

Costs, finance and accountability for sustainable WASH services

C. Pezon, C. Fonseca, J. Butterworth

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IRC Symposium 2010
Pumps, Pipes and Promises

Background paper: Pumps, Pipes and Promises

Costs, Finances and Accountability for Sustainable WASH services

Christelle Pezon, Catarina Fonseca and John Butterworth

1 INTRODUCTION

The aim of this paper is to set the scene for participants in the Pumps, Pipes and Promises Symposium by bringing under one umbrella the latest knowledge on finances, costs and accountability for provision of sustainable decentralised WASH services. It aims to illustrate clearly the links between these three thematic areas which often tend to be addressed separately, and to identify the unanswered questions that this symposium provides us the opportunity to share for further reflection.

In recent years, a better picture of how money flows into and through the WASH sector has emerged (OECD/DAC, 2008; WHO, 2010; Foster & Briceño-Garmendia, 2010). However, it can still be hard to identify where WASH money comes from (the balance between taxes, tariffs and transfers) and where it goes over time. In the countries where the biggest challenges lie to meeting the MDGs, financial requirements exceed by far the available funds but, at the same time, in many cases, available funds are not used cost-effectively and not accounted for properly.

Multiple level planning, budgeting and monitoring characterise the governance of decentralised WASH services. Key processes for the decentralisation of WASH services are that funds will flow from the centre to the intermediate and the local levels to meet the costs of the functions that have been deconcentrated or decentralised, and that the capacities of these intermediate and local levels are strengthened to fulfil their new responsibilities. Despite progress in harmonisation, relatively few countries have developed a Sector Wide Approach (SWAp) mechanism yet; in practice, multiple channels of financing and a mix of project, programme and different planning and budgeting processes are found. Even when SWAp processes are partially in place, the transfer of funds to intermediate and local levels remains a challenge and the ability to use and to monitor funds at these two levels needs to be strengthened.

Considering the limited funds available for in the WASH sector, the efficiency in using available funds is crucial. The costs of the different financing mechanisms matter as the cost of capital varies and the collection of taxes and tariffs also contains different costs. On the other hand, the regularity and the predictability of funding flows as well as the equity in fund raising –especially from users- are key issues, while the criteria to access and raise funds are

often unclear. The explicit or implicit criteria to access funds and the regulatory mechanisms to check and balance their allocation and use may not provide appropriate or sufficient incentives to deliver cost-effective WASH services.

The international policy environment encourages spending on new construction which is undoubtedly needed. However problems of slippage[1] or unsustainable investments are emerging especially for the provision of rural WASH services, revealing the lack of attention paid to the issue of sustainability. Over the last years, methodological improvements have been made to understand the cost of providing WASH services. New initiatives, including WASHCost[2], have recently started to shine a light on what it really costs to provide long term decentralised water and sanitation services, looking beyond capital investment, while applying a life cycle cost approach in Burkina Faso, Ghana, India (Andhra Pradesh) and Mozambique. By costing *services* rather than solely *infrastructure*, the life cycle cost approach recognises the importance of post-construction costs - which include the operation and maintenance but also the rehabilitation of infrastructure. It also incorporates support costs, those arising from the functions that support the provision of sustainable and decentralised WASH services, should they be carried out by water authorities (planning, monitoring, regulation), by deconcentrated agencies as part of their overall mission in supporting the decentralisation of WASH services (channel funds from national level to local level, consolidation and reporting to the national levels, etc) or by national departments when they design and plan the strategy to develop the sector. This methodological development creates a paradigm change from infrastructure to service delivery approach.

In 2008, Transparency International's Global Corruption Report focused on the issue of corruption in the WASH sector (Zinnbauer & Dobson, 2008). Corruption can occur at all points along a 'value chain' (Plummer, 2007) that stretches from donors and financiers, through national government and sector agencies to local governments and the frontline where utilities, communities and contractors are working to keep the taps running and toilets functioning. It has been shown that under some conditions, decentralisation can lead to an increase in corruption in WASH service delivery where local water authorities lack capacity and checks and balances are weak or missing (Davis, 2004). It can also be argued that corruption is the symptom of weak institutions, and that strengthening the multiple level institutions and regulatory mechanisms for the governance of WASH services would tackle the corruption issue quite effectively.

