example weekly rather than monthly billing, to help overcome problems of non-payment faced in the past. Consideration should also be given to the fact that many households access water from neighbours' connections. At the same time, however, the costs associated with serving poor households are often higher than for commercial or wealthier customers and the returns lower, so targeted action to incentivise the operator and utility remains critical to ensure that the poor are not the last to be served.
- DAWASA and DAWASCO could learn lessons from cities such as Kampala, where services to poor households have been extended through both household connections and pre-paid water meters, or from towns in Tanzania such as Lindi, where the utility reportedly set aside 1% of its income to spend on establishing a network of kiosks and saw its income rise 16% (according to an interview with GTZ staff).

- DAWASCO should make a concerted effort to bring as many kiosks as possible into operation, particularly where the delay is due to management issues or delays in construction rather than lack of bulk water, which can be resolved quickly if given priority.
- Possibilities to target the first time connection fund more effectively should be explored, for example: free connections for all in the poorest areas, and in mixed/better-off areas, free connections for households meeting one or more of a set of proxy indicators for poverty level (e.g. number of taps, housing quality, or number of families sharing a dwelling).
- If limited funds to subsidise services are available, these should be channelled to services which benefit low-income users (connections, kiosks and community-managed supplies) rather than to consumption of water through the main network, especially not to consumption above the lifeline tariff.
- From an equity perspective, affordable services for poor households should be given immediate attention even if this means developing 'interim' solutions on a large scale – such as the CWSSP or kiosks with tankered water – while necessary investments are made in the main network.
- Scaling up of the CWSSP should be coordinated with municipal governments and NGOs to ensure that the siting of schemes implemented under different programmes is complementary and equitable. It is recommended that a dedicated team be retained to manage this programme, as it requires expertise which is currently being built up in the CLU. Efforts to learn from the CWSSP programme, such as studies by WSP, are a positive sign and should be continued.
- Further support should be given to the development of the young Consumer Consultative Council, in particular to ensure that it reflects the priorities of low-income households by including representation from low-income groups (e.g. kiosk users, not just networked customers) and publicising public meetings appropriately.

<u>For the World Bank</u>:

- There should be full consistency between the stated goals of World Bank support (or the projects/programmes it supports), the detailed project design and key performance indicators of projects . If a pro-poor goal is stated as a project priority, this should be fully reflected in the project design and performance indicators.
- The World Bank should encourage and support sector institutions to develop strategic and systematic approaches to serving low-income households across cities (i.e. going beyond the design of individual project components or specific approaches with limited application without being integrated in a city-wide system). This is an opportunity for positive influencing and guidance. Project design should be informed by a systematic analysis of the needs of low-income households and levels of affordability.
- The World Bank should support data collection activities by utilities and regulators, including collection of socio-economically disaggregated data on service levels, as the current poor information base is a constraint on effective targeting and pro-poor regulation. In line with the Accra Agenda, the World Bank should work with the Government of Tanzania to collect and monitor dissaggregated data on water users under the WSDP (see Box 1.3).
- A good option for further capacity building of DAWASA and DAWASCO, particularly pro-poor aspects, is to support further partnership with Uganda's NWSC, perhaps by financing NWSC's costs. This partnership has so far proved successful in improving the performance of DAWASA and DAWASCO, and there is scope for more learning in particular on how services

have been extended to low-income households in Kampala through both household connections and pre-paid water meters, without damage to the utility's financial position.

5 Synthesis

This section summarises the findings of the case studies in the three countries.

Sections 5.1 to 5.4 review progress of the projects[93] against the following common issues:-

- **Water policy,** and particularly equity aspects;
- **Water Infrastructure**;
- **Water Services,** and particularly social and 'inclusion' aspects; and
- **Utility capacity and performance,** including financial aspects.
- Section 5.5, on '**Policy principles to project implementation',** considers how social aspects, in particular 'inclusion' of low-income areas and households, have been lost or disregarded in the translation of policy statements into utility plans and contracts, project design and implementation.

Further sections then discuss:-

- **Sustainability**: prospects for sustainability of services for low-income households;
- **Accountability** issues;
- **IDA role:** the role of the World Bank in negotiations with government; the terms of on-lending and on-granting.

The Table in **Annex 10** provides, for ease of reference and comparison, an overview of information relating to the four projects.

5.1 Water Policy

In the three countries, laws and/or policies include a commitment to universal access to potable water supply and either recognition of the requirement for 'equity' or the needs of poor populations, as follows.

Under the laws of the three counties, access to drinking water is recognised as a right. National water policies state that, in relation for water for drinking, different categories of population must be treated "equitably" (Burkina) and according to "appropriate social equity considerations" (Tanzania), so as to "satisfy sustainably, in quantity and quality, the water needs of a growing population and an economy in development" (Burkina) and so that "a basic level of water supply is provided to the poor at affordable cost" (Tanzania), and as key to poverty reduction (Ghana).

5.2 Water Infrastructure

Population growth rates in Accra, Ouagadougou and Dar es Salaam have doubled each city's population in the two decades prior to the beginning of the studied project, beyond the capacity of existing water collection and treatment infrastructure[94]. The consequence, in each case, was a piped network delivering an intermittent service to a minority of residents.

The ZIGA project (2001-2007) succeeded in increasing water production in Ouagadougou threefold. "The production and storage capacity installed is sufficient for the time being" (World

[93] In the case of Burkina, since the new project was only recently approved, only the achievements and weaknesses of the ZIGA project are considered.

[94] As described in each of Sections 2, 3 and 4. As noted in Section 4.1.1 in three decades from 1978 to 2007, the population of Dar more than tripled.

Bank 2009b, page 6). The distribution network within Ouagadougou was also substantially extended, serving more residents - see **Box 5.1**.

Box 5.1 Water Infrastructure - progress status

Ghana (Urban Water Project, 2004-2010)
- The UWP offers the possibility of substantial, much-needed investment in infrastructure which is necessary to support future expansion/connections.
- Investments are to be allocated between and within regions across the country (see section 5.3.2).

Burkina ('ZIGA' project, 2002-2007)
- An earth dam and reservoir were duly constructed at the ZIGA river site, and a 50 kilometre long 'primary' water main (of 1 metre in diameter) was laid in order to bring the bulk water supply to the city. At the entry to the city, a storage facility and pumping station was built, with eight water towers and other ground-level tanks within the city, as well as 171 kilometres and 1,437 kilometres of 'secondary' and 'tertiary' distribution networks respectively. Thereby, water production and delivery for Ouagadougou was increased threefold, from 40,800 cubic metres per day in 2001 (World Bank, 2001, p.5) to 122,000 cubic metres per day in 2007 (World Bank, 2009b, page 1). This meant that, from an intermittent service prior to ZIGA, the city was provided with a continuous water supply (including in the dry season) (World Bank, 2008, p.vi). According to the key informant interviews conducted by this study, the water supply produced by the ZIGA project is sufficient to meet current demand.
- Water access in urbanised areas of Ouagadougou beyond the city centre has improved through household connections and standpipes. The project evaluation in June 2008 (World Bank, 2008), recorded 56,000 inhabitants connected and 400 standpipes installed.

Tanzania (Dar es Salaam Water Supply and Sanitation Project, 2003-2010)
- The DWSSP brings substantial investment in infrastructure to increase bulk water production and rehabilitate the network. Over 112,000 connections installed (mixture of new, reinstated and rehabilitated) and at least 184 water kiosks constructed in networked areas.
- Infrastructure improvements were delayed, in turn delaying expected improvements in NRW and hours of service, largely due to the failed privatisation at the start of the project (the project end date was revised twice from 2008 to 2010). However these works are now largely complete. CWSSP schemes were to be completed in 2007, but in late 2009 only 25 out of 41 were yet in operation, due to a mixture of procurement and management issues. The number has since risen.
- Lack of water in the network has deprived some kiosks of a reliable service (12 out of 184, 7% only).

In Dar, the DWSSP has improved water access for tens of thousands of urban residents - in the case of the Community Water Supply and Sanitation Programme (CWSSP), hundreds of thousands. Meanwhile, the UWP project in Ghana is designed to extend the national piped supply network with investment in each of the country's ten regions; progress has, however, been extensively delayed, in part due to slow procurement procedures. Five years into the project, baseline studies have not been done. Delays in implementation of the main project components have also occurred in Tanzania: capital works originally scheduled for completion in 2008 are still ongoing.

All the projects financed, or will finance, new connections, including standpipes/kiosks as well as household connections.

In Accra and Dar es Salaam, the main barrier to access is not cost, but a lack of **bulk water** in the system which means that significant areas of each city are not covered by the piped network, including low-income communities. This contrasts with the situation in Ouagadougou where the construction of the dam at the ZIGA site and the installation of 50 kms of water main from the river

water source to the city has resolved the problem of bulk supply, at least in the short and medium term. In the context in Accra and Dar, what matters are investments in bulk water supply and production so as to be able viably to extend services, both network expansion and stand-alone schemes in areas (far) outside the network, which should be targeted according to need. Until those investments have been put in place, subsidies which focus on connections to the network alone are irrelevant to a large number of poor households.

5.3 Water Services

5.3.1 Status of water services

As regards the status of water services under the three projects[95], **Box 5.2** notes the key findings of this research.

Box 5.2 Water Services - status

Ghana (Urban Water Project, 2004-2010)
- The project has had a positive impact in highlighting the importance of pro-poor service provision.
- The project provided financial support for fledgling pro-poor initiatives led by the regulator, PURC, including piloting of community-managed schemes in three low-income areas of Accra; these pilot schemes look set to bring significant benefits for poor households.
- Allocation criteria for regional investments fail to take into account the distribution of water and income within regions (they rely on overall income and coverage figures), the availability of alternative water sources or acceleration in urban population growth (they are based on 2000 population figures). This has resulted in some wastage of resources through ineffective targeting.
- Pro-poor elements of the project represent a very small proportion of project funds.

Burkina ('ZIGA' project, 2002-2007)
- In Ouagadougou, the spatial coverage of standpipes has been significantly increased, and most have been located in areas surrounding the centre of the city which are generally poorer (as verified by the mapping exercise conducted by this research study).
- The ZIGA project introduced a social connection policy to reduce the cost of connections by 50% and later 75%. This substantially increased demand for household connections.
- In the extension of standpipes, some poor areas were missed and some better-off areas included.
- Few standpipes were installed in informal, 'un-urbanised' areas, and rates of functionality in some locations are low.
- The evaluation of the ZIGA project did not distinguish benefit or impact on households of different income level.
-The socio-economic data gathered from the ICEA/SOGREH questionnaire employed by ICEA/SOGREAH (set out in the annex to the report ICEA-SOGREAH, 2008) for its survey in July 2007 among households in the largest cities in Burkina was not utilised in the project design - at least, not visibly in the PAD.

/cont…

[95] As noted above, *not* including the new project in Burkina.

Box 5.2 Water Services - status (continued)

Tanzania (Dar es Salaam Water Supply and Sanitation Project, 2003-2010)
- Pro-poor issues were brought on to the agenda, reportedly due to World Bank influence. A Community Liaison Unit has been established within DAWASA to manage the Community Water Supply and Sanitation Programme-CWSSP.
- Improved, affordable water supply was provided to around 200,000 peri-urban residents outside the main network through the CWSSP (figures disagree – see section 4).
- Kiosks were constructed in networked areas. Those which function and receive bulk water from the network provide affordable water to users (though this is a very small percentage of kiosks).
- Social connection fund collected (levy on water bills).
- The new connections were mostly free to consumers.
- Bureaucratic delays by DAWASCO in connecting kiosks and hiring operators has also hindered the provision of a reliable service.
- The First Time Connection Fund (FTCF) for low-income households has not been used, due in part to inappropriate design of criteria for targeting of poor households.
- Pro-poor elements of the project represented a very small proportion of project funds.

The projects in Ghana and Tanzania each include a dedicated pro-poor component (the CWSSP in Dar es Salaam and the pro-poor pilots in Ghana). The CWSSP has made significant achievements in terms of inclusion and impact on the poor, and the pilots in Ghana look set to do the same, in both cases since they are employing workable targeting methods and have been led by specific teams (the Community Liaison Unit in DAWASA in Tanzania, and the regulator, PURC, in Ghana). In Ghana and Tanzania in particular, the projects have played an important role in bringing pro-poor issues on to the policy agenda. In all countries, the projects introduced or developed new approaches for serving the poor: subsidies (of 50-75%) for water connections and household sanitation in Burkina, and community managed schemes outside the main network in Ghana and Tanzania.

The targeting methods used to achieve inclusion of poor areas and households (discussed in greater depth in section 5.3.2 below) were variable. For some specific components, targeting approaches have been developed which are fairly effective (e.g. CWSSP). As for more mainstream project elements, relating to the central activities of utilities - network extension, new connections and even the installation of standpipes/kiosks - in all three countries there were noticeable gaps in targeting. In particular, there were no clear criteria for siting standpipes. Neither Accra, Ouagadougou nor Dar es Salaam had a city-wide strategy for inclusion, in spite of the fact that in all three countries, sector policies clearly express the principle of provision of affordable services to low-income urban communities. In Ghana, there was an effort to target investments across the country according to a defined formula for allocation of investment between and within regions, but this does not appear to have targeted the areas of greatest water poverty most effectively.

