Introduction and reflection on benchmarking for the delivery of water and sanitation services to the urban poor

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Abstract: A dedicated benchmarking system to assess the availability of water supply and sanitation services for the urban poor will be explained. These services require the involvement of the utility and a host of other stakeholders, such as national and local government, a regulator, NGOs or CBOs and the slum dwellers themselves. Distributional justice arguments can be used to justify the development of systems for providing to the poor. The dedicated system covers both drinking water supply and sanitation, and emphasises and assesses the involvement and contributions by all stakeholders. It considers piped and non-piped drinking water and sanitation solutions, the mix of which often characterises the reality in the slums and the urban periphery of Third World countries. The lessons from the PROBE research project on this topic will be summarised. These comprise the need for the right policy and institutional environment, the provision of financial and other incentives to reach the poor, the involvement and collaboration of multiple stakeholders in mobilising the local resources, and the availability of a set of organisational, financial and technical tools with the concerned utility. When all these requirements are fulfilled there is a good chance to achieve the MDGs and SDGs in water and sanitation.

Keywords: performance measurement; benchmarking; stakeholders; pro-poor service delivery; drinking water; sanitation; non-piped solutions.

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1 Introduction

Benchmarking in the water sector has been practised since the 1990s. Hundreds of indicators have been developed to guide water utilities in their benchmarking exercises. However, these indicators mostly support the benchmarking of water and sanitation services in developed economies where the users have (near) universal access to piped water supply and sanitation and where the challenges are mostly with finance and efficiency, drinking water and effluent quality, customer satisfaction and environmental impact. The related indicators are important but unable to respond to the benchmarking needs in less developed economies where the utilities are challenged to provide services to large groups of poor customers who depend on shared or otherwise unimproved water and sanitation services.

The pro-poor benchmarking (PROBE) project carried out by UNESCO-IHE with support of The Netherlands Ministry of Development Cooperation developed a supplementary benchmarking framework with five perspectives and thirteen indicators that incorporates the common approaches, systems and technologies for the provision of water and sanitation services to the poor. The details will be presented in the paper of Murungi and Blokland below.

A significant number of indicators have been suggested in different benchmarking projects to help water utilities to improve their performance (performance benchmarking). These benchmarking exercises are generally not very context (developing countries) and issue (reaching the poor) specific however. Benchmarking in the water supply and sanitation sector has been promoted by international and sector organisations, academics and experts. It is usually considered a tool for improving the performance of water utilities. Research has been undertaken concerning the modalities and impact of benchmarking in developed countries (see Diaz and Blokland below). Also in developing countries, benchmarking is considered important for improving the performance of the water sector (contributions 5 to 11 in this special issue). Developed countries may help to develop specific performance indicators, and promote measures such as pro-poor legislation, regulation, policies, programs, technologies, tariff systems and subsidies.

Most benchmarking studies are limited by focusing on finance and efficiency, product quality, etc., and few if any assess if water supply and sanitation services are reaching the poor, let alone what the quality of these services is. The absence of pro-poor assessments in a global context where hundreds of millions lack adequate water and sanitation services is also indicative of a very low level of international and local exchange of experiences with pro-poor strategies, processes and practices for water and sanitation services. Pro-poor benchmarking can be a relatively low-cost tool to visualise the poor quality of services to the poor and to help the concerned stakeholders to improve their performance.

2 Why benchmarking pro-poor service delivery?

One specific problem area in the framework of poverty reduction is the provision of water and sanitation services to the urban poor. Many utilities have great difficulty to provide effective and sustainable service coverage to the people who live in slums and peri-urban areas. A comprehensive overview of measures to remedy this is not available.