More broadly, access to information on sector performance is vital for financial accountability. Financial accountability in WASH means that people and agencies who are entrusted with money from various sources and for various activities are held accountable as to how that money is used and to what effect. It requires adequate information to be published on all aspects of performance. Sector performance monitoring is improving, but

[1] WASH slippage can be defined as the falling back of a certain level of WASH services to a lower level of services over a defined period of time (Reddy et al. 2010).

[2] WASHCost, a five-year initiative, is focused on exploring and sharing an understanding of the true costs of sustainable services. Since 2008, WASHCost has developed new methodologies to better understand and use the costs of providing water, sanitation and hygiene services to rural and peri-urban communities in Ghana, Burkina-Faso, Mozambique and India (Andhra Pradesh) www.washcost.info

better coverage data is needed at aggregate levels and more information is required at the service provision level. As data is prone to manipulation at the cost of accountability, it matters to clarify responsibilities and roles (what level of governance is accountable for what and to who?) and to set transparent, timely and detailed reporting processes and tools by service providers, local water authorities and State agencies at central and deconcentrated level. The wider availability of Freedom of Information Laws has provided new opportunities to access information and hold providers accountable, as have new communication technologies.

A current area of much interest in the sector has been promoting citizens or consumer voice type activities to strengthen the demand for accountability, to put pressure on service providers to increase their performance (World Bank, 2003; Ryan, 2008). The central idea is that if people are more cognisant of their rights, and how to express these rights, then government agencies, water authorities and service providers will have to be more responsive. Mechanisms to strengthen the short arm of accountability (between service providers and users) as well as innovative practices in procurement (such as community contracting and integrity pacts) have been developed. However, further investigation is needed to understand the cost-effectiveness of such participatory processes in order to identify more precisely when they may be more appropriate than strong institutionalised accountability mechanisms.

In the following four sections of the paper, we:

1. Set the scene through an analysis of the current context in relation with financing, costs and accountability;
2. Describe key trends and the wider context of development in the sector and the opportunities emerging to address financing, costs and accountability;
3. Provide inspiration for a better future, through a proposed vision and intermediate outcomes that those working in the water, sanitation and hygiene (WASH) sector might aspire to. We also present some concrete proposals for discussion on how the outcomes and the vision might be achieved;
4. Summarise the issues raised in the paper and present problematic areas and ideas for discussion at the Symposium.

2 CURRENT CONTEXT: STATING THE PROBLEM

In this section we provide an overview of the current financing flows for the water and sanitation sector from different sources, we discuss how decisions about financing focus almost exclusively on capital investments and illustrate how there is limited knowledge on costs beyond the moment that systems are constructed in rural and small urban areas. We also discuss how both direct and indirect accountability in service delivery are problematic.

2.1 Financing flows and decision making

In 2010, it remains challenging to bring together an overview of the financing flows in the WASH sector, in terms of the origins of money (development aid or transfer, country and local levels taxes and users through tariffs) but also in terms of its destination (State, intermediate level such as region or district or commune, community or village, users, operators), and the conditions attached (loan vs grant, new infrastructure vs enhancement of existing infrastructure, development of sector strategic plan, transparency, etc).

The WHO GLAAS report (2010) provides the most detailed worldwide picture we have of the financing flows in the WASH sector. It estimates that the overall annual amount of ODA in 2008-2009 coming from multilateral and bilateral donors was $7.4 billion, while the contribution of some 14 developing countries to their WASH sector through national tax, was estimated as 0.48% of GDP on average. Despite the significant effort the GLAAS initiative represents, the report does not yet provide any data on a number of important areas:

- Contributions of users. All costs that are not covered through ODA and country tax have to be covered by users. This includes the running costs of facilities, but also the cost of facilities that households self-finance. A recent review of infrastructure in Africa (Foster et al., 2010) brings evidence on the high level of users' contribution in the WASH sector: African users were estimated to have contributed $2.13 billion from a total of $4.58 billion capital expenditure on annualized averages from 2001 to 2006.