The projects have also had mixed results in terms of ensuring **affordability** for low-income households. In Ouagadougou, standpipes provide water at an affordable rate, but households in the peri-urban areas studied by this research (through focus group discussions) consider household connections to be too expensive, even with a substantial connection subsidy. In Dar es Salaam, water from both CWSSP schemes and kiosks (those that receive adequate bulk water supply) is much cheaper than that sold by vendors and is considered reasonably affordable by users, but it is still more expensive than even the higher band tariff for piped water, and more than twice the price of water sold at the lifeline tariff.

This may reflect the fact that, in the three countries, pro-poor approaches are not based on detailed analyses of the needs and capacities of low-income communities. None of the projects has as its starting point an assessment of the needs of poor households, and the project appraisal documents (PADs) cite very limited **social analysis** in comparison with the depth of analysis of financial and technical aspects.

In the new project in Burkina (approved in May 2009), and also in the DWSSP in Tanzania, project design gives clear priority to household connections over standpipes/kiosks. In Ghana, the type of connection is not specified. This pro-connections approach appears to be driven at least in part by financial considerations, with connections prioritised *a priori*, rather than a balance of approaches based on assessment of how to best serve the greatest number of poor urban residents. In both Ouagadougou and Dar, it was found that there is still demand for standpipes. The decision to channel subsidies away from standpipes to household connections does not have a clear basis from a perspective of inclusion.

The social goals of the projects have not been fully translated into the performance indicators by which the projects' success will be judged. The existing project performance indicators clearly prioritise financial and technical/service quality aspects. Social indicators, where they do exist, are restricted to the number of connections or standpipes/kiosks installed - with no measure of where these are located or who is to benefit. It has been difficult for researchers to assess how effectively connections have reached low income households, precisely because no disaggregated data is collected in any of the three countries.

This downgrading of the status of social elements of the projects is further reflected in how they have been implemented. In Ghana and Tanzania, significant delays in implementation of the main project components have occurred, and in both cases the objectives of pro-poor elements seem to have been neglected in order to save time and meet project targets (e.g. timing was such that lessons from pilots could not be incorporated into planning of the capital investment programme, and the first-time connection fund was never applied in Dar). This may explain the low priority that seems to have been given to restoring the non-functioning kiosks in Dar es Salaam.

Overall, the projects have raised the profile of pro-poor issues and supported some positive initiatives aimed at achieving inclusion of poor households. However, with the exception of some specific components, receiving a very small share of project budgets, the social elements of the projects have not been adequately developed and/or prioritised to meet the difficult challenge of achieving inclusion of the poor in these cities.

5.3.2 Targeting of infrastructure investments

Table 5.1 summarises the targeting approaches adopted in the three countries, for targeting of both infrastructure investments and subsidies to ensure that benefits reach low-income households.

The use of **geographic targeting** approaches for infrastructure investment - i.e. prioritising areas where households are poor or meet other socio-economic criteria - varies across the three countries. In Ghana, this was attempted with the use of formulae to allocate investments across regions based on a number of indicators (Box 2.3), although as shown in Table 5.1 these criteria did not reflect distribution within regions and water systems and failed to capture fully the extent of deprivation. This shows that attention has to be paid to the criteria used for prioritisation of geographic areas, and that these should be regularly reviewed. With the exception of the small PURC pilot project, within Accra and other towns in Ghana, the utility does not target investments geographically according to need, for example establishing standpipes in low-income areas. In Ouagadougou, the mapping exercise carried out by this research project suggests that, in terms of inclusion of low-income areas, extension of standpipes to the city's surrounding districts was 'patchy'. It is not clear

why some peri-urban sectors - those noted in section 3.4.2.1, each of which is poor - received many fewer standpipes than other sectors.

Targeting of kiosks on a geographical basis occurred in relation to the community-managed schemes outside the main network which have been developed in Accra (the pilots led by PURC) and in Tanzania (the Community Water Supply and Sanitation Programme - CWSSP). In Tanzania networked kiosks were constructed in areas identified as priorities for infrastructure upgrading under another World Bank-supported project. Although the kiosks have not functioned well in practice, this seems to be a good example of coordination between water and other infrastructure planning, although awareness of the process in DAWASCO is low. In Burkina, the only geographical targeting from a pro-poor perspective was a broad assignation of project funds to 17 peri-urban districts of Ouagadougou, without taking account of differing levels of poverty or needs in those areas. Overall there was a lack of systematic, city-wide targeting.

The preliminary poverty map developed by the researchers in Burkina Faso (see Section 3.4.2.1 and Annex 5) shows that, using available census data, it is possible to map city districts according to levels of wealth/poverty. Application of such methods could be explored by the other cities with a view to improvement of targeting of pro-poor services such as standpipes or subsidies, though as shown from the experience of Obuasi in Ghana (where standpipes were not used because safe, affordable water from wells was already readily available), it is also important to take into account the presence of alternative water supply sources as well as income, to promote equity in access and avoid wasted investments. In each country there is some information which could form the basis of a targeting strategy, but it is not currently being utilised for this purpose, e.g. the zones identified for infrastructure upgrading in Dar.

5.4 Subsidies

In all three countries, consumption subsidies are provided for lifeline volumes of water. These are intended to benefit low-income households, since it is assumed that poor households will consume less water (or can choose to, in order to keep down costs - a form of **self-targeting**). However, it is well established in the literature that such subsidies generally do badly at reaching poor households (see for example Boland and Whittington 2003 and with regard to SSA, Foster Briceño-Garmendia 2010). Many low-income households live in high density housing, share connections or access resold water, so consumption quickly exceeds a larger lifeline volume, or their connection is not metered. In addition, the subsidy is provided to all consumers on their consumption within the lifeline block, including better-off households - a targeting error (also called 'leakage'). In Tanzania, DAWASCO staff confirmed that poor households often struggled to control consumption when they obtained a household connection, and said that some even prefer to return to paying by the bucket because their monthly bills became unaffordable. This suggests that the lifeline tariff is not succeeding at making piped water affordable for all, and that other measures are required, such as flexible billing mechanisms and continued provision of standpipes.

Table 5.1: Targeting approaches adopted for investments and subsidies in the projects studied

Targeting Method	Ghana	Burkina	Tanzania
Geographic Targeting Areas identified as poor are prioritised, and either: - investments in extending services are made primarily in these areas, or - households in those areas are considered eligible for subsidies on the basis of location	- Criteria were set for investment allocation to 10 regions within Ghana, and 26 systems in those areas. This is the principal instrument of targeting under the UWP, although this was based only on Ghana water official supplies and did not consider alternative access mechanisms; thus in Obuasi, people preferred to access water from boreholes. - *Within* the areas served by the 26 systems, there was no geographical targeting to identify low-income zones. - One exception is PURC's pilot projects in Accra which are geographically targeted.	- Other than the stated objective of bringing improved water services to, broadly, the seventeen sectors (14-30) outside the centre of Ouagadougou, no geographic targeting strategy of ONEA is evident. - The siting of standpipes in areas surrounding the centre of Ouagadougou appears to have been patchy from an inclusion perspective, with targeting errors.	Kiosks: 31 priority zones were identified by a local government infrastructure project and these were adopted for the kiosks. Within these 31 areas, DAWASCO, DAWASA and the municipal authorities reportedly worked together to identify priority streets based on three criteria: degree of water unavailability; accessibility of the street from other nearby streets, and frequency of outbreaks of water-related disease. The operator DAWASCO also conducted surveys to determine commercial viability of kiosks and incorporated this criterion into decisions about siting. Communities were short-listed for the Community Water Supply and Sanitation Programme (CWSSP) according to five criteria designed to identify low-income communities in need of better water services.
Targeting by household characteristics (proxy means-testing) Households selected by characteristics indicating poverty.	X Not currently employed by GWCL or AVRL.	X Not currently employed by ONEA.	This was tried in the eligibility criteria for the First Time Connection Fund: households had to have less than 3 taps, and be within 20 metres of a distribution main. But the FTCF was only briefly used and the criteria did not prove workable in practice.
Income-based means testing Households selected based on income	X Not employed by the projects.		
Community-based Community leaders and/or organisations, or CSOs select poor areas/households in their community.			Communities were short-listed for the Community Water Supply and Sanitation Programme (CWSSP) schemes by DAWASA, local authority officials at city, municipal and district levels and a university professor) - Although not driven by community leaders or representatives, this selection process did involve district governments. The exact location of kiosks within selected streets was also reportedly determined through community consultation, though this may have been more geared towards identifying sites with suitable land rather than ensuring convenience for the poorest households.

Table 5.1: Targeting approaches and subsidies - continued

Targeting Method	Ghana	Burkina	Tanzania
Self-targeting Households select from a range of service levels at different prices (e.g. household connection, shared connection or standpipe), according to their preferences and ability to pay. **Or** the first volumes of water used are subsidised and households (in theory) self-target by consumption level.	- Standpipes are being provided as an alternative to household connections. But in Obuasi this investment was not demand-responsive and there are water quality problems with standpipes, leading to low levels of use. - The barrier to household connections in Ghana is not just price but bureaucracy and the time taken to install a connection. - A lifeline volume of water ($20m^3$ per month) is supplied at a subsidised rate to all metered households.	- Standpipes are provided as an alternative to household connections in many areas, particularly low-income areas. - Under the new project households will be able to choose from a range of household sanitation technologies at different prices; but the study suggests that even the cheapest are unaffordable to low-income households. - The water tariff includes a "social tranche" (lifeline volume) at a subsidised rate to all metered households.	- Kiosks have been constructed as an alternative to household connections in several areas with water network, and also under the CWSSP schemes. But water from networked kiosks is more expensive than piped water and functionality rates are extremely low. - A lifeline volume of water ($5m^3$ per month) is supplied at a subsidised rate to all metered households.
Universal subsidies Universal subsidies are provided to all households, and are not targeted.	- No connection subsidies offered. - PURC, alone, has been working to develop a social policy including pro-poor elements with a very small proportion of project funds. - GWCL showed (at the time of this research) little interest in social policy, although the UWP was making GWCL more aware of social policy. - Tariff is said to be approaching cost recovery (see discussion in Section 2). - A lifeline volume of water ($20m^3$ per month) is supplied at a subsidised rate to all metered households.	- Household water connections are subsidised by 75% and, under the new project, construction of household sanitation facilities will also be partially subsidised. - These subsidies are made available to *all* households at a standard rate, i.e. not different levels of subsidy for households in differing circumstances (the subsidised costs still seem to be unaffordable to low-income households). - The water tariff includes a "social tranche" (lifeline volume) at a subsidised rate to all metered households.	- The FTCF was designed to offer subsidies for new connections for low-income households at an effective subsidy of c.85%. - In practice, the FTCF was not applied, which meant that the DWSSP offered *universal* connection subsidies (within designated work areas) in order to meet implementation targets and increase the number of paying connections on DAWASCO's books. - A lifeline volume of water ($5m^3$ per month) is supplied at a subsidised rate to all metered households.

Consumption subsidies for water from standpipes or kiosks, in contrast, are much more likely to be progressive as standpipes are only generally used by those who cannot access or afford a household connection (a form of **self-targeting**). Consumption from standpipes was subsidised in all three countries, although in Ghana, Burkina and Tanzania water from standpipes was still more expensive than piped water. In Tanzania, while water was supposed to be sold at the lifeline tariff rate from kiosks, the surcharge required to pay kiosk operators pushed up the price. Similarly, in Ghana the official standpipe tariff is the same as the lifeline rate (Table 2.3), but evidence from interviews and other research (such as Keener et al 2009) indicates that Ghana (along with Tanzania, Sudan and Madagascar) is one of few countries in the region where the standpipe rate is higher than that of a household connection for water. Elsewhere, it is not clear that subsidised standpipe consumption

reaches end users and are often captured by standpipe operators (Keener et al 2009, p.24). In Tanzania, it was projected in the design of the DWSSP that water from household connections would be cheaper than from kiosks, in order to incentivise households to obtain connections. However, there are many reasons why households might be unable or unwilling to apply for a household connection, as noted in section 1.7. In the Dar context, as discussed in Section 4, the decision to prioritise subsidies for connections in Tanzania does not seem to be based on any assessment of the demands or needs of low-income households.

Connection subsidies are generally considered more progressive than consumption subsidies because they extend access to piped water to new households. In both Burkina and Tanzania, connection subsidies were offered. In Ghana, connections are charged at full cost. In Burkina, a universal connection subsidy of 75% (previously less) is provided, yet the focus groups conducted by the project suggest that a connection was still unaffordable to low-income households. In Dar es Salaam, a social connection fund (the First Time Connection Fund) was aimed at providing free connections (free, apart from a small deposit on future consumption) to low-income households, which was intended to use **targeting by household characteristics,** designed to correlate with lower incomes (three or fewer taps). Key informants reported, however, that households with three taps would be middle class rather than poor, while low-income households living in rented homes could be asked to leave, once landlords installed a connection, because they could charge more rent. Nonetheless, this represents an effort to make access to household connections more affordable for poor households, though the broad criteria also seem to reflect a desire to increase connections *in general* as also discussed in Section 3 rather than a channelling of subsidies to the poorest - subsidies are geared to increasing the number of household connections *irrespective* of for whom, and there is a lack of incentives for the three utilities to serve low-income households.

In Dar, in any case, the FTCF has not yet been used, following the decision to provide universal free connections in the DWSSP work areas, in order to meet connection targets and reduce illegal connections.

In terms of network enlargement, the PURC-led pilots in Accra and the CWSSP in Dar es Salaam are positive developments, subject to resolution of the bulk water situation, referred to in section 5.2. Meanwhile, in Ouagadougou, the French Development Agency (AFD) is funding extension through schemes for local neighbourhood operators whose overhead is likely to be lower than that of ONEA, so it is expected that they will charge a lower margin.