The PROBE project, the framework in which most of the papers in this special issue have been produced, considers benchmarking as a tool to promote achievement of the millennium development (MDG) target no. 7 and its successors: Halve, by 2015, the proportion of the population without sustainable access to safe drinking water and basic sanitation. This target requires a focus on the expansion of services in slums as this is where most of the urban unserved live. The need for efficient and effective service delivery to the urban poor is clear and recognised by many governments, donor organisations and civil society. The PROBE project seeks to expand research on pro-poor benchmarking by specifically incorporating in benchmarking systems the dimension of service provision to the poor in the urban and peri-urban areas (and thus linking it to MDG 7, targets 10 and 11). Facilitation of services to the urban poor requires an integrated approach by the stakeholders including the political and institutional resolve to supply services to the poor, appropriate technologies such as water kiosks, public stand posts, public and multi-family latrines, etc., innovative financial arrangements directed at affordable water tariffs and connection fees, mobilisation of micro-credit, etc., and the necessary institutional arrangements including among others the collaboration of utilities with small scale private providers, and community self-help schemes. Benchmarks can be developed that measure the degree of readiness of utilities and other stakeholders to enable the provision of services to the poor and the actual provision of services to this group, including a workable definition of the poor. The PROBE project seeks to develop an inclusive methodology, different perspectives and indicators that enable a benchmarking exercise that focuses on water and sanitation services for the poor whilst considering the national and local contexts and all relevant stakeholders.

Bromley (1995) puts this issue in terms of moving away from a supply-side approach (utilities selling water) to a demand-driven solution where the expressed needs and role of the poor are taken into consideration. In philosophical terms this means a shift away from the state using a welfare approach (based on a distributive justice framework; Sen, 2009) to a procedural justice, or fairness framework. Such a framework adopts a policy aiming at more efficient allocation of scarce resources (such as water and sanitation for the poor) through the use of market prices and organisational incentives.

3 Benchmarking in the water supply and sanitation sector

Benchmarking in the water supply and sanitation sector is a tool for performance improvement and allows us to compare and enhance the performance of water utilities and the sector as a whole. The objective of benchmarking may not only be to enhance performance and efficiency, but also to improve transparency and accountability, and to support strategic planning. The tool can be applied by water utilities on a voluntary basis and can be mandated by a regulator as one tool to promote performance improvement for improved services delivery.

This topic can be applied to any type of organisation in the water sector, e.g., in water and/or wastewater utilities, water boards and river basin organisations. Benchmarking dates from the 1970s and has been applied to the water sector since the 1990s, with the first IWA guidelines being published in the early 2000s. With that, the water and wastewater utilities have a somewhat longer benchmarking history than water boards and river basin organisations where a start has been made only recently and where there are no universally accepted guidelines yet.

The performance of a water organisation can be measured by means of a series of indicators that cover the strategic, financial, technical, innovative, administrative and other areas of the operations. Performance can be compared in time, against standards or norms, across units in one water agency, across different water sector organisations or with organisations in other sectors (e.g., energy, telecoms). This comparison is called *performance assessment*: it shows how an organisation performs relative to its peer group, prevailing norms or historically. When we introduce the analysis of the processes that shape the value of the indicator we enter into the area of *performance improvement*, i.e., to select, compare, study, analyse, re-model and improve a (number of) proces(ses) in an area where performance improvement is needed. There are many other performance measurement models and some of them are discussed in the paper of Nalwoga and van Dijk below.

Benchmarking in the water supply and sanitation sector has been heavily promoted in the past decade by international development organisations, sector agencies, academics and sector experts. The reason for promoting benchmarking is that it is seen as an important tool to help improve the performance of a water utility. Considerable research has been undertaken regarding the impact of benchmarking. Analyses by different academics found that the Dutch benchmarking exercise, for example, resulted in a 'markedly improved' performance (De Witte and Saal, 2010; Braadbaart, 2007), that it increased efficiency by more than 20% (De Witte and Dijkgraaf, 2008; Schmitz and Dane, 2008) and that it enhanced transparency (Braadbaart, 2007). Also in developing countries, benchmarking has been seen as leading to improved performance (Berg, 2007; Corton and Berg, 2008; Mugisha, 2007).