- The flows targeting/reaching the poor compared to non-poor. While ODA for low income countries has increased from 32% to 46% over 10 years, this figure does not provide any insight into the ultimate beneficiaries' profile in term of poverty. A decrease of ODA to finance more basic systems (16% against 27% 10 years ago) in favour of larger and more complex systems, suggests that ODA might be turning towards the urban sector at the expense of the rural poor, and even household connections rather than lower levels of service. This picture is worse when users' contributions are included: at least in Africa, their contribution to capital expenditure exceeds that from other sources (Foster et al., 2010).

- Other important financiers. Other bilateral donors such as non-OECD and Middle East countries, INGO transfers and other foundations that are increasingly contributing to the WASH sector (Bill and Melinda Gates Foundation, Hilton Foundation, Fondation Ensemble, etc) are not yet counted but also international transfers by local governments ($16 M) or from migrants (four times the size of ODA) are not widely recognised. For instance, China's aid to the WASH sector in Africa was, on average for the years 2001-2006 ($90 million), eight time greater than the contribution of the world's private sector (Hall, 2010).

- While the respective share of ODA received at each governance level remains unknown and uncoordinated, a further unknown is whether or not the total financing matches the costs at each level. The trend is a decrease of general budget support and a slow

increase in direct budget support (State level). A lot of ODA still flows through projects and programmes to other governance levels (intermediate and local) through international NGOs. Local governance levels also benefit directly from overseas local governments, and users and communities from migrants' remittances.

According to the GLAAS report, comparing ODA allocation to recipient country needs shows that transfers from multilateral and bilateral agencies are targeted at supporting infrastructure development. 64% of ODA goes to new systems whereas the financing needs to achieve the MDGs consist of operation and high capital maintenance of existing water systems (88% of overall financing needs), as well as of sanitation facilities (60% of overall financing needs). Only 13% of ODA goes into system maintenance.

The post construction costs (operation, maintenance and renewal expenditures) are largely left to users, and remain mostly unknown, particularly in rural, small and peri-urban areas. Financial decision making is based on investment costs and the estimated number of inhabitants supplied by system. It is not based on the cost of providing services forever and may even lead to develop systems that are relatively expensive over a lifetime, despite low initial investment costs. Or put another way, our current processes of financial decision making cannot prove those choices are cost-effective.

Strong (financing) messages without evidence: Surprisingly, this poor knowledge has proved compatible with very strong messages at the international level, carried on in countries, such as: "full cost recovery"; "O&M must be covered by users fees"; "investment must be covered by departmental budgets"; "we need much more money in the sector". Financing flows are supposed to match specific costs despite the fact that there is limited knowledge of both cost components and available funding. Where do these messages come from? How are decisions being made? What motivates donors, INGO, governments, users to (not) dedicate money to WASH services? Does it make sense to decide on a yearly basis the investment in such a capital intensive sector which is supposed to deliver services forever? Is it desirable that part of the budget is spent differently in December than in January just because money should be spent by the end of the fiscal year by a development agency? Why do governments prioritise household connections on access to basic water and sanitation facilities by subsidising massively the former type of service?