Under the new project in Burkina, ONEA will also offer a universal subsidy for the construction of household sanitation facilities. A menu of technological options is to be offered at different prices, to allow **self-targeting**. However, it is feared that cost will still be a barrier for low-income households. For self-targeting to be effective, the range of options must include some which are affordable to the poorest households. A better approach might be to offer a greater subsidy for selected households only, e.g. those in mapped low-income parts of the city or with certain household characteristics.

It is clear that more attention is needed to ensure **affordability** of services for low-income households, for example through enhanced connection subsidies (which could be targeted by geographic area if a universal subsidy would place too heavy financing constraints on the utility). Subsidies should also be channelled to services which provide particularly for low-income households i.e. standpipes/kiosks and standalone schemes in peri-urban areas, particularly if these investments are geographically targeted in areas where the majority of users are likely to be poor. There is also a need for attention to other barriers to access. In Ghana, research in Obuasi revealed a heavily bureaucratic process involved in obtaining a connection and water quality problems, for example.

As for 'community-based selection', communities were short-listed for the CWSSP in Dar by DAWASA, local authority officials at city, municipal and district levels and a university professor (according to five criteria designed to identify low-income communities in need of better water services). This selection process was on behalf of the community, although not conducted directly by community leaders themselves. Community-based selection has been proposed as a possible future approach to determine eligibility for the first-time connection fund in Tanzania. This can be a sensible approach where hard data on incomes is lacking, but there are risks of capture and bias.

As Table 5.1 shows, one targeting method described in Section 1.7 (Table 1.3) which was clearly not found to be employed by any of the utilities in the case studies is 'Income-based means testing'. Means testing is unlikely to be workable in the three countries studied in the near future, due to the costs and complexity of collecting and maintaining accurate information, particularly where there are large unplanned/informal settlements, a mobile population and high levels of employment in the informal sector.

Key findings: Targeting and subsidies

The projects adopted partial geographic targeting of investments in new services to varying degrees. Stand-alone bulk schemes in Accra and Dar es Salaam were geographically targeted, as were kiosks in Dar. In Ghana, there was an attempt to target resources across the country according to need but not within towns. In no cities has a geographic targeting method for new investments been systematised or incorporated into standard utility practice.

Self-targeting through subsidy for a lifeline tariff is adopted in all projects, even though this method of targeting poor households has been repeatedly shown to be flawed. Indeed in Dar es Salaam, it is clear that the lifeline tariff alone is not succeeding in making household connections affordable to the poorest households.

Kiosk/standpipe subsidies are offered in all three countries as an alternative approach to self-targeting, but in two of the three countries (Ghana and Tanzania) water from standpipes remains more expensive than from a household connection.

Connection subsidies are offered in two of the three countries, but not in Ghana. In Burkina, these are universal. In Tanzania, they are targeted to middle- and low-income households in theory, but in practice have been universally applied under the DWSSP. In Burkina, a subsidy for household sanitation is also offered, with a menu of options of different prices, but there are concerns that none of the options may be affordable for the poorest.

Targeting of investments and subsidies is only one constraint to access to services by low-income households. Others include shortages of bulk water and low level of areal infrastructure coverage; without these, targeting will mean little.

5.4 Utility capacity and performance – including financial aspects

Alongside the projects' infrastructure goal, strengthening the performance and capacity of the utilities is central to the purpose of the projects studied, as clearly set out in the PADs. Combined, the infrastructure and utility capacity components have been allocated by far the largest share of project budgets.

In Burkina Faso, the ZIGA project saw a substantial turn around in the financial and operational management of ONEA, in terms of bill collection, reduction of unaccounted-for-water, staff productivity, and financial reporting (as described in Section 3.5). In Tanzania and Ghana,

institutional reform was part of the project design, as the projects introduced private operators (AVRL in Ghana and, initially, CityWater, subsequently DAWASCO, in Tanzania).

It is striking, however, that neither of the management/lease contracts with operators (AVRL in Ghana and DAWASCO in Tanzania), nor ONEA's performance contract in Burkina from 2007-2009, includes any 'pro-poor' obligations. This reflects **the designs of all four projects assessed by this research study which are skewed towards financial objectives, to the detriment of social aspects,** as discussed in section 5.5 which follows.

5.5 Policy principles to project implementation: how 'inclusion' is being lost or disregarded

Figure 5.1 is a schematic representation of what has been observed in relation to all four projects studied by this research project, namely that, in the translation of policy statements into utility plans/contracts, project design and ultimately project implementation, social aspects, in particular inclusion of low-income areas and households, have been lost or disregarded.

The **green** and **blue** arrows in the Figure show how aspects relating to utility capacity and performance (including financial matters), as well as infrastructure aspects (engineering and technology), are expressed in policy and are followed through into implementation. Progress has varied across the projects, but in each case policy goals relating to utility capacity and performance and water infrastructure have been reflected in targets in utility contracts and in the key performance indicators of the projects.

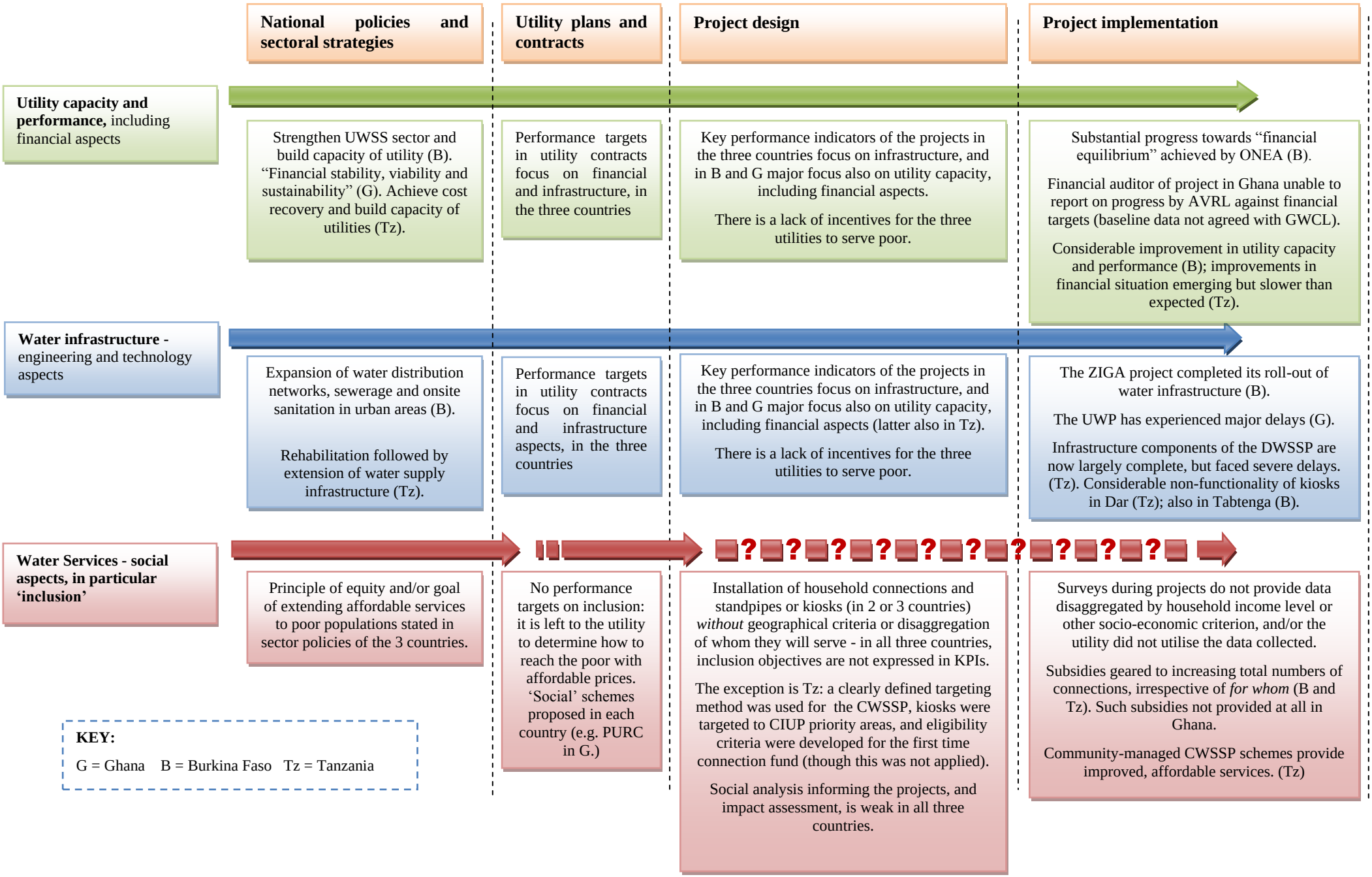
The same cannot be said of social aspects. The **red** arrow in the Figure is drawn in hatched form to represent the lack of performance targets and indicators on inclusion, in both utility performance contracts and project documents.

The exception, as noted in the Figure, is the clearly defined targeting method for the Community Water Supply and Sanitation Programme (CWSSP), one component of the project in Dar es Salaam (and the eligibility criteria for the First Time Connection Fund also in Dar, though they were not applied). The figure also illustrates that, when it comes to implementation, insufficient attention has been paid to targeting of low-income households.

In all three countries, **social analysis informing project design is weak.** Surveys carried out during projects did not provide data disaggregated by household income level, or another socio-economic criterion. In Burkina, data collected by consultants commissioned by ONEA *was* available, but was not utilised.

These are serious failings which, it is suggested, should be discussed between the utility, the World Bank and CSOs, and other sector actors, as part of the dialogue process referred to in section 1.2.

Figure 5.1. Policy principles to project implementation: how 'inclusion' is being lost or disregarded



5.6 Sustainability: prospects for sustainability of services for low-income households

The research also looked for indications of the prospects for **sustainability** of pro-poor services in the selected projects.

One of the main concerns, from the perspective of sustainability, is the lack of clear ownership by utilities of pro-poor services in any of the three cases studied.

In Ghana, it is the regulator which has become a champion of services for the poor, in the absence of clear commitment from the utility, Ghana Water Company Limited (GWCL) (e.g. GWCL is often absent from pro-poor policy discussions). The Urban Water Project in Ghana may have made an important contribution to sustainability to supporting the social policy developed by PURC.

In Tanzania, there is an unclear split of responsibilities between DAWASA and DAWASCO in terms of services to the poor, and while specific pro-poor activities have been implemented, a pro-poor approach is not mainstreamed into utility practice. The new Informal Settlements Department in DAWASCO may help to institutionalise pro-poor approaches, but this will depend upon the capacity of the unit (it is not yet fully staffed and its future resourcing is unclear) and the commitment of other sector actors. As with the proposed pro-poor unit in Ghana, it is too early to tell whether these will succeed in mainstreaming pro-poor services or will be donor-supported "add-ons".

In Burkina, the question arises whether the units within ONEA responsible for the new project (2009-2015) called 'DMOZ' (Direction de la Maîtrise d'Ouvrage de ZIGA) and DASS (*Direction de l'Assainissement*) will show leadership in producing or commissioning production of data on social aspects of populations in Ouagadougou and Bobo-Dioulasso, to update the survey conducted by OCEA/SOGREAH in 2007 (reported in ICEA/SOGREAH 2008).

The weaknesses already identified across all countries in information collection and utilisation, and hence opportunities for learning on pro-poor services, also threaten the sustainability of the projects.

In terms of pro-poor approaches which have been adopted, two of the three projects included the establishment of cross-subsidies, for water connections in Tanzania and for household sanitation in Burkina Faso. These are funded by a surcharge on water bills, and so could potentially provide a sustainable fund to support for low-income households.

However, the prospects for sustainability of the community-managed schemes established in Tanzania (and planned in Ghana) are more questionable. Technologically, the CWSSP schemes in Tanzania have been designed to be integrated into the main network in future. Questions arise as to the financial viability of such schemes, since some are already experiencing management problems and shortage of funds. It is possible that they may in future need external subsidies in order to continue to provide affordable water, particularly if large maintenance costs arise.

The weaknesses in targeting of kiosks/standpipes and associated problems with the services they provide, in all three countries, also raise concerns about sustainability.

In spite of problems encountered, the two projects which are completed or well advanced, the ZIGA project in Burkina Faso and the DWSSP project in Tanzania, have contributed to general improvements in infrastructure and utility capacity, which should help to ensure the sustainability of future services for low-income households. In Ghana, the Urban Water Project

aims to do the same. In themselves these improvements are necessary, but they are not sufficient, to build sustainable pro-poor services.

Key findings: Prospects for sustainability

There is a lack of ownership and championing of the pro-poor agenda by utilities in all cases.

The gap in data collection/use on services for low-income households means that there is currently little opportunity for learning on pro-poor approaches.

Two of the three countries use cross-subsidies to provide a sustainable source of funds for new connections to water (Tanzania) and sanitation (Burkina).

Pro-poor community schemes developed in Tanzania (and planned in Ghana) have been broadly successful, but show signs that they may not be financially sustainable over the long term without external support or subsidy.

Weaknesses in the targeting of kiosks and standpipes in Ghana, and implementation problems in Tanzania, have led to problems of under-use and inadequate water supply, and hence poor prospects of sustainability for many kiosks.

The more mature projects did, however, make a contribution to improving underlying infrastructure and utility capacity which will contribute to overall sustainability of services.