4 Pro-poor benchmarking

Although these studies suggest that benchmarking is a powerful tool to improve performance, the tool as it is currently often used does have its limitations. Firstly, most benchmarking exercises and studies appear limited in their focus (focusing on efficiency and service provision to existing customers) and do not take into account service provision to the poor in (peri) urban areas. As a result, much of the existing research (Mugisha, 2007; RIONED, 2010) tries to establish how efficient utility operations are. Although benchmarking has shown to increase water operator efficiency, these benchmarking exercises may leave aside questions of operator effectiveness, in particular those around equitable service delivery. Conventional benchmarking does not distinguish domestic customer groups. Where this is done, the evidence shows that the richest are two to four times more likely to have access to improved services than the poorest (WHO/UNICEF, 2010). Secondly, performance of water utilities is often very much context-specific, and even more so across countries. Legislation and accompanying measures supporting pro-poor services in one country may not be present elsewhere.

Benchmarking exercises often do not reflect on this context-specificity even though contextual indicators do exist. In the PROBE project, these limitations were addressed by researching the underlying assumptions and methods used in the existing benchmarking exercises. PROBE's goal was to propose improvements to existing benchmarking systems and provide insights into leading pro-poor practices, thus allowing a much stronger focus on service provision to the slums and on the context-specificity of service provision.

The research looked beyond the coverage figures to discover why some water operators achieve their goals for services provision to the poor and others do not, thereby focusing on benchmarking as a low-cost tool to distinguish the variability in approaches used by the various operators and their stakeholders. The research focused on a number of areas considered to be of major importance for water utilities to achieve service provision to the poor:

1 the enabling political, institutional, legal and regulatory environment
2 the organisations that play a key role in providing pro-poor services including also the slum dwellers
3 the incentives, both internal and external for operators to provide services for the poor
4 the utility business processes (best practices) for the realisation of pro-poor services provision
5 the identification and testing of indicators that are specific for pro-poor services provision and that cover all key actors

The related research questions were:

1 Who are the relevant stakeholders and what are their contributions to the provision of services to the urban poor?
2 Which collaborative frameworks, approaches and tools are used by water operators and other stakeholders to promote, enable and provide pro-poor services?
3 What are the tools and practices in use by water operators to improve water and sanitation services to the poor?
4 Which perspectives and indicators are best suited
   - to measure the stakeholder's contribution to the realisation of services provision to the poor
   - to assess operator's capacity to provide services to the poor?
5 Which performance indicators are best suited to measure the actual status of water and sanitation services that are being accessed by the poor?

The research was executed through a number of case studies in developing countries across three continents (Africa, Asia and South America), with different national, sector and utility-level characteristics to obtain a good spread in the variables, and also related the benchmarking experiences in the industrialised economies of North Western Europe. Supporting literature studies were carried out in the areas of incentives in support of

operator performance, (pro-poor) benchmarking, and the provision of water and sanitation services to the poor.

The MDGs have formulated quantitative goals for the improvement of water and sanitation services coverage. The joint monitoring program of the WHO/UNICEF (2008) that regularly reports on coverage finds that the expansion of water supply services is generally on track whilst sanitation is lagging much behind. Nearly all those that are un-served are disadvantaged, poor people in the urban and rural areas in developing countries, particularly in Asia and Sub-Saharan Africa.

Benchmarking is increasingly being adopted in the water supply and sanitation sector as a tool for improving the performance of water utilities. Currently, however, this tool does not adequately reflect performance of service provision to the poor in (peri) urban slum areas. By addressing this gap, the tool of benchmarking should be better able to monitor the creation of conditions for and the actual service provision in slum areas and, as such, promote and thus contribute to the achievement of the MDG targets 10 and 11.

The objective of the research is to find out under which conditions and in which form benchmarking can be used by various stakeholders (governments, regulators, operators, NGOs/CBOs, communities) as an effective and efficient tool to identify and implement objectives and activities in support of national, sector and/or utility policies that aim to provide water and sanitation services to the poor.