More funds invested does not necessarily lead to increased coverage levels*:* It is commonplace at each international event to hear a call for more money to be invested in the WASH sector, as if lack of funds was the only reason for the sector to be lagging behind the achievement of the MDGs, especially for the sanitation target. However, beyond the issue of the *amount* of financing flows –and also in view of raising them- its *effectiveness* must be questioned. In many countries, it has become clear that although more investment is made into the sector, overall coverage is either not increasing in similar proportion or is actually decreasing (MAHRH, Burkina Faso, 2010); (Government of Uganda, 2008); (EUWI-AWG. 2008); (WHO, 2010). At least three different, and sometimes contradictory, reasons explain this:

1) There has been insufficient attention paid to post construction costs resulting in the misallocation of funds, to cover even a relatively small cost such as operation and maintenance (O&M) which, eventually results in the breakdown of the system and potentially wastes money invested in the other and relatively bigger costs.

2) Investment in high service level (household connection) to meet the demand of the growing urban middle class (see JMP, 2010) does not impact positively upon the coverage figures as this represents a switch from accessing improved water source to an enhanced service level.

3) Investment is made in soft processes (support to decentralisation, management and procurement process, administrative and finance procedures) which don't necessarily translate into coverage increases, but feature in the development of key functions leading to a more sustainable sector (OECD, 2008).

Financing decisions are based on risk analysis: One may argue that, as in any sector, financing is not based on cost but on (geo) political interest and risk assessment. Looking at the OCDE/DAC report (2010), Iraq and Afghanistan benefited, in 2008, from 50% of the ODA that flowed to the whole of Sub-Saharan Africa. Schematically, any funder expects a return on his investment, either financial or political. The more risky, the higher the expected return. Through grants, bilateral and multilateral donors don't expect a cash return on ODA. So their risk is not associated with the ability of receivers to pay back but to use the funds properly. For development agencies, the main risks are low disbursement by beneficiaries, under-performance (fewer infrastructures as expected) and misuse (corruption).

Risk mitigation strategies consist of changes in financing mechanisms (general support to direct support) or channels (I-NGOs or private operators rather than government). They also consist of conditionality such as tendering process to get the cheapest infrastructure and increase the number of systems built. For beneficiaries' countries, the risks consist of insufficient financing resources to match the needs that can be covered by donors (new infrastructure). They mitigate this risk by aligning on donors' strategies to reduce their own risks. As funders to lower governance levels, States also face the risk of losing power in favour of intermediate and local levels, and of poor reporting from these levels to comply with the reporting process expected by donors. They mitigate these risks by slowing or delaying effective deconcentration and by transferring to lower governance levels similar reporting processes as for donors, regardless the differences in role and responsibilities that are left unaccounted for at this level. At all these levels (international, national, intermediate) accountability to users is often missing or weak.

Finally, users face a series of risks: failing in operating and maintaining systems at a scale where there is no technical capacity; failing in contributing to cover costs that are not managed at a proper scale, denying economies of scale in a highly capital intensive sector, etc. They develop coping strategies by maintaining alternative sources of water, refusing to pay or to invest long term money for systems (sanitation facilities or water infrastructure) that nobody will support or maintain. They are basically supposed to match fund the costs that intermediate governance levels in charge of support functions neither properly assessed

nor managed and for which no financing resource is allocated by donors or State. Users have to pick up the forgotten costs, or systems fail (Figure 1).