5.7 Accountability issues in the studied projects

The lack of monitoring arrangements for pro-poor services in all three countries/cities raises concerns about accountability, given that, as noted above, there is no overall strategy or plan for inclusion in any of the cities studied, no requirement for rigorous impact assessment, and a lack of indicators relating to social issues in both project documents and utility contracts. There is, therefore, no clear basis on which to hold utilities accountable for services provided to the poor.

The pro-poor approaches adopted by the regulator in Ghana, PURC, are promising in this regard, but there is still a need to develop specific pro-poor targets. In Tanzania, while the regulator, the Energy and Water Utilities Regulatory Authority (EWURA), expressed an interest in pro-poor dimensions, it does not currently collect any disaggregated information on service levels to poor households. If improvements are not monitored or measurable, there is a clear gap in accountability.

The evaluation report (World Bank, 2008) of the ZIGA project in Burkina Faso (the only project which was completed at the time of the research in 2009) reveals weaknesses in the monitoring by ONEA of inclusion and social dimensions. It seems no information was available to the evaluators as to where in Ouagadougou the new connections and standpipes had been installed by ZIGA.

The lack of reliable information on services and access for poor households also makes **accountability** difficult, and again this applies to all three countries. Data collected by the utilities in the three countries generally does not include any measure of household income or socio-economic status. This matches the observation by Marin (2009, p.134) that data from utilities are rarely organised by customer income category (see further under section 5.8).

There is also **a lack of transparency**. Information on where infrastructure and connections have been installed, for example, was not publicly available in any of the three countries (and not readily supplied to the researchers conducting the present study). The information which was provided by

different institutions was sometimes conflicting (in Tanzania), and some details turned out to be inaccurate when verified in the field (in Tanzania and Ghana).

As discussed in section 1.1.3, from the outset of projects, the process of discussion between governments and World Bank over project design (including the writing of the PADs) adds another dimension to the lack of transparency, as far as other actors and stakeholders are concerned.

Key findings: Accountability

There are no targets or indicators for pro-poor services in project agreements, utility plans or utility contracts. Broad policy statements are not a sufficient basis for monitoring and accountability.

Neither regulators nor World Bank evaluations have collected disaggregated data on services received by households of different wealth level (or other socio-economic characteristic) in the studied cities.

There is no mechanism for regulators to insist on services for low-income households, or for projects to demonstrate who has benefited from their investments.

There is a lack of transparency around project investments. Details of what investments had taken place, and where, was not readily available and information supplied by utilities was often conflicting or inaccurate.

5.8 IDA role: the significance of IDA support to the studied projects, including the terms of lending and on-granting.

5.8.1 The role of the Bank in negotiations with Government

All the projects considered in this study were chosen by the World Bank for support - IDA funding was approved - and the World Bank put its name to the project appraisal documents, thereby 'signing off' on the design of the projects as described in the PADs. The role of Bank staff in relation to project design, including their interactions with representatives of government, is discussed below.

The question arises: how far did Bank staff working on the PADs for the four projects seek to find, in practice, a balance between the goals of installing new water infrastructure and strengthening utility capacity on the one hand, and 'inclusion' - equity of access - on the other hand? Equity is emphasised in sector policies and strategies in all three countries, so, according to the principle of alignment under the Paris principles, Bank staff would have been justified in pursuing equity goals as much as goals of cost recovery.

There is some evidence of positive influence in Tanzania, where the incorporation of pro-poor components in design of the DWSSP is attributed to the World Bank's influence. As seen in Section 4, however, this support in principle does not seem to have been followed up with adequate guidance on how to target the poor most effectively. As noted in section 4.3, two important pro-poor elements of the DWSSP (kiosk provision and connection subsidies) were given low priority in implementation by the utilities.

The findings of the present study point to the need for more attention to be paid to inclusion issues in both design and implementation of the projects. Bank staff may usefully apply their authority and influence to this, to guide utility staff in selection and application of measures appropriate to each context.

As noted in Section 3, in relation to the ZIGA project in Burkina, the role of Bank staff seems to have been to support the sweeping characterisation by the utility, ONEA, that the service territory of the project was uniformly poor. The mapping exercise carried out by the research team in Burkina has refuted this suggestion that poverty in the peri-urban districts of Ouagadougou is, in some way, homogeneous, clearly showing that it is possible to identify levels of relative wealth and poverty, district by district, in the peri-urban sectors 14-30 of the city (using data from the 2006 census). **As noted in section 3.6, despite the extent of poverty in Burkina as a low-income country, it is not true - or at least not analytically useful - to say that the entire population of the peri-urban areas in sectors 14-30 of Ouagadougou (the 'service territory' referred in the above quote from the Bank's written comments) is 'poor'.**

This misleading picture of Ouagadougou meant that a key lesson of the ZIGA project was not learnt in the design of the new project, 2009-2015. Its focus is to increase the number of connections, and the surrounding areas are seen as comprising a source of new clients of the utility *irrespective* of differing levels of income - rather than (or more than) a focus on provision of affordable services for low-income households. The role of Bank staff in supporting the new project design surely extended to pointing out that a social objective which is stated to be a 'primary' goal of the project is reflected in the KPIs.

The present research study has, in particular, noted that, under all four projects, very **limited analysis** has taken place on the needs of low-income households, and there has been no attempt at poverty mapping, as far as the researchers could discover. The failure of the projects to collect and use disaggregated data has been noted in Sections 2, 3 and 4 of this report. **Box 5.3** reproduces extracts from the Accra Agenda, by which partner countries and donors commit to improvement of results management, including by disaggregation of data.

Box 5.3 Management for Results - including disaggregation of data, under Accra agenda

Delivering and Accounting for Development Results - para 22. We will be judged by the impacts that our collective efforts have on the lives of poor people…

We will focus on delivering results - para 23 - "We will improve our management for results by taking the following actions: a) developing countries will strengthen the quality of policy design, implementation and assessment by improving information systems, including, as appropriate, *disaggregating data by sex, region and socioeconomic status*; b) developing countries and donors will work together to develop cost-effective results management instruments to assess the impact of development policies and adjust them as necessary.

We will better coordinate and link the various sources of information, *including national statistical systems*, budgeting, planning, monitoring and country-led evaluations of policy performance" (emphasis added).

Source: Accra Agenda

The mapping exercise carried out by this research project in Burkina has applied data in the possession of the 'national statistical system' in Burkina (as referred to in the Box), but ONEA did not make use of that resource, and, as discussed in section 3.6, Bank staff did not guide ONEA staff in any analysis of differing levels of poverty in the peri-urban areas of Ouagadougou.

Despite the recommendation in the 2004 Operational Guidance to Bank staff (World Bank 2004b) that "diagnosis should form the starting point for formulating policies to address access and equity issues in the sector", as noted in section 5.5 in all three countries, **social analysis** *informing* project design is weak. The Operational Guidance could have usefully been applied by Bank staff in the contexts in Ghana, Burkina and Tanzania - but the case studies suggest that this has not been the case. Surveys conducted during projects either do not provide data disaggregated by household income level, or another socio-economic criterion, or when they were commissioned - as in Burkina and to a limited extent by DAWASA in Tanzania - the data gathered was not utilised. Subsidies are geared to increasing the number of household connections *irrespective* of for whom, and there is a lack of incentives for the three utilities to serve low-income households.

This suggests that the World Bank did not provide the necessary **strategic guidance or analysis** on how to design and deliver pro-poor services, and did not adequately translate the pro-poor elements into monitoring arrangements and utility contracts.

These are issues which, it is suggested, should be discussed between the utility, the World Bank and CSOs, and other sector actors, as part of the dialogue process referred to in section 1.2., in order to extend discussion of the challenges of UWSS to a broader policy community.

5.8.2 On-lending and on-granting

The predominantly financial, as compared with social, perspective, in project design - as shown in the PADs for the four projects - is illustrated by the descriptions of the terms of transmission of IDA funds to the project implementing agencies[96].

In all four cases, the IDA funds provided are transmitted by government to the water companies/utilities in the form of loan and grant.

The rationale for this is that activities which are not expected to generate income for the utility are on-granted, whereas finance for investment in project components which are expected to generate revenue, is on-lent. The loan element is regarded as an instrument of financial rigour for utilities, which are mandated to operate on commercial principles.

An example of a non-revenue generating element is the sanitation component of the new project in Burkina which is to receive a grant of US$ 24.44 million (World Bank 2009b, p.17).

In relation to the ZIGA project in Burkina, the PAD notes (World Bank 2001, p. 11-12):-

> "IDA's credit to ONEA will be on lent, partly in the form of a long-term loan and partly as *contribution to equity capital*, in order to maintain the conservative structure of ONEA's balance sheet. This will also limit the sector's interest expense and the impact on water tariffs. Agreements have been reached during negotiations that the Government will pass on to ONEA, on terms and conditions satisfactory to the Bank, an amount of US$42 million, in the form of equity contribution, and an amount of US$28 million as a loan with a maturity of 20 years, including 10 years of grace period for the principal, and at an annual interest rate of 5.4 percent" (emphasis added).

[96] For this purposes of the discussion below, the researchers carrying out the present study have not had access to the the subsidiary agreements between government and water companies/utilities in relation to any of the four projects, only the summary information in relation to on-lending/on-granting in the PADs.

The above equity contribution was made at a time (in 2000/01) when ONEA's financial condition was less robust than currently. The logic, however, remains - as applied by the financial experts, based on use of ONEA's "financial model" to test different scenarios - that the application of financial rigour should not over-extend the financial capacities of the utility[97]. The 2009 PAD notes that "the financial equilibrium of ONEA is quite sensitive to the financing conditions of the investment program" (World Bank 2009b, page 17).

So, a grant is made to ONEA for the new project, in an amount equivalent to half the IDA funds for the water component. Again, the PAD envisages a grant element, for both the water and sanitation components, but those subsidies are not targeted to a particular category of water or sanitation users (as far as is indicated by the PAD).

The 2009 PAD here could have added that certain elements of the water component (e.g. for standpipes) generate lower commercial revenues (than full cost recovery), but it does not. In the PADs of the four projects, the sections relating to 'on-lending' make no reference to different levels of revenue generation.

Yet, the grant elements provide opportunities to direct subsidies to 'social' water components, without imposing an extra burden on the government's treasury - by applying IDA funds. In order to deliver a subsidy to the low-income urban households who need it, one option would be for the governments which receive IDA funds to compensate the utility for all (or a specified proportion) of water sold through lower revenue-earning project components, e.g. the standpipes. This would remedy the current disincentive which operates to discourage utilities from investing in water infrastructure to serve lower revenue-earning components of the water economy.

5.8.3 Excessive optimism in project design?

A feature of both the Tanzania and Ghana projects, in different ways, was an excessive optimism in project design in relation to what the projects were expected to achieve. In Ghana, this relates in particular to the pro-poor ambitions of the UWP. Expectations of how far the project would, in the context and timeframe and ear-marked investment, improve pro-poor services were unrealistic, and there seems to have been a lack of awareness of the constraints faced. For example, the PAD acknowledges a risk that the utility would lack pro-poor awareness, but states that this could be overcome by training. However, it was later found that in practice basic training in financial and technical skills was required before any pro-poor training could be introduced.

In both Ghana and Tanzania, projections of utility performance were overrated. In Ghana, the economic analysis in the PAD bases the economic rate of return on improvements in revenue collection by Ghana Water, which have not materialised. In Tanzania, a comparison of DAWASA's actual financial position with the projections from the PAD shows that progress has been vastly slower than hoped. Staff from both the utilities and the World Bank agreed that the projections were too optimistic, and the project ICR confirms that the initial assumptions were not valid. However, it was these projections which informed the World Bank's decision to approve on-lending conditions agreed between the Ministry of Finance and DAWASA - conditions which World Bank staff now consider unmanageable for DAWASA.

[97] As discussed in Section 3, despite the subsequent turn-around of ONEA's finances, the 2009 PAD, page 14, noted that ONEA's debt service obligations could jeopardise its "financial equilibrium" and the report on "African Water Utilities: Regional Comparative Utility Creditworthiness Assessment" (WSP 2008) commented on ONEA's heavy debt service obligations. In Ghana, meanwhile, as noted in Section 2, the utility, GWCL, is in a very weak financial situation, unable to service debts.

Both cases suggest a lack of attention to serious underlying constraints in the sector **and gaps in social analysis** during project design, leading to unrealistic expectations in terms of project results. This may relate to pressures within the World Bank to process projects quickly through the design stage. These internal pressures in the World Bank have not been documented in this study, but the problem has previously been identified in the literature. According to Pincus (2001), for example: *"Given that the task manager wants the project… and the government needs the loan, it does not take long for an understanding to develop in which the shortcomings of existing projects are overlooked in exchange for a smooth path for new projects in the pipeline"*.

6 Conclusions and recommendations

This research project has assessed four urban water projects in sub-Saharan Africa which are supported by the International Development Association-IDA, from the perspective of 'inclusion' of low-income households, in accordance with principles of equity. One of the projects is just beginning and includes a sanitation component.

The conclusions from each study, carried out by researchers in the three countries - Ghana, Burkina Faso and Tanzania, focusing respectively on Accra (and one other urban centre in Ghana, Obuasi), Ouagadougou and Dar es Salaam - have been set out in Sections 2, 3 and 4 respectively of this report, as well as some recommendations in each case, with also a synthesis in Section 5.

The following is a summary of the conclusions from the three countries.