The research focused on defining and testing benchmarking systems that covers the array of measures that facilitate sustainable access to improved services for the poor. These measures may be of a legal, institutional, organisational, technical, or financial nature.

5 Lessons learned

In terms of understanding the institutional dynamics of pro-poor water and sanitation services provision the project has taught us that:

1 The achievement of services provision to the urban poor requires inputs and collaboration of a variety of stakeholders. Each stakeholder contributes to the provision of services and this contribution needs to be assessed accordingly, i.e., on a set of stakeholder-specific inputs and related indicators and variables.

2 The institutional and organisational arrangements for the provision of services to the poor vary between water and sanitation and from one country to the other. A pro-poor assessment framework needs to be flexible so that it can take into account the contributions by the various stakeholders, distinguish between water and sanitation sector and be made context specific.

3 Water operators are encouraged by their local and national governments and in some cases by regulators to provide improved services in slum areas and to account for their performance in this area. In the development and implementation of these services, water operators increasingly work with poor communities, often assisted by local government, NGOs and CBOs.

4 In many countries, water operators are being tasked to take up a central role in the provision of water services to the urban poor and some operators have developed an array of institutional, organisational, financial and technical tools for that purpose.

Also, the conventional mandate for urban water operators to provide sewerage services in central business districts only is slowly but surely being expanded to include sanitation services for the whole of the designated supply area including the slums. Name changes from 'water and sewerage' authority to 'water and sanitation' authorities are heralding the expanded mandate.

The insights that have accumulated during the project on benchmarking for pro-poor services provision, can best be summarised as follows:

1 Pro-poor services cannot be arranged for and provided on any large scale by a single actor. An array of actors needs to collaborate whereby each actor has a specific role to play and a dedicated contribution to make.

2 The role of government, be it national or local and sometimes assisted by a regulator, is to create the conditions for pro-poor services through policies, strategies, legislation, financial mechanisms, incentives and accountability systems; very often, these government bodies need to develop their own capacity to effectively execute a pro-poor agenda.

3 The role of the water operator is to develop and provide services to slum dwellers, on its own or in collaboration with NGOs, CBOs, small scale providers or combinations of these. The operators need to develop an array of institutional, organisational, financial and technical tools for that purpose, and often need to orient and develop their staff to take a more profound and effective interest in the provision of services to poor people and slum inhabitants.

4 NGOs, CBOs and small scale providers can and do often play an important role in connecting water operators with the slum dwellers. They have the experience of working in informal settlements with transient populations, their leaders, the landlords, the informal entrepreneurs and know better how to deal with the absence of formality regarding the availability of land and infrastructure, and how to resolve the inevitable issues that come up around community participation, landownership, etc., when planning for water and sanitation infrastructure.

5 A number of dedicated perspectives or focal areas for pro-poor benchmarking are required to bring out if and how the array of actors and factors are playing their role in the provision of services to the urban poor. The PROBE project defined five perspectives, as follows:

- policies, arrangements and capabilities with three indicators
- collaboration with three indicators
- tools with four indicators
- sustainability with one indicator
- quality of services with two indicators.

The first four perspectives cover the policies, strategies, legislation and capacities and the array of tools and instruments that are to be available with the various actors in support of pro-poor services provision. The last perspective comprises the prevailing access to and the quality of water and sanitation services in the slums.

6 Two important findings came out during the research period that required an adaptation of the assessment framework. One was that to obtain a more precise picture it was better to assess water separately from sanitation, for all indicators. The second one was that in the collaboration perspective one indicator on community leadership and outreach in the slum communities was added to supplement those on inter-agency collaboration and community involvement and participation.

7 The value of the 13 indicators is assessed using 62 variables for water and 66 for sanitation. The variables for 11 indicators are of a qualitative nature and for two indicators – the quality of service indicators – they are quantitative.