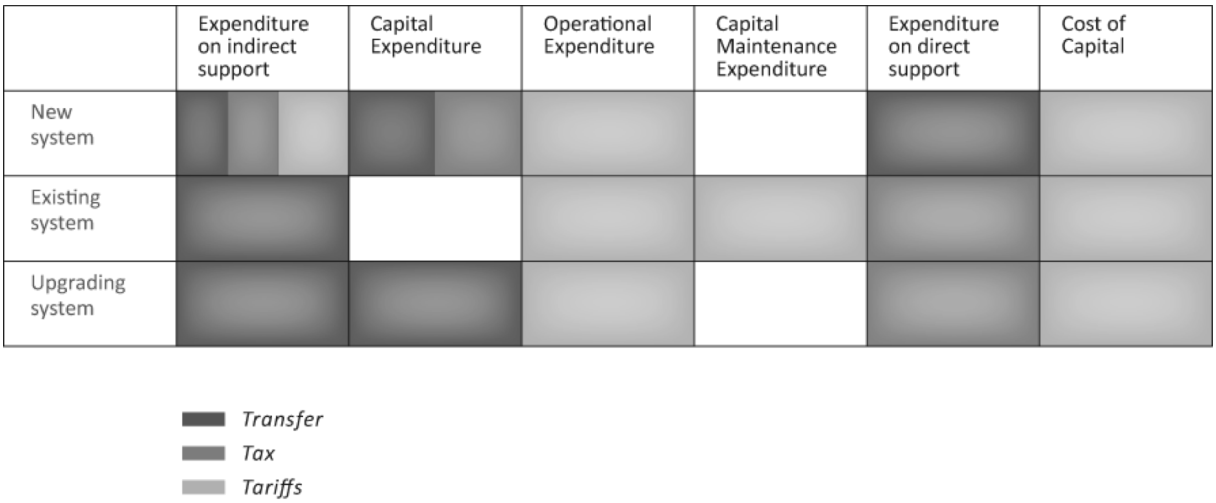


Figure 1 **Generalisation of existing sources of funds (international transfers, taxes and tariffs) to cover services cost components**[3]

2.2 Limited knowledge on WASH costs beyond construction

A recent review (WHO, 2010) of the reasons cited by the largest donors (bilateral agencies, multilateral and foundations) in aid allocation decision making in the WASH sector found that the main criteria were: i) Countries or regions of greatest need in terms of coverage and access figures, ii) Established presence and relationships in-country or in-region, and iii) Countries or regions of greatest need in terms of poverty. The delivery of cost effective and improved services to target groups, is not a criteria. Donors, national governments and other key stakeholders have until recently largely ignored the fact that every year - despite the large past investments – many rural users actually stop receiving water or sanitation services. In monitoring aid achievements, the indicator most commonly used is the "number of people with (improved) access", and it has only recently been acknowledged (and some systems improved to report this data) that this number can go down as well as up.

"Cost" is currently not a significant factor in sector decision making. In most developing countries and donor-led projects, planning is not linked to either (real) budgeting or finance flows and, hence, is not cost sensitive. Setting service levels (using indicators such as quantity and quality, access, reliability, etc) is largely a political decision, but in any case happens in the absence of information on costs of different service levels though service levels are major (perhaps the most important) cost drivers. In situations where cost information is considered, we find this is mainly focused on the capital investment in new services (CapEx) and is used almost exclusively at national level (in sector policy, investment plans, etc.) with poor records of historical trends.

[3] See details of cost terminology in section 3.

Sector actors advocate for users to pay fully for maintenance without understanding the full life-cycle costs*[4]*. Nobody knows the relative magnitude of the different life cycle cost components of non networked supply types of WASH services, but at the same time expect the contribution of users to cover operation and maintenance, regardless of the amounts involved or the service levels being provided (Moriarty et al, 2010; Potter et al, 2010). Many times, poor communities and households in rural and peri-urban areas are being asked to contribute much more than the non-poor for receiving a lower level of service. Very limited knowledge exists on how much poor households are paying every month for operation and maintenance services and if these amounts are on the one hand adequate to meet costs of operation and maintenance, and on the other hand affordable to users.

'Blindness' to slippage and rehabilitation in the sector: capital maintenance and rehabilitation are largely ignored. Slippage, where some communities and users fall back to a lower level of service, or become completely unserved, is rising up the agenda in countries where nominal coverage is high. This is especially the case in India where it has been acknowledged and efforts made to measure it, and increasingly in other countries such as Ghana and Uganda. As an example from the latter, Figure 2 shows how expenditure per capita has been increasing, while the number of people served by new facilities has been decreasing. This difference is not explained by population growth rates.