6.1 Conclusions

6.1.1 Water infrastructure

- The first priority of the projects in Ghana and Burkina has been to improve water supply infrastructure. In Burkina, the 'ZIGA' project (2001-2007) succeeded in increasing bulk water production for Ouagadougou threefold - sufficient to meet demand at current levels. In Ghana, five years into the Urban Water Project (UWP) (2004-2010), the bulk supply is fragile with frequent interruptions in supply. In Tanzania, the first task of the Dar es Salaam Water Supply and Sanitation Project (DWSSP) (2003-2010) was rehabilitation of infrastructure to increase water supply and reduce losses. In Dar es Salaam, despite the investments made in rehabilitation by the DWSSP, there is still an urgent need to tackle leakages and improve supply.

- As regards distribution networks, these have been extended in Ouagadougou, serving substantially more residents with connections and standpipes/kiosks, as well as in Dar es Salaam (although in Dar the majority of 'new' connections are in fact rehabilitated existing connections, and the service provided is severely limited in some areas by lack of adequate water supply). In Ghana, progress by the UWP in extending the piped supply network in the country's ten regions has been extensively delayed (in part due to slow procurement procedures). Delays have also occurred in Tanzania: capital works scheduled for completion in 2008 were in the end virtually concluded by an extended completion date of end 2010.

6.1.2 Utility capacity and performance, including financial management

- Alongside infrastructure objectives, strengthening of utility/operator[98] capacity and performance is central to the purpose of the projects studied, as clearly set out in the project appraisal documents-PADs. By far the largest share of project budgets has been allocated to the infrastructure and utility capacity components combined.

- In Burkina, the ZIGA project saw a substantial turn-around in the financial and operational management of ONEA, in terms of bill collection, reduction of unaccounted-for-water, staff productivity, and financial reporting. In Ghana and Tanzania, institutional reform was part of the project design - including introduction of private operators: Aqua Vitens Rand Limited

[98] The private operator in Ghana.

(AVRL) in Ghana and initially CityWater in Tanzania before the contract was terminated and operations were taken over by the state company, the Dar es Salaam Water Supply and Sewerage Corporation-DAWASCO.

- A design feature of all the projects - to different degrees - was excessive optimism in relation to what the utilities/operator could achieve in financial/capacity terms. In Tanzania, a comparison of DAWASA's actual financial position with the projections from the PAD shows that progress has been much slower than hoped, and both utility and Bank staff have now recognised that the financial and performance targets were too optimistic. In Burkina, despite the progress made by ONEA in strengthening its finances, the 2009 PAD (World Bank 2009b) and a recent independent report (commissioned by WSP) (WSP, 2008) nevertheless highlight ONEA's debt service obligations as a concern.

6.1.3 Water Services, including social aspects and particularly 'inclusion'

- Similarly, while the design of water services under each of the studied projects included goals of inclusion of low-income areas, expectations of how far each project would improve 'pro-poor' services for low-income households were unrealistic. Inclusion has been more difficult than the PADs seemed to anticipate, and sufficient incentives for provision of pro-poor services were not developed.

- Despite, in all three countries, national laws and/or policies and sectoral strategies which express the principle of provision of affordable services to low-income urban communities, neither Accra, nor Ouagadougou, nor Dar es Salaam has a city-wide strategy for inclusion of low-income households.

- Close reading of the PADs points to gaps and inconsistencies on social aspects. For example, statements of pro-poor goals in the PADs are not translated into quantifiable measures of impact for low-income households in the key performance indicators (KPIs). The attention to inclusion is, in all cases, weak compared with infrastructure and utility performance issues (particularly financial).

- It is left up to the utilities to determine how to reach poor households[99]. There is little incentive, however, for them to target low-income areas. Their contracts (including for the private operator in Ghana) focus on improving utility performance and achieving financial stability, measured by technical and financial indicators, without (in each case) any performance targets relating to social objectives. This confirms the bias towards financial aspects. The PADs present mixed messages on promotion of full cost recovery and pro-poor service delivery; the two are treated separately when in practice they should be interlinked.

- In Burkina and Tanzania, the projects have prioritised maximisation of new household connections, for revenue generation, irrespective of for whom. Under the UWP in Ghana, it appears that allocation criteria for regional investments failed to take account of distribution of water and income, and some wastage of resources resulted; overall, the funds of the UWP are spread thinly across the country.

[99] Other than, in Burkina under the 'ZIGA' project, the stated - but broad - objective of providing new water infrastructure and services in the peri-urban areas outside the centre of Ouagadougou which comprises seventeen districts (sectors 14-30) .

- Of the three projects, targeting was more developed in Tanzania. Here, a social connection fund was established to be targeted by household characteristics (although this has been little used to date and the criteria were problematic) and the Community Water Supply and Sanitation Programme-CWSSP schemes (part of the DWSSP) were targeted geographically in collaboration with a university and municipal councils (although this programme was allocated only 2.3% of the total project budget). Kiosks in networked areas were targeted to areas already identified as priorities for infrastructure upgrading under another World Bank-supported project. In Ghana, targeting according to welfare indicators guided the allocation of infrastructure investment, but the details of who, in the end, benefits from this infrastructure have not been specified. In Ouagadougou, beyond identification of the seventeen peri-urban districts outside the city centre (sectors 14-30), there is no evidence of a defined strategy for geographic targeting, at least from the perspective of inclusion of low-income households. Connection subsidies are offered to *all* residents in those districts.

- In Ghana and Tanzania, individual - and small - project components are engaging in focused efforts on targeting and these have recorded progress in achieving inclusion. In Ghana, pilot schemes in low-income communities, led by the regulator, PURC (Public Utilities Regulatory Commission), look set to bring significant benefits for poor households. In Dar es Salaam, the CWSSP has provided improved, affordable water supply to around 200,000 peri-urban residents outside the main network. However, these are not part of a city-wide pro-poor strategy in either case. In Burkina, the 'ZIGA' project extended the piped network and installed standpipes in peri-urban areas of the city. Low-income households in Ouagadougou have benefitted, but ONEA is not able to say how many. And, from the perspective of inclusion of poor households, its 'targeting' of peri-urban areas is patchy. The poverty mapping exercise conducted by this research study has highlighted targeting errors, both exclusion of low-income customers and inclusion of better-off households. Making available the connection subsidy to relatively wealthy households means unnecessarily lost revenue for ONEA. Where the poverty mapping conducted by this research project identified some distributional inequities in the ZIGA project's allocation of infrastructure/services, that mapping exercise suggests that, in future, such techniques can be applied/adapted to improve pro-poor targeting in project design.

- In both Ghana and Tanzania, processes to improve targeting were dropped following delays in the project, e.g. socio-economic surveys in Ghana and the application of the First Time Connection Fund in Tanzania.

- Network extension seems to be decided from an engineering and financial, rather than a social development, perspective; for households in peri-urban areas, standpipes and kiosks are important water sources, but in Dar and Ghana generally the price of water from standpipes/kiosks is more expensive than the networked tariff (in Ouagadougou also, when caretakers' margins are taken into account).

- It appears that none of the utilities organise their data by customer income category; in all three countries there is an information gap - a reflection of lack of capacity and little attention to analysis of the poverty of urban populations as it affects their affordable access to WSS.

- Overall, in the translation of policy statements into utility plans and contracts, project design and ultimately project implementation, inclusion of low-income areas and households has been lost or disregarded (**Figure 5.1** refers).

6.1.4 Sustainability

- The lack of clear ownership by the utilities/operator of pro-poor services in any of the three countries threatens the sustainability of the social components of the projects, as do the weaknesses already identified across all countries in information and transparency.

- Problems of functionality of standpipes are affecting access in areas where focus groups were convened as part of this research study (e.g. Tabtenga, Ouagadougou; Dar es Salaam).

- In spite of problems encountered, the two projects which are completed or well advanced, the ZIGA project in Burkina Faso and, to a lesser extent, the DWSSP project in Tanzania, has contributed to general improvements in infrastructure and utility capacity, which should help to ensure the sustainability of future services for low-income households.

6.1.5 Accountability

- There is a lack of strong ownership of pro-poor services by utilities. In Burkina, the 'social' elements were subsumed into the rest of ONEA's activities (the subsidy for household connection and the social tariff apply universally to all consumers). In Tanzania, although there is a special unit in DAWASCO, this is very new and pro-poor approaches have not been mainstreamed into utility practices. In Ghana, the champion of pro-poor issues is the regulator, PURC, with little apparent commitment from the utility (Ghana Water Company Limited) itself.

- The lack of monitoring arrangements for pro-poor services in all three countries/cities raises concerns about accountability, given that, as noted above, there is no overall strategy or plan for inclusion in any of the cities studied and a lack of indicators relating to social issues in either the project documents or utility contracts. There is, therefore, no clear basis on which to hold utilities accountable for services provided to the poor.

- In Tanzania, the CWSSP (as noted above, a component of the DWSSP) benefited from the involvement of municipal councils and NGOs experienced in community projects, and from a dedicated fund and management team in DAWASA. However, institutional responsibility for pro-poor services generally is much less clear.

- In Ghana, PURC is effectively left championing pro-poor pilots alone. In Burkina, ONEA has successfully increased the number of connected customers, without developing a pro-poor targeting strategy (beyond its approach which characterises all residents of the peri-urban areas as 'poor', in one homogeneous category). Yet, it is the utility/operator which needs to be the service provider, while the regulator (Ghana, Tanzania), or supervising ministry (Burkina), sets standards to hold the utility to account.

6.1.6 IDA role

- Without published information on the discussions between the World Bank and Government/utilities on project design in the three countries[100], the tenor of discussions during the writing of the PADs, including on pro-poor issues, was not generally visible to the

[100] As alluded to in Section 1.1.3, the researchers understand that, as from mid-2010, the 'aide memoires' written by Bank staff, reporting on missions to country, will be made publicly available.

researchers carrying out this study. This study has relied largely[101] on the PADs which record the position arrived at the conclusion of any such debate - the resulting project design. The researchers have additionally taken into account the written comments of the World Bank on the preliminary (July 2010) draft of the present report, but this was against the backdrop of the overall lack of transparency of the project discussions between the three governments and the World Bank (as referred to in section 1.1.3).

- An example of a position adopted in the negotiations between World Bank and Government has emerged from the key informant interviews in Tanzania, where incorporation of social components in the DWSSP is attributed to Bank staff - an example of influencing in favour of a pro-poor agenda. But, it seems this positive support in principle in Tanzania was not followed up with adequate guidance or supervision to ensure that low-income households gained real benefits. It is also clear that pro-poor goals were not the central ambition of the DWSSP; it seems, rather, that the World Bank sought to 'do something' for poor households as an add-on to the project.

- Despite the recommendations in the 2004 Operational Guidance to Bank staff (World Bank 2004b, in the section on 'Extending Services to the Poor'), the findings of the present study point to insufficient attention by Bank staff to inclusion issues in design, including "diagnosis of access and equity issues in the sector" (section 1.5.1 of the present report refers).

- It is clear from the written comments of the World Bank on the preliminary (July 2010) draft of this report that the Bank did not consider the lack of a strategy for targeting of low-income areas/households in Ouagadougou to be a design flaw. The view taken by Bank staff was that all the residents of the districts outside the centre of Ouagadougou were poor, so that there was no need to make specific provision for pro-poor targeting.

  As discussed in Section 3, this suggestion that poverty existed in the 'service territory' of the ZIGA project in a homogeneous form is surprising and misleading. The mapping exercise (referred to in section 6.1.3 above) carried out by the University of Ouagadougou and the National Institute of Statistics in Burkina (INSD) clearly shows that it is possible to identify levels of relative wealth and poverty, district by district, in Ouagadougou, using existing data (from the 2006 census) and this was echoed by the consultants hired by ONEA in 2007 (ICEA/SOGREAH 2008). Despite the extent of poverty in Burkina as a low-income country, it is not true - or at least not analytically useful - to say that the entire population of the peri-urban areas in sectors 14-30 of Ouagadougou (the service territory referred to in the Bank's written comments) is 'poor'. Those 17 sectors cover a large part of the territory occupied by Ouagadougou. A substantial part of east Ouagadougou, for example, is very poor; at the same time, not all districts beyond the central area are poor: two surrounding districts are relatively well-off, and two other outlying areas are in the intermediate category, while the remaining thirteen districts which received standpipes are poor or very poor - all as shown in the different colours on the map in Annex 5 (and discussed in section 3.6).

- As discussed in section 5.8.2, the IDA funding to two out of the three Governments (Burkina and Ghana) has been made available, in whole or part, as (non-reimbursable) grants. In all three countries, the IDA funds are transmitted to the utilities from the finance ministries in a

[101] The PADs, plus the Implementation Completion Reports (ICRs) of two projects (in Burkina and Tanzania), as well as the Mid-Term Review in Ghana (and two project meetings in Tanzania which stakeholders attended, without, however, participation of the World Bank).

combination of loan and grant elements. The loan elements are, it seems, intended as instruments of financial rigour - the PADs pay much attention to the financial models of the utilities and specify ambitious cost recovery targets for them. The grant elements of IDA funds to these projects provide opportunities to direct subsidies to 'social' water components, without imposing an extra burden on the government's treasury. This opens the way to design means of applying IDA funds, in order to deliver a subsidy to low-income urban households who need it.

- The IDA grant to the new project in Burkina, approved in 2009, will bring much needed investment in sanitation in Ouagadougou and Bobo-Dioulasso; the design of the sanitation component aims to offer a menu of in-site sanitation options at an affordable price; the subsidy currently envisaged is 60% of the cost of improved latrines. Based on previous ONEA experience in relation to subsidies for water supply, the level and targeting of that sanitation subsidy will need to be monitored closely (and supported by subsidy of 'software' elements). In each project, who is benefitting from a subsidy needs to be determined, to check for targeting errors (where poor households are missed out and/or more wealthy households included).