8 The resulting assessment framework was field tested in seven African countries by resident alumni of the UNESCO-IHE Institute for Water Education. For the purpose of informing these alumni and for ensuring a uniform approach to the implementation of the pro-poor assessment, a fieldwork manual was prepared by the PROBE project. Subsequent to the field testing the fieldwork manual was revised with the experiences of the alumni. The manual is an operational tool that will soon be publicly available for use by each person or organisation who wishes to engage with the assessment of pro-poor water and sanitation services.

6 Overview of the special issue

The topic of benchmarking has been well established as a topic of scientific research as illustrated by the existence of an international journal (*Benchmarking: an International Journal*) on the topic. In the water supply and sanitation sector, however, much existing scientific research focuses on the efficiency and effectiveness of utilities without taking into account the peri-urban areas (which are often not supplied by these utilities). Focus is on indicators such as non-revenue water, labour productivity, operational costs, services coverage in the designated supply area, etc. In this special issue we would like to focus on the following topics:

1 the experiences with benchmarking by utilities and other stakeholders and their relevance for application to the provision of services for the poor

2 the pro-poor benchmarking framework that was developed and tested by the PROBE project

3 the analysis of current practices by utilities and other organisations, such as donors, NGOs and CBOs to provide water and sanitation services to the poor, often not using the piped drinking water or sewer system

4 the role of all stakeholders, including governments and regulators in promoting access to improved services by the poor

5 the lessons learned from very diverse experiences in countries in Africa, Asia and Latin America.

We focused on the provision of improved water and sanitation services to the population of slums and peri-urban areas. The papers cover performance assessment and benchmarking practices, a tested framework for pro-poor benchmarking, and case studies which show how the various stakeholders, i.e., the (local) government, the regulator, the

provider, the NGOs/CBOs and the slum dwellers act and interact in the area of pro-poor services provision.

The first paper after this introduction by Nalwoga and van Dijk reviews existing organisational performance measurement models. Performance management has been recognised as a key component of good governance and of the government's capacity to deliver services, a criterion used to define failed states (Collier, 2007). In the management literature a lot has been written about organisational performance measurement. The question asked is to what extent these organisational performance measurement models can also be used as an instrument for assessing poverty alleviation through appropriate service delivery. It is concluded that a sector and context specific approach is needed.

Subsequently, Diaz and Blokland review in the third paper voluntary water utility benchmarking experiences in Europe in an effort to learn some lessons that can be of use when developing a pro-poor benchmarking system for developing countries. The paper discusses the European Benchmarking Cooperation (EBC) and the Dutch National benchmarking program. The EBC has piloted voluntary water supply benchmarking across various countries and utilities in Europe since 2004. The system is characterised by low costs and the confidentiality of its knowledge exchange activities and results. The Dutch benchmarking exercise dates back to 1997 and is characterised by moderate costs, transparency of process, publication of the results and proven efficiency improvements. Both systems have in fact been quite successful in achieving their main objective of providing a learning platform for participating water utilities. The replication and adaptation of (elements of) these two systems for use in other, notably developing countries is considered feasible if the design of such system responds to a number of specific questions. These concern the objectives and scope of benchmarking including the choice for confidentiality or transparency; the availability and reliability of data; the desired profundity of the exercise and the auditing requirements; the specific challenges in water supply and the related focal areas selected for benchmarking; the local technical and socio-cultural characteristics that may impact on the effectiveness of the program; and finally, the cost of the program. Finally, in an environment that is not used to or even somewhat suspicious of information and data sharing, the starting up of a benchmarking program may be incentivised by a parallel program of capacity building and infrastructure investments aiming to achieve specific performance improvement.