Another example illustrated in Figure 3, is India which is experiencing around 20% (annual) slippage in rural water services due to a lack of maintenance of ageing infrastructure. Previously served people are now experiencing a decrease in the services provided. In a similar vein, at any time, 30% to 40% of handpumps in Africa are not functional (Evans, 1992; WSP, 2003; Taylor, 2009; Skinner, 2009). The need for spending on new services without provision for maintaining and rehabilitating existing services is a key issue that the sector needs to address (Franceys, Pezon, 2010), since a consequence of low levels of maintenance is an increased need of investments in new services.

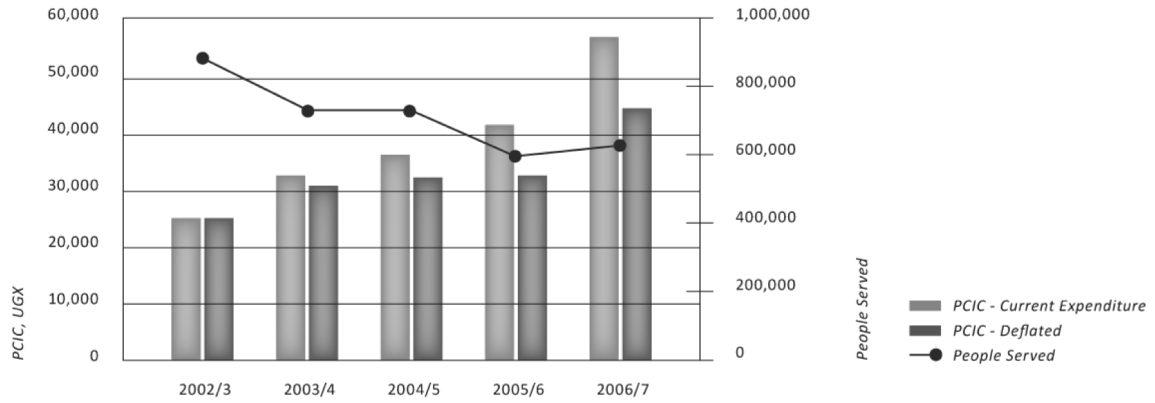


Figure 2: Trend in number of people served by new water facilities against PCIC - Per Capita Investment Cost (Government of Uganda, 2008)

Note: PCIC in current prices and deflated to 2006/7 to allow for annual comparisons.

[4] See more on the concept and life-cycle costs on Section 3

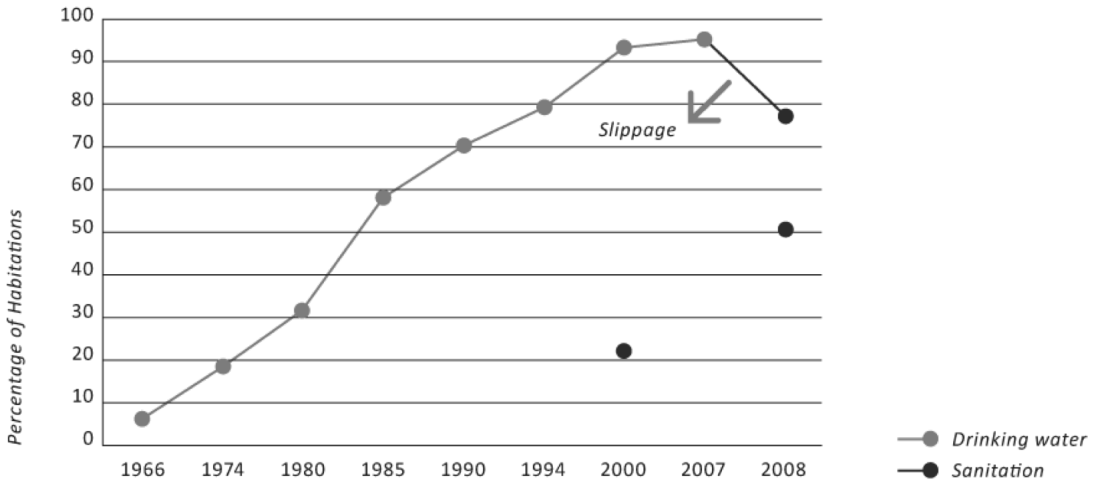


Figure 3 **Coverage of drinking water and sanitation in Rural India**
Source: (Ranjiv Gandhi National Drinking Water Mission. 2008)