6.2 Recommendations

Based on the above conclusions, the following are recommendations to Government, utility/operator and World Bank in the three countries.

6.2.1 For the Governments and utilities/operators:-

- Given the key finding of this research study - that Government goals on service of low-income areas and households in accordance with principles of equity, as set out in national laws and/or policies and sectoral strategies in the three countries, are not being put into effect - **ministries responsible for urban water and sanitation need to commit to a process of sector review of social and 'inclusion' aspects** (inclusion of low-income households) alongside those of utility performance and engineering (without the current disconnects between the different aspects**) to include time-bound, suitably resourced, targets to which the service provider can be held accountable.**

- The sector review in each country should bring together the utility/operator, other service providers and water user associations, as well as Government and NGOs. Such collaborations, as part of broader policy communities - beyond just government representatives, donor staff/consultants and utility executives - would allow access to a broader pool of skills.

- Measures to be determined during this sector review include city-wide strategies for inclusion. More attention needs to be given to levels of affordability of low-income households, based on understanding of their constraints to access. For that, targeting approaches selected will need to be informed, actively, by analysis and collection of existing and new data. In Burkina, for example, ONEA has not been making use for inclusion purposes of the data which does exist in the hands of the national statistical agency, the INSD, and did not make use (again for inclusion purposes) of the socio-economic data produced by consultants commissioned by ONEA (the 20087 report of ICEA/SOGREAH).

- Means of incentivising utilities to serve low-income households will also need to be determined. To the extent utilities are not able to show that equity and cost recovery objectives are consistent within existing financial models, there should be reappraisal of financial targets and

design of specific Government-utility subsidies for delivery of targeted utility-customer subsidies.

- Government-utility contracts would need to be re-negotiated accordingly, incorporating targets and indicators relating to service of low-income households which are measurable, based on collection of data organised by customer income category. These targets in utility contracts should be matched, appropriately, in project performance indicators (KPIs).

- As to design of means of applying IDA funds in order to deliver a subsidy to the low-income urban households who need it - referred to in section 6.1 - one option would be for government to compensate the utility/operator for all (or a proportion) of water sold through lower-revenue earning water points, e.g. finance ministries making retrospective payments at agreed intervals. This would be a means of remedying the current disincentive which operates to discourage utilities from installing, for example, standpipes.

- In Burkina, a revision of the results framework as set out in the PAD of the 'new' project, 2009-2015 (World Bank 2009b), will be required to remedy the omission of KPIs for social/inclusion elements from monitoring and evaluation of that project. The same principle applies to future UWSS projects which may be developed in Ghana and Tanzania.

- Household surveys need to be formulated by utilities so as to collect information which allows comparison of levels of satisfaction expressed by households of different income levels - to specifically question households on how pricing policy is operating, in relation to connections (including subsidy of the connection price) and standpipes. Socio-economic analysis to inform pro-poor targeting should cover the aspects described in section 1.3.2.

- Flexible payment systems should be developed, for example weekly rather than monthly billing, to help overcome problems of non-payment faced in the past. Poor households can be viable customers for the utilities.

- Kiosks and standpipes should remain a central component of pro-poor services. Where they are not currently working well (e.g. in Dar es Salaam), they should not be de-prioritised, but rather a concerted effort should be made by the utility to, first, understand the real demand and, then, to bring as many viable kiosks/standpipes as possible into operation, particularly where the delay is due to management issues or delays in construction, rather than lack of bulk water, which can be resolved more quickly if given priority.

- Projections of utility performance need to be based on more realistic assessments of potential for progress, including detailed analysis of institutional constraints, especially where these are linked to the approval of on-lending arrangements. This would avoid a situation where over-optimism about a utility's financial position leads to unmanageable levels of debt when repayments of on-lent funds begin.

- In Burkina, given the widely recognised need to stimulate demand for sanitation, more information and communication activities need to be conducted by ONEA in peri-urban areas; under the new project, the focus will be on bringing this 'software' support to Ouagadougou and Bobo-Dioulasso.

- In Tanzania, further support should be given to the development of the young Consumer Consultative Council, in particular to ensure that it reflects the priorities of low-income

households by including representation from low-income groups (e.g. kiosk users, not just networked customers) and publicising public meetings appropriately.

- Further, in Tanzania, DAWASA's efforts to extend and learn from the CWSSP, to improve the effectiveness and sustainability of future similar community initiatives, should be supported. The CWSSP in Dar es Salaam, as well as the PURC-led pro-poor pilots in Ghana, indicate that small scale interventions can be effective in reaching target populations. These efforts must be carefully monitored, evaluated and scaled up to become mainstream policy. This would require coordination with NGOs and municipal authorities already engaged in developing community WSS projects, to ensure equitable targeting of investments and lesson-learning from existing experience.

- Greater transparency and availability of information on project progress and impacts is required so that civil society can hold utilities/service providers and donors to account.

- As alluded in section 6.1, the roles of regulators and service providers will need clarification, so as to support the above measures to tackle the challenges of extension of affordable services to low-income households.

6.2.2 For the World Bank

- The sector review process in each country (referred to in section 6.2.1) should be supported by the World Bank - as well as other development partners contributing to UWSS.

- The World Bank should encourage and support sector institutions to develop strategic and systematic approaches to serving low-income households across cities, going beyond the design of specific components, in order to incoporate them into city-wide strategies for inclusion. This is an opportunity for positive influencing. Bank staff may apply their authority (bestowed on them by the institutional standing of the Bank and its financing capacity) to guide utility staff in selection and application of measures appropriate to each context. The World Bank is in a position to draw on its wide experience in other countries, its convening power, and its access to expertise, in order to support governments and utilities in the development of such new approaches (although 'one-size-fits-all approaches' should be avoided, as pro-poor strategies need to correspond to local conditions).

- Development of those approaches will require resources to be made available by the World Bank for the carrying out of socio-economic analyses to inform pro-poor targeting. The most sophisticated targeting methods, such as income-based means testing, are expensive. In these cities, the key will be to find indicators of poverty which are as meaningful as possible, but not prohibitively costly to apply, e.g. the poverty mapping approach suggested in the Burkina case study which may, for example, be combined with targeting by household characteristics. Greater levels of sophistication can then be developed in future, as appropriate.

- The World Bank should take the steps necessary to apply its own 2004 Operational Guide (World Bank, 2004b) on 'Extending Services to the Poor', both at the project design stage and in relation to project implementation. More support by Bank staff and more resources are required to help the utilities/operators to work out how to deliver services to low-income households in the circumstances of each city (i.e. not accepting sweeping generalisations by utilities to the effect that poverty across broad peri-urban areas of a city is somehow homogeneous).

- World Bank staff should ensure that statements of pro-poor goals in PADs are expressed in quantifiable measures of impact for low-income households in project KPIs, so as to mainstream inclusion in project designs (matching, appropriately, inclusion targets in Government-Utility contracts).

- The World Bank may usefully review the financial performance targets applied to the utilities/operators under these and future IDA-supported projects in the three countries. The purpose of this exercise will be to arrive at a better balance between financial and social/pro-poor goals, so that reaching low-income areas and households is at least as important as cost-recovery. For this, projections of utility performance need to be based on more realistic assessments of potential for progress.

- As for design of means to apply IDA funds for delivery of a subsidy to low-income urban households who need it (section 6.2.1 refers), the World Bank can usefully support governments in developing the option of compensation of utilities/operators for all (or a proportion) of water sold through lower-revenue earning water points, e.g. the scheme referred to above, whereby finance ministries would make retrospective payments at agreed intervals, as a means of remedying the current disincentive which operates to discourage utilities from installing, for example, standpipes.

- In Ghana and Tanzania, a clear finding from this research is the vulnerable financial state of the water utilities and the weak state of infrastructure. These two dimensions have been the focus of donor efforts to improve services and the extent of support required is extensive. Donors need to be prepared to stay for the long haul, but must not neglect provision of services for poor populations in the short term on the basis that improvements to overall infrastructure and utility performance must come first.

- In line with the Accra Agenda, the World Bank should work with the Governments in the three countries to strengthen management for results under the projects, and particularly pro-poor impacts, through socio-economically disaggregated data on water users and service levels.

- The need for greater transparency and availability of information relating to project progress and project impacts, for accountability purposes, as referred to in section 6.2.1, applies equally to the World Bank.

- The above steps would serve to confirm the role of IDA finance in providing support to low-income countries which achieves extension of UWSS service to low-income areas and households.

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Annexes

Annex 1 Water for Life (W4L)

W4L is a charitable foundation established by Dutch water companies Vitens and Evides where customers in the Netherlands can contribute to social projects. They have projects in Vietnam, Mozambique, Yemen, Mongolia and Ghana. With the financial support from Water for Life, AVRL undertakes social projects in Ghana. AVRL manages the funds in Ghana for projects independent of its management contract. By the end of 2008, two W4L projects had been completed, one in the Brong-Ahafo Region and one in Central Region (where 11 villages along the major water transportation pipeline were connected) for a total amount of almost €200,000 These two projects supply water to an estimated 20,000 people. W4L has since 2007 approved seven projects in Ghana for a total amount of GHC1.04 million to provide water to about 50,000 people (Water for Life, 2009).

In Teshie, a poor district of Accra, W4L has provided €110,000 for the construction of eight water kiosks, a dedicated water tanker and establishment and training of a Water Board. About 8,000 residents in Teshie are benefiting from this intervention. The sustainability of this project is threatened by the high operating cost of the water tanker and other operational bottlenecks (interview with member of the Teshie Water Board). This is a serendipitous side effect of the UWP but is in no way part of the project itself in terms of inclusion in project design or implementation. The speed with which W4L has managed to establish new connections compared with the laborious process of the UWP is in large part due to the fact that as an NGO, there are no requirements to follow official procedures.

Annex 2 Analysis of Allocation of UWP Funds across regions in Ghana

Application of Criterion for Distributing Investments across all Regions

Region	Area Km2	Population 2000	Urban Population				Economic Factor			Service Coverage			Parallel Investments				Weighted Factor	Funds Available for Investment		Budget for FYIP	Balance for SYIP
			% of Tot	Nos	Factor	N-Factor	Hl/capita Cedis	Factor	N-Factor	% of pop	Factor	N-Factor	$ mil	$/capita	Factor	N-Factor		Estimated	TOR		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Western	23,921	1,916,748	34.9	668,836	0.26	0.08	568,000	0.36	0.07	54.9	0.48	0.08	0.0	0.03	1.038	0.6057	0.21	15,160,198	9,291,310	-	15,160,198
Central	9,826	1,593,868	37.1	591,525	0.23	0.07	444,000	0.46	0.09	61.5	0.43	0.07	146.1	247.04	0.000	0.0001	0.06	4,230,765	4,690,790	-	4,230,765
Geater Accra	3,245	2,903,753	87.4	2,538,221	1.00	0.31	932,000	0.22	0.04	86.3	0.30	0.05	301.9	118.90	0.000	0.0001	0.10	7,264,824	6,686,652	2,900,000	4,364,824
Volta	20,570	1,630,254	26.6	434,455	0.17	0.05	527,000	0.39	0.07	47.9	0.55	0.10	0.0	0.04	0.674	0.3894	0.15	11,126,035	6,583,557	-	11,126,035
Eastern	19,323	2,101,650	34.7	729,918	0.29	0.09	415,000	0.50	0.09	51.2	0.51	0.09	126.7	173.54	0.000	0.0001	0.07	4,915,372	6,860,172	-	4,915,372
Ashanti	24,389	3,600,358	53.2	1,914,953	0.75	0.23	622,000	0.33	0.06	57.5	0.46	0.08	119.9	62.63	0.000	0.0003	0.09	6,761,748	7,866,953	3,900,000	2,861,748
Brong Ahafo	39,557	1,798,058	37.4	671,710	0.26	0.08	548,000	0.38	0.07	39.1	0.67	0.12	156.0	232.24	0.000	0.0001	0.07	4,874,213	6,422,872	-	4,874,213
Northern	70,383	1,805,429	27.0	487,993	0.19	0.06	210,000	0.98	0.19	35.0	0.75	0.13	70.9	145.24	0.000	0.0001	0.09	6,798,985	7,307,436	-	6,798,985
Upper East	8,842	919,549	15.1	138,174	0.05	0.02	321,000	0.64	0.12	44.8	0.58	0.10	61.0	436.30	0.000	0.0000	0.06	4,354,344	7,487,751	-	4,354,344
Upper West	18,478	575,579	17.5	100,851	0.04	0.01	296,000	1.00	0.19	26.2	1.00	0.17	62.1	615.31	0.000	0.0000	0.09	6,811,316	9,122,506	-	6,811,316
All Regions	**238,534**	**18,845,266**	**43.9**	**8,278,636**	**3.26**	**1.00**	**527,000**	**5.26**	**1.00**	**56.5**	**5.72**	**1.00**	**1,044.6**		1.714	**1.000**	**1.00**	**72,300,000**	**72,300,000**	**6,800,000**	**65,500,000**

Source: Tahal Consulting Engineering, August 2009.

Annex 3 Survey of Performance by AVRL in Ghana

The table below indicates contrasting findings in relation to the performance of AVRL in connection with the targets of the Management Contract, according to presentations at the mid-term review in August 2009.