In the fourth paper, Murungi and Blokland propose an assessment framework for benchmarking for the poor in the water and sanitation sector. They argue that conventional benchmarking exercises mostly concern the benchmarking of water and sanitation services in developed economies where beneficiaries have (near) universal access to piped water supply and sanitation. This locks out the assessment and exchange of strategies, processes and practices for water and sanitation services in less developed economies where utilities are challenged to improve services to major groups of poor customers who depend on shared or otherwise unimproved water and sanitation services. The PROBE project has developed a supplementary benchmarking framework with five perspectives and 13 indicators that incorporates the common approaches, systems and technologies for water and sanitation services provision to the poor. Information for establishing indicator values is obtained from secondary sources, focus group discussions, interviews, questionnaires and observation methods. Each one of the 13 indicators is made up of a number of items with each item having a given number of

variables (mostly four) that support data collection. In total, there are 62 and 66 variables for water and sanitation respectively. To ease usage of the framework and improve comparison of results, a field manual has been developed to guide investigators with the collection and processing of data and the preparation of the single matrix that summarises the result of the assessment. The framework has been tested in seven African countries and the results have shown its ability to assess multi-actor performance on specific aspects of enabling the provision of water and sanitation services to the poor as well as the actual quality of these services. One key challenge in the application of the emerging framework is the scoring system for obtaining indicator values which still needs to be further developed to improve consistency in data analysis and the comparability of findings.

In the fifth paper, van Dijk argues that benchmarking sanitation for the poor has to take the real sanitary problems in the slums of Kampala as the point of departure. The paper assesses how different stakeholders can be involved in such an exercise. International aid often overlooks the conditions and needs of urban slum dwellers, while NGOs and CBOs may be closer to the people in the slums. Aid tends to be allocated to the rehabilitation and expansion of centralised sanitation solutions. To be effective in urban low-income areas, international aid should be directed to the specific sanitary conditions of the urban poor and include them in the project planning and execution. The paper stresses the importance of involving all stakeholders, looking at non-piped solutions and the points of view and problems of poor people.

Information about the effects of different efforts to cater for the sanitary needs of the poor is often missing. A key issue in the slums of Kampala is that people resort to pit latrines for their sanitary needs, but neglect maintenance and emptying of the pits. This leads to important environmental problems. The latrines are not emptied because it is too expensive with the current technology (lorries). This is also considered the problem of the landlords, who are not willing to pay for it. It is a challenge to address the sanitation crisis in un-sewered slum areas in African mega cities, such as Kampala, in an integrated way, since many of the initiatives come from the stakeholders themselves.

In the following paper, Murungi and Blokland provide an assessment of the tools and ‘leading practices’ in use by the National Water and Sewerage Corporation (NWSC) in Uganda to improve water and sanitation services in the slums of Kampala, the capital. The study focuses on identifying and describing those tools and practices, studying their impact and the challenges faced during their implementation. The tools identified include organisational tools such as a dedicated pro-poor corporate strategy, establishment of a pro-poor branch (PPB), incentive systems; financial tools focusing both on tariffs and connection fees; a pro-poor mapping tool; and technical tools such as pre-paid meters and communal sanitation facilities. Some of the key challenges faced include limited staff capacity at the PPB, diverging interests between the PPB and commercial branches, limitations in identifying the poor, the transient nature of slum dwellers that continuously renders mapping data inaccurate, the recent addition of 42 towns to NWSC’s mandate that will challenge the cross subsidisation concept, the high cost and frequent malfunctioning of the prepaid water meters and poor management of the communal sanitation facilities. Some of the key impacts include the development of a pro-poor tariff, increased access by the poor to water and sanitation services, reduction in water wastage especially for pre-paid meter users, reduced risks of arrears and bad debts. Pro-poor initiatives and impacts are more evident in drinking water supply than in sanitation. This disparity calls for the need to accelerate the development of specific

pro-poor sanitation strategies, approaches and tools. The paper shows what a utility can do itself and how effective different pro-poor tools are.