***The infrastructure obsession*.** From existing estimates, it is possible to conclude that most grants are directed towards new or upgraded infrastructure. Very limited funds are disbursed towards maintaining existing services which is usually left to the users of water systems (WHO, 2010). We are only starting to gather evidence in WASH on how inefficient this is, but in other sectors (e.g. roads and energy) preventative maintenance has been shown to be extremely cost effective and lengthen the lifetime of infrastructure (WB, 1994, 2003; Devarajan et al., 1996; Rioja, 2003).

Donors and bankers are under pressure to disburse large funds for new infrastructure (capital investment) and tend to ignore (or not ask) anything that might be needed to keep the service running. It is a powerful and simple political message for donors and politicians to say that 'we are investing in new infrastructure'. But at best this is not enough. At worst, it is harmful and a waste of money. Often doing better will mean investing in things that are superficially less attractive and harder to sell to the northern and southern publics: planning, monitoring, auditing. These support functions should not be seen as wasteful overheads, but vital aspects of good management to invest in if we care about delivering a service rather than just more soon to fail infrastructure.

2.3 Accountability, transparency and corruption

In most of the countries where the WASH service challenge is greatest, service delivery improvements have to be made against a backdrop of relatively weak systems of governance (WASH coverage for example tends to be negatively correlated with levels of perceived corruption, see Plummer & Cross, 2006). Even national governments, where capacity is concentrated in developing countries, still struggle to develop sufficient capacities in policy making, planning, regulation and management. At the local government level, where the day to day business of service provision has to be supported, the gaps in capacity are greatest. This governance deficit is a key reason why providing access to water and sanitation is taking

so long, and why the scale and urgency of the challenge will persist over the coming decades if not addressed. One aspect of this is inadequate accountability in the sector. In a situation where service providers have low capacity, and are only weakly accountable to either consumers (direct accountability) or governments (indirect accountability on behalf of the citizens they represent) it is not surprising that sector performance is often inadequate.

Direct accountability in WASH service delivery is problematic: Although there are some exceptions, markets and competition are not the force that will lead to accountability in most WASH situations. Although there are significant differences from an economic perspective between networked and non-networked types of services, water users rarely have a choice of provider, usually they cannot take their business elsewhere due for example, to a lack of service or dissatisfaction with their supplier. The influence of users and the level of direct accountability depends upon how well informed and organised users are to voice complaints, and how well disposed the provider is to listen and respond. When the bulk of the money for new WASH investments does not come directly from users but from national taxation and donor transfers, this can sometimes make service providers unresponsive. Some (indirect) accountability from authorities and regulators is therefore required.

***Indirect accountability is challenging*:** That governments and their representatives ensure provision of adequate services on behalf of their citizens requires a number of (challenging) conditions to be in place for it to be effective. Firstly, there needs to be sufficient information on the actual performance of WASH service providers. Reliable data at different scales are therefore vital. For example, how much water do people receive, of what quality, how reliably, at what cost; and how close and clean is a sanitation facility? Although sector information is improving, this is from a low base. There are also increasing concerns that some of the key monitoring indicators that we use e.g. coverage are badly flawed with their use at national and international levels poorly reflecting the realities of service delivery. Reporting by service providers is limited even by urban utilities.

Secondly, governments and their representatives – politicians and officials – have to establish effective control over the performance of many decentralized service providers and to have sufficient capacity to make changes where required. The main mechanisms for that oversight include local water authorities that frequently lack capacity or whose role is combined with provider reducing the potential for oversight, and regulatory functions that have yet to develop sufficiently to support the urban let alone rural water sectors.