Indicator	AVRL	GWCL Position
New connections (add at least 50,000 new connections or standpipes)	Annual average growth of 5%; 37, 532 household connections and 712 public standpipes had been established since June 2006	GWCL agrees there has been increases in connections but this cannot wholly be attributed to AVRL's intervention
GWCL operations in the 5 largest cities meet 100% of their cash obligations from collected revenues	AVRL reported an improving cost to income ratio in the 5 largest cities	GWCL has reservations on the computation of operating cost because it does not include AVRL's management fee.
Water production	Increased production from 211.7mm3 in 2006 to 222.6mm3 in 2008	GWCL attributes increase in production to expansion works in Central and Northern regions
Non-revenue water (Target of 45% and 40% respectively was set for 2007 and 2008)	52.3% in 2007 and 51.7% in 2008 recorded.	Non revenue water higher than targets set for 2007 and 2008.
Water sold	Increased from 100.1mm3 in 2006 to 107.6mm3 in 2008	Based on targets for 2007 and 2008, there were shortfalls of 13.4% and 20.2% respectively.
Revenue collection ratio	Annual billing and collection ratio was 95% in 2006, 89.6% in 2007 and 90.7% in 2008	Performance is lower than 100% target. The increases in revenue collected were significantly influenced by an upward adjustment of tariff implemented in the 4th quarter of 2007
Chemical cost	Despite rising cost of chemicals, there has been significant reduction in the chemical cost used in treating a m3 of water	GWCL acknowledges this achievement
Energy consumption	Energy cost of producing a m3 of water has also reduced	GWCL acknowledges this achievement

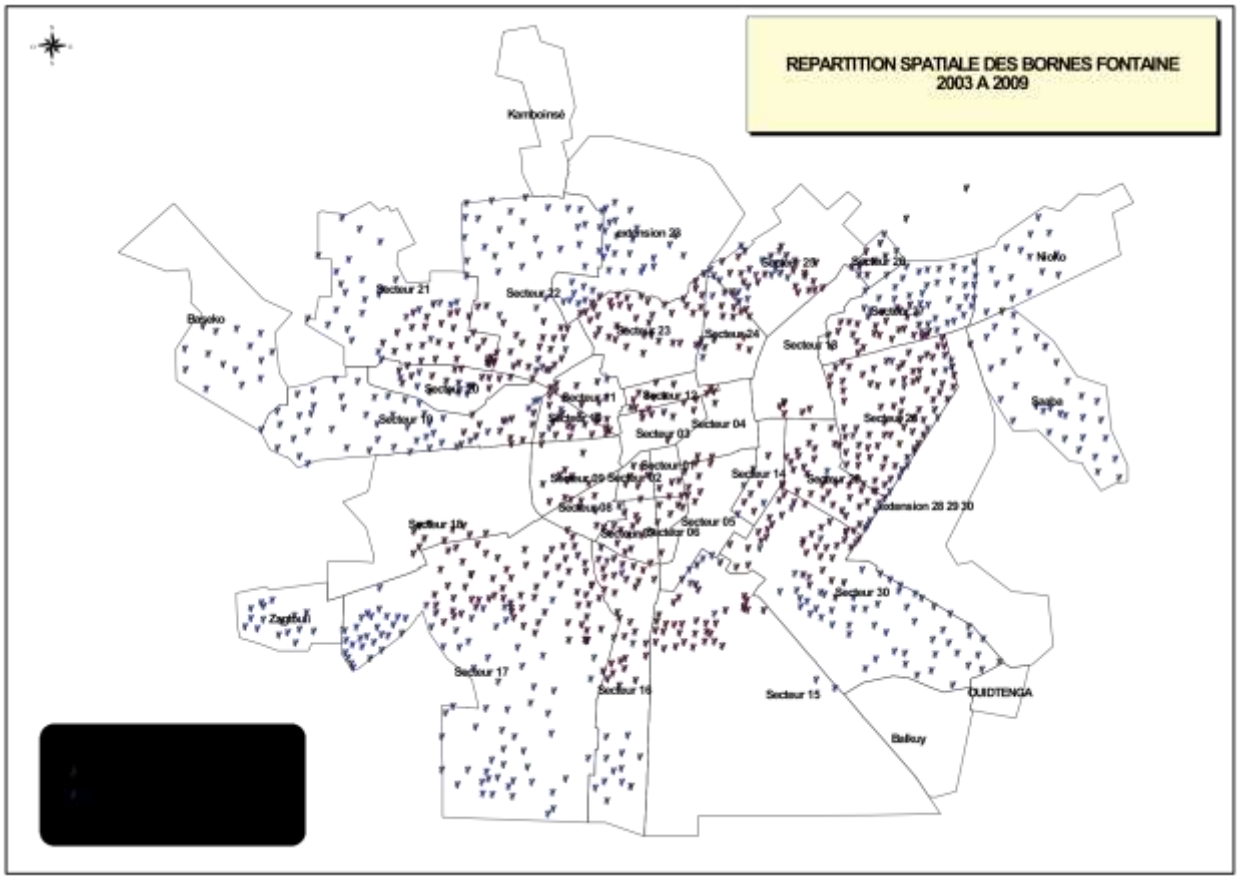
Source: Presentation by AVRL

Annex 4. Spatial distribution of standpipes in Ouagadougou up to 2009

This **Map 1.** on the 'Spatial distribution of standpipes ('*répartition spatiale des bornes fontaines'*) in Ouagadougou up to 2009, was supplied to the researchers by ONEA.

It shows, against the background of the sectors of the city of Ouagadougou (numbered 1-30) and named towns around it, the spatial distribution of standpipes ('*répartition spatiale des bornes fontaines'*) up to 2009.

Those standpipes installed before 2003 are marked in **red**, and those constructed between 2003 and 2009 are marked in **blue**.



Annex 5 Map of Poverty levels in Ouagadougou, and siting of standpipes

Map 2. is based on information on poverty levels in different parts of Ouagadougou, taken with the help of the National Institute of Statistics (INSD), from the 2006 census which constitutes the most recent available information for calculating the poverty indices of the city[102].

The sectors of the city of Ouagadougou are numbered and 'villages' around it named.

The areas coloured in green and dark green are respectively the poor and poorest areas surrounding the central sectors of the city which are coloured in beige to red (the darker the more wealthy).

Areas well covered by water infrastructure ("*couverture* > 80%") are marked in wide hatching and areas "not equipped" ("*zone non-équippée*") with narrow hatching – according to this preliminary mapping exercise which, as noted in Section 3.5, can usefully be developed and refined.

The places where focus groups were conducted as reported in this report are marked with a star.

[102] The mode of calculation of the poverty index of each sector is simple: the number of poor persons per sector is divided by the total population (Wetta and Fofona, 2010). So, in a given sector, if the number of poor is (to make the example simple) 20 persons out of a total of 100 persons in the sector, the poverty index is 20 percent.

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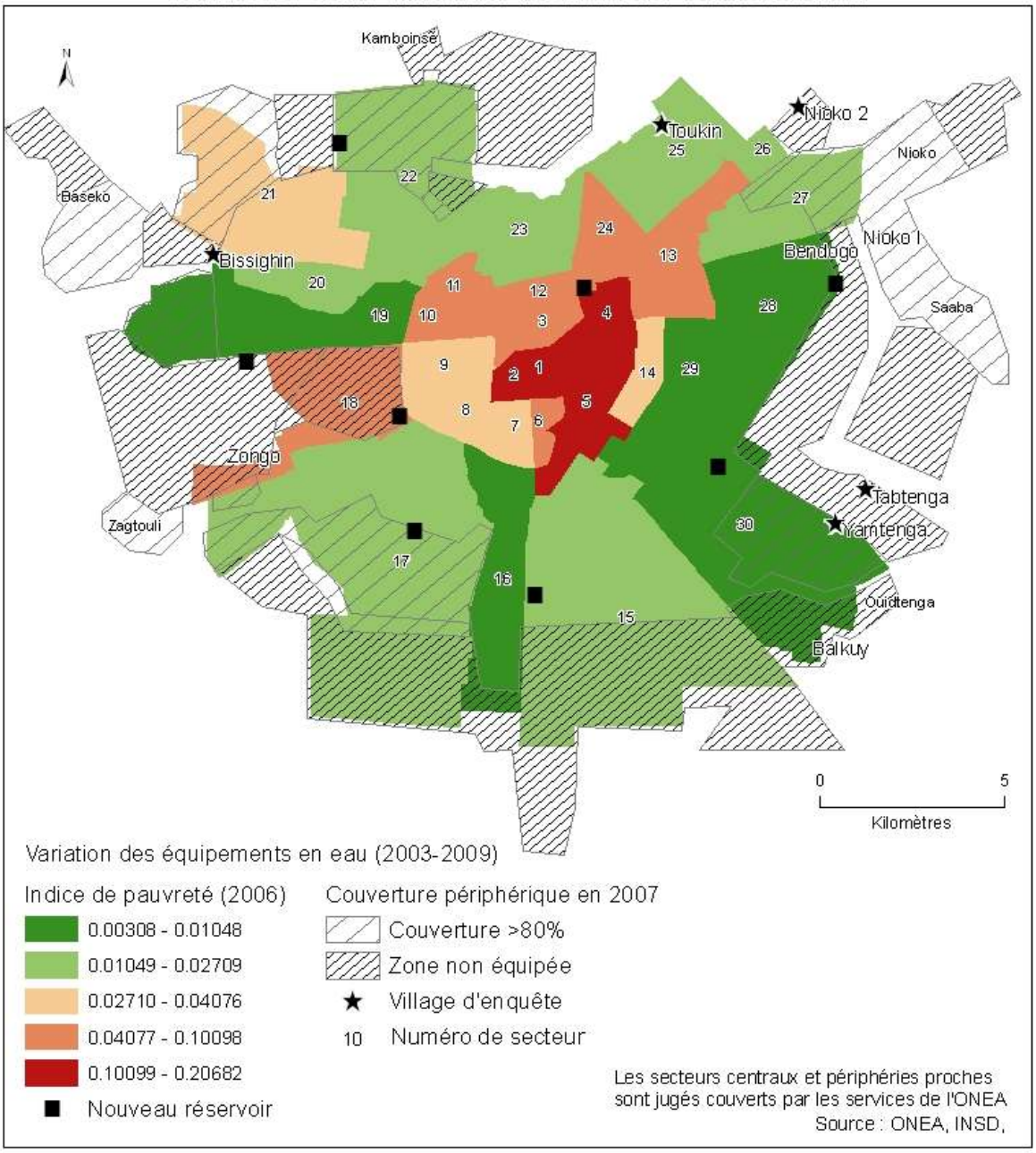
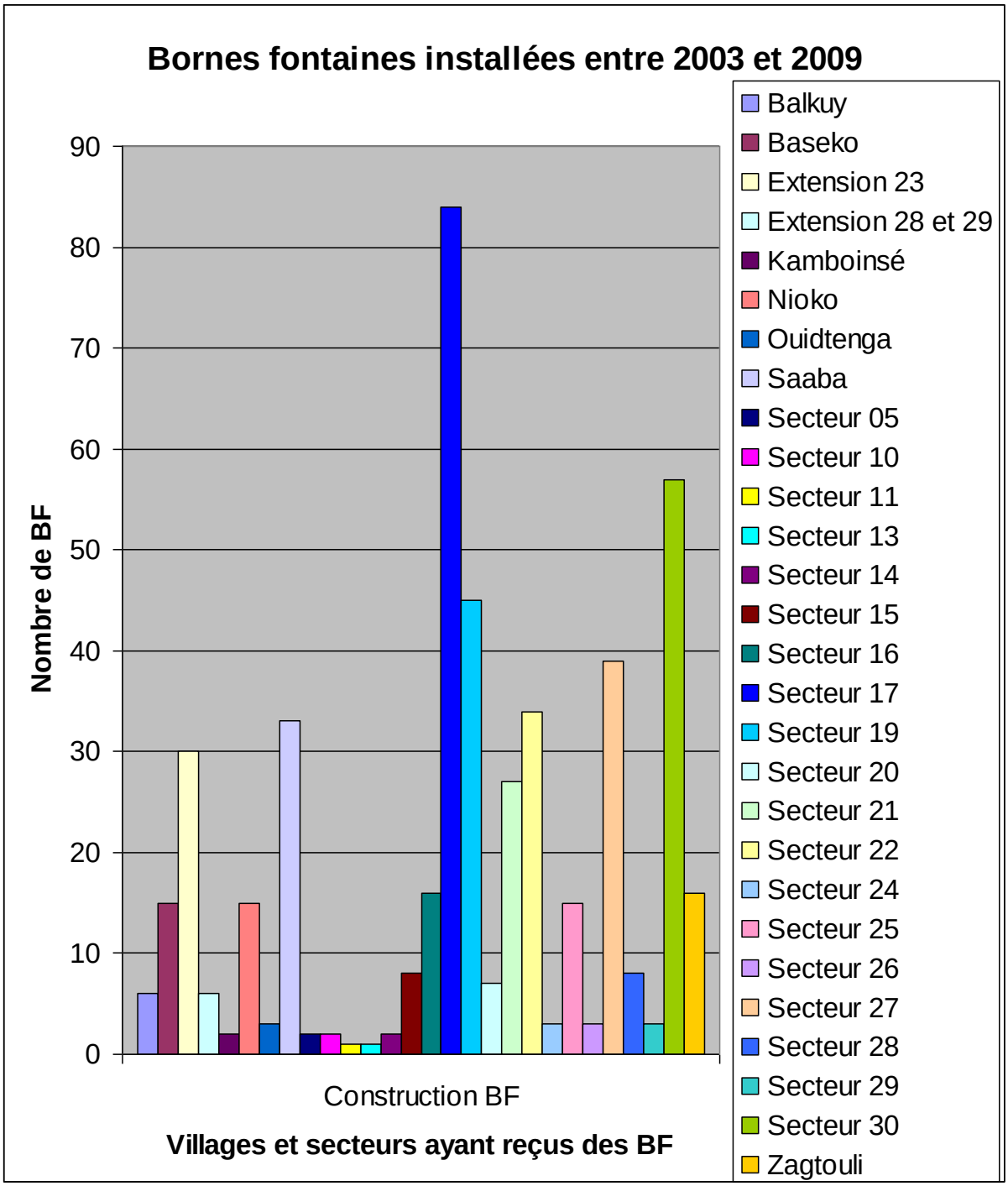
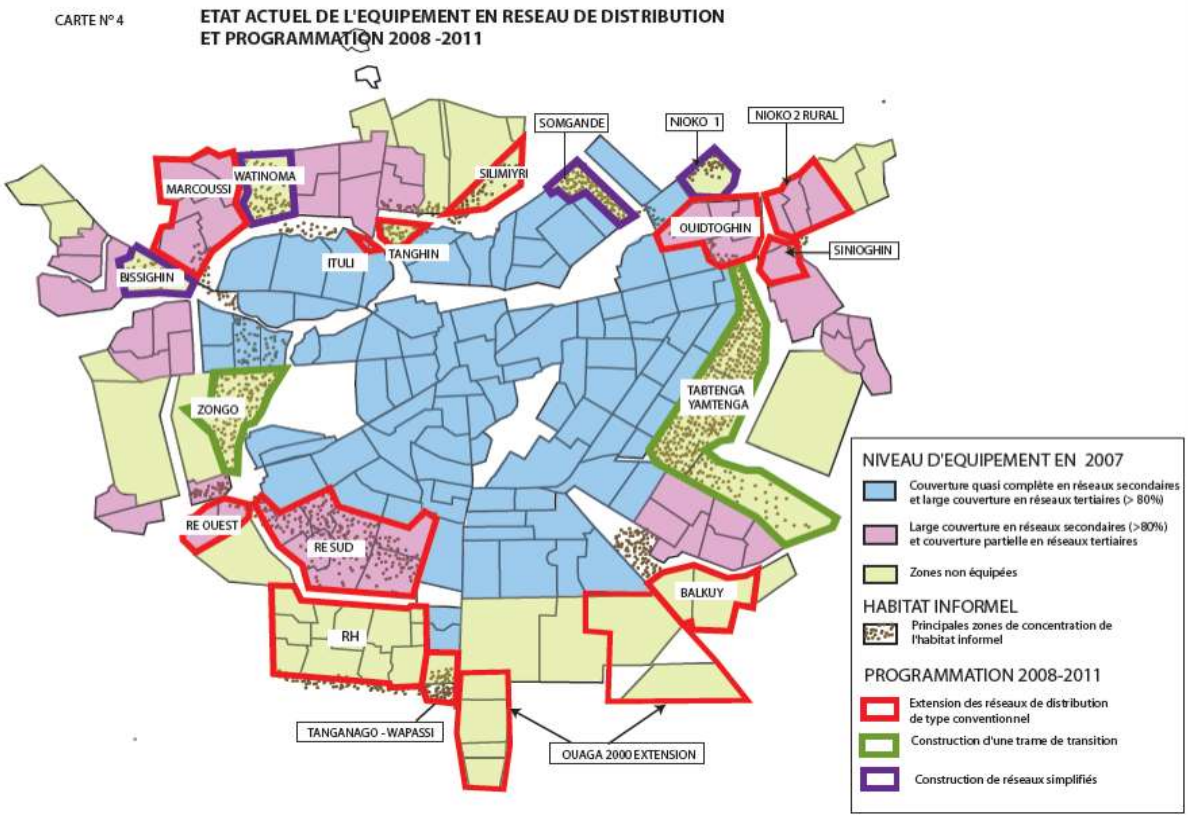