In the seventh paper, Attari and van Dijk study the transition in Iran from subsidising public services to providing income transfers through a case study in the City of Mashad. Iran has followed a different approach of dealing with water supply for poor people. The emphasis is no more on subsidies, but on income supplements. The question studied is: what are the effects for poor people of shifting to income supplement schemes? To facilitate provision of water services for the urban poor, many developing countries have established subsidies for water, electricity, etc. In Iran, these services also used to be provided at heavily subsidised rates, but from 2011, the government of Iran has started paying direct subsidies (income supplements) to compensate for higher prices of public services. Following a summary of this reform, the new increasing block tariff system of Iran is described in this paper. Impacts of the reform with regard to domestic water consumption in the city of Mashhad, located in North West of Iran, have been analysed. For this purpose, statistical analysis of data from water bills, household surveys and structured interviews were used. Early results indicate that overall consumption has decreased in the entire city but the decline was more significant in the outskirts of the city which are predominately populated by poor residents. It is believed that paying the subsidies directly to the consumers has been effective in water demand management terms. Furthermore, this approach has increased equity among consumers and in the long term the poor are projected to receive much more support in the form of direct subsidies. The paper is an example of policy impact analysis, which is an alternative to benchmarking in a situation where drastic policy changes are introduced. The authors indicate that the macro economic developments in Iran have eroded the positive effects of the cash transfers, which also in the first stage almost concerned the whole population and not just poor people.

Ravet analyses in this paper a stepwise approach to achieve sustainable services to low income areas: a utility operational experience. Implementation of the rights to water and sanitation is a crucial issue for all actors involved in essential services provision. Utilities are at the heart of this process, and are in particular in charge of providing sustainable solutions. Through analysing three case studies the paper draws the lessons learned and focuses on the importance of building answers that are adapted to local contexts and rely on precise governance schemes. To achieve that, it appears that a step wise process is the best way to proceed, rather than trying to copy paste solutions from other situations and contexts. It starts with creating a dedicated team within the utility that can ensure coordination of the actions; completing a sincere diagnosis of the local situation about water and sanitation provision to slum areas; and finally building jointly the solution that can provide vital services in a win-win dynamic. Ravet deals with these issues from the point of view of the private sector. International companies are willing and able to help poor consumers if this is part of the contract and the agreed key performance indicators measure the progress they make.

Rachmadyanto, van Dijk and Oduro-Kwarteng are mapping the pro-poor water supply services in Accra, the capital of Ghana. Different modes of water supply, various institutional options and ways of financing and cost recovery are possible in the drinking water sector. In Ghana they also note an emerging partnership between the utility (GWCL) and small scale providers. This is one way of reaching the poor, who have been mapped in Accra. Rachmadyanto (2010) has shown in two slum areas of Accra who the

poor are and what kind of institutional arrangements they have to obtain drinking water and to solve their sanitary problems. In the first case the two most promising options were collaboration with the utility, which would either provide standpipes or engage with private suppliers. These options are analysed in more detail to show that they are serving the poor and can be benchmarked. That would imply that the achievements would be measured regularly and an increasing number of poor would be served, while the quality and price of the drinking water would be assured at a certain level. Similar arrangements are possible for the sanitation sector, where the Accra Metropolitan Authority is the responsible organisation.

Nyarko, Oduro-Kwarteng, Dwumfour-Asare and Boakye review the incentives for water supply to the poor in Ghana. Different stakeholders focus on different variables when assessing the impact of their activities on poor consumers. Drawing from this case study the authors look at the functioning of incentives to reach the poor for the most important utility in Ghana. They emphasise the role of the regulator. Which lessons can be drawn from the use of these instruments in Ghana?

Marson and van Dijk assess whether the Zambian system of benchmarking allows to monitor to what extent the utilities in that country are able to help the poor. Private sector involvement (PSI) in the water sector has increased in most countries. This raises the issue how to control the private parties involved? Regulation is normally the natural counterpart of PSI, although there are also countries (Zambia for example) where a regulator is created to control public sector water utilities. Different forms of regulation exist in all countries and the trend is that the regulatory environment becomes more and more complicated. This contribution reviews arguments for regulation and analyse to what extent the existing regulation has had a pro-poor effects. Comparable to the situation in Ghana the regulator also takes the interests of the poor into consideration, although it is not its only objective. The benchmarking system also serves to increase the efficiency of the utilities.

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