Annex 6. Standpipes installed in the districts ('sectors') of Ouagadougou, and its surrounding villages, between 2003 and 2009 - as per information supplied by ONEA



Annex 7 Map of the Water distribution network in Ouagadougou - actual status and planned extension 2008-2011



Annex 8 Components of the Dar es Salaam Water Supply and Sanitation Project - DWSSP

- **Component 1:** The rehabilitation and extension of water supply services: This was to involve rehabilitation of production facilities, rehabilitation of transmission mains and services, rehabilitation of primary distribution mains, and rehabilitation of secondary and tertiary distribution mains.

- **Component 2:** The rehabilitation and extension of wastewater facilities: This component was to involve rehabilitation of existing sewers and construction of new ones, rehabilitation of waste water pumping stations, stabilisation plants, and an existing ocean outfall.

- **Component 3:** The Community Water Supply and Sanitation Program: This was to involve the support in terms of grants by DAWASA to 50 beneficiary communities for water projects based on point source or bulk supply from the main network. The objective is to provide a minimum service to low income communities that may not immediately be served by piped water network. The project was also to support on-site sanitation facilities. DAWASA was to implement this component with assistance of specialized NGOs in supporting communities in formulating grant requests, implementing WSS projects and building capacity for post construction management.

- **Component 4:** The institutional strengthening program: This was to includes (a) an assistance to the Operator to help finance its initial operating costs; (b) technical assistance to DAWASA: engineering, financial, legal, assets revaluation, audits, communication, environmental monitoring, independent assessments of the institutional framework and activities aimed at the prevention of HIV/AIDS; (c) training of DAWASA and MoWI staff, (d) operational equipment and repairs of emergency nature to be financed by DAWASA under the Lease Contract; and (e) technical assistance to the Wami/Ruvu Basin Office. DAWASA was to implement all components; MoWI was to supervise component (e).

- **Component 5:** Preparation of a medium term WSS development program: This component was to support a series of studies aimed at preparing the medium term capital works programme.

Extract from World Bank (2003) DWSSP Project Appraisal Document (PAD)

Annex 9 Key Performance Indicators of the Dar es Salaam Water and Sewerage Corporation - DAWASCO

- Drinking water quality leaving water treatment plant / borehole source
- Drinking water quality in distribution
- Effluent quality
- Customer meter installation
- New water supply customers
- Transmission main losses
- Water distribution losses
- Collection efficiency
- Service pipe repairs and mains up to and including 100mm diameter
- Repair of mains above 100mm diameter and up to and including 300mm diameter
- Repair of mains above 300mm diameter and up to and including 600mm diameter
- Repair of mains above 600mm diameter
- Repair time
- Data collection
- Percentage of customers receiving less than 5m pressure at the tap
- Percentage of customers receiving less than 10m pressure at the tap

Source: Lease Contract between DAWASA and DAWASCO, 2005.

Annex 10 - Summary of information relating to the projects studied

	Ghana: **Urban Water Project** **2004-2010**	**Burkina Faso:** **Ouagadougou Water Supply Project ("ZIGA") 2001-2007**	**Burkina Faso:** **Urban Water Sector Project** **2009-2015**	**Tanzania:** **Dar es Salaam Water Supply and Sanitation Project 2003-2009**
Project objectives	To (i) significantly increase access to the piped water system in Ghana's urban centres, with an emphasis on improving access, affordability and service reliability to the urban poor; (ii) restoring GWCL's long term financial stability, viability & sustainability"	"To increase access to adequate and reliable potable water in Ouagadougou through expansion of distribution and tertiary water networks and improvement of urban water sub-sector management"	To increase access to sustainable water and sanitation services in selected urban areas". Consolidate achievements of the reform of the urban water supply sub-sector and strengthening of capacities to deliver and manage services".	To provide a "reliable, affordable and sustainable water supply service and improve the sewerage and sanitation in the "Service Area" of DAWASA"
Project value (US$) & IDA contribution	120million (IDA contribution 103m)	205.88million (IDA contribution 70m)	92.92million (IDA contribution 80m)	164.6million (IDA contribution 61.5m)
Project components and value in US$	System expansion and rehabilitation (91.8m) Public-private partnership development (6.5m) Capacity building and project management (7.7m) Severance program (11m)	Resettlement & mitigation plan (11.55m) Dam construction (27.64m) Boudtenga storage facility, delivery system & transmission main (26.83m) Treatment plant (20.51m) Primary network (20.77m) Reservoir & pumping station (24.55m) Secondary & tertiary networks (47.06m) Domestic connections equipment: 1.62m Power supply line (2.24m) Unallocated & refinancing (3.71m)	Urban water supply in four urban centres (52.78m) (Ouagadougou 13,33m) Urban sanitation in Ouagadougou and Bobo-Dioulasso (35.56m) (Ouagadougou 18.11m) Institutional support and capacity building (3.93m) Environmental and social management (0.64m)	Rehabilitation and extension of water supply facilities (106.05m) Rehabilitation and extension of wastewater facilities (22.4m) Community water supply and sanitation program (3.85m) Institutional strengthening program (25m) Preparation of a medium-term WSS development program (6.15m)
Main infrastructure elements	First Year Investment Programme of US$17m for minor works; Subsequent Year Investment Progamme of US$70m for individual water supply systems, extension of water production, transmission and distribution works, to be distributed across 10 Ghana regions. Repair, Replacement and Rehabilitation Fund, originally US$5m, increased with additional donor funding to US$12m to be managed by the operator	Construction of new storage and bulk water production facilities and transmission main to Ouagadougou (50km) Construction of distribution and tertiary networks within Ouagadougou with installation of connections and standposts	Expansion of water distribution networks, installation of connections and standpipes in Ouagadougou and three other urban centres Expansion of bulk water production and storage capacity in other cities (not Ouagadougou) Construction of household and school sanitation facilities in Ouagadougou and Bobo-Dioulasso (e.g. 18,000 household latrines in Ouagadougou)	Rehabilitation of water supply infrastructure to increase bulk supply and reduce losses Network extension and new connections
Main institutional elements	Public-private partnership development Training and technical assistance	Capacity building of ONEA in technical, commercial, administrative and financial management, to move to "financial equilibrium" (PAD, p7-8)	Improve reliability, accountability and customer management Improve staff skills Assess performance and visibility of ONEA	Separation of functions: asset holder and operator (private 2003-5, now public following contract termination) Technical assistance and training:

	Ghana: Urban Water Project 2004-2010	**Burkina Faso: Ouagadougou Water Supply Project ("ZIGA") 2001-2007**	**Burkina Faso: Urban Water Sector Project 2009-2015**	**Tanzania: Dar es Salaam Water Supply and Sanitation Project 2003-2009**
		Introduction of a service contract to "strengthen ONEA's commercial, accounting and financial operations"	to households Review suitability of access options proposed	engineering, financial, legal, asset management, audit, communications, environmental monitoring.
Financing arrangements	IDA grant to GoG Portion on-lent to GWCL (terms not available to researchers)	IDA concessional loan to GoB; maturity 20 years with grace period of 10 years; GoB on-grant to ONEA of US$ 42m ("contribution to equity capital in cash") GoB on-loan to ONEA of US$ 28m; maturity of 20 years with 10 years grace period for the principal - PAD p.50)	IDA grant to GoB. GoB on-grant to ONEA of US$ 25.87m (half of total IDA funds for water supply component) GoB on-loan to ONEA of US$ 26.87m (half of total IDA funds for water supply component) GoB on-grant of US$ 24.4m for (all) sanitation component.	IDA credit to GoT: 40 year term; 10 year grace period; annual interest rate GoT on-grant to DAWASA of funds for all consulting services and 60% of infrastructure construction GoT on-loan to DAWASA of funds for 40% of infrastructure construction; 15 year term; 5 years grace period; interest rate 11.5%
Outcome/ Impact key performance indicators	Urban centres receiving civil works add at least 50,000 new connections or standposts GWCL in the five largest cities meet 100% of their cash obligations from collected revenues 2 well-targeted pro-poor programmes are put in place by PURC.	Increased water reliability (24 hours per day) Population connected to the water network from 300,000 inhabitants to 800,000 inhabitants in 2007 Recovery rate from private customers from 86% in 2000 to 92% at the end of 2004 and 95% thereafter Accounts receivable of private customers from 160 days to less than 120 days at the end of 2004 and to 90 days in 2006 Productivity of commercial staff from 186 to 230 in Ouagadougou at the end of 2006 and thereafter Financial statements prepared according to international standards (on time and certified for year 2002).	Percentage of population having access to safe water in Ouagadougou, Bobo-Dioulasso, Koudougou and Dédougou Percentage of population having access to adequate sanitation services in Ouagadougou and Bobo-Dioulasso Additional individuals in the project having access to improved water sources through household connections and standpipes Additional individuals in the project area having access to improved onsite sanitation facilities Additional students in the project area have access to adequate sanitation in their schools Financial equilibrium of the urban water sector maintained with the implementation of an agreed tariff policy based on cost recovery Ratio of ONEA's water employees per 1,000 connections Bill collection ratio of private water customers.	70% of customers obtain 24 hour water supply service under adequate pressure 100% of water samples taken meet the water quality standards specified in the Lease contract 80% of sewage collected is treated and 95% of effluent samples meet specified standards A life-line tariff for domestic customers is fully implemented Revenues from water and sewerage services cover all operations and maintenance and allow for a 10% contribution to the construction costs of the project.