Finally, indirect accountability requires a system (i.e. some kind of democracy or alternative: it being possible in all kinds of political systems), where politicians and officials are rewarded if they are doing well in the task of supporting service provision, and influenced or changed if they are doing badly. This is also a work in progress, and a long-term project, with the overall governance environment being far from ideal in many of the most off-track countries in WASH.

3 TRENDS IN THE SECTOR: EMERGING OPPORTUNITIES

In this section we set out the latest trends in the sector concerning the three themes set in the previous section. The wider opportunities that exist to embed some concrete actions that have the potential to make significant improvements (and achieve the vision that is described in the following section) are described.

The key development is that the contexts in which accountability and financing arrangements need to be strengthened have changed significantly over recent years: decentralisation and the development of Sector Wide Approaches (SWAps) are probably the two most important trends.

3.1 Decentralisation, financing and accountability

Decentralisation processes are taking place in many different parts of the world,. Generally they involve the decentralisation of the authority over WASH service provision to local governments (which are often too inexperienced and insufficiently skilled and resourced to perform such functions); and/or the deconcentration of central government departments to regions or provinces, to channel funds to and monitor/support/advise local governments.

- Decentralisation provides the potential for a stronger link at the local level between local government and citizens. However, administrative capacities and checks and balances are also generally less developed at this level, and the dangers of corruption taking root within newly decentralised service delivery arrangements have been highlighted (Plummer, 2007).
- The complexity of transferring money to these new levels and to set up monitoring processes of both money use and service provided add on the complexity of tracking good records of external financing flows at country levels and involve transaction costs.
- Among the emerging financing mechanisms, some fit very well the decentralisation process (local governments cooperation, Water Operator Partnerships, mesofinance) but skip the national and the intermediate levels and the monitoring processes that exist at these levels where monitoring is also implemented, making coordination more difficult.

Decentralisation of basic services is widely considered necessary for improving the efficiency and responsiveness of those services and ensuring greater accountability to users. Increasingly developing countries are *on paper* devolving the authority and resources for basic services provision from the national level to the local level. As a result many of the Millennium Development Goals are seen by some to be dependent upon successful decentralisation, political will and capacity at the local level to achieve the various sector targets. It might be assumed that elected local governments, being closer to the users of the service, are better placed to plan the services based on user preferences and needs, determine appropriate service levels, optimise financial resources, and provide more effective and sustainable services. However there are concerns about decentralisation of authorities to local governments, based notably on the extent to which participative decision

making takes place in practice (Davis, 2004; Plummer, 2007; Harpe and Butterworth, 2009). However, it is evident that rural local governments rarely have the capacity and necessary resources to make decentralisation work. It may also be argued that the local government level is not always the most cost-effective one at which to develop support and regulatory functions over service provision or the right one to manage the requested funds to cover crucial, high level and high maintenance expenditures punctually.

Since the late 1980s Uganda has pursued decentralisation of education, health and drinking water services with resources channelled to local councils. However, studies have found that improvements in service delivery have been attributable more to the increase in conditional funding from central government rather than to improved local decision making (Robinson, 2007). Mechanisms for ensuring participation in governance (including development planning) at the local level do not guarantee that the preferences and interests of the community will be prioritised. For example the opportunities created for public participation at the local level in Côte d'Ivoire, did not result in the commune (local council) allocating budget to their preferences for water supplies, social facilities and roads. The mayors, who continued to exert control and influence over the decisions, chose to spend the budget on municipal buildings and secondary schools. In Ghana, a survey of two districts found that 70 per cent of the respondents indicated that their preferences for water supplies, electricity, health facilities and road repairs were not provided for in the district assembly expenditure priorities.

Decentralisation has major implications for addressing local capacity as well as the capacity of the regulatory framework to ensure compliance with national policies, norms and standards. Addressing these capacity areas is likely to be an increasing priority over time as capacities need to be aligned with the governance functions that are being decentralised or deconcentrated to different levels.

3.2 Sector wide approaches and implications for financing and accountability

The aim of sector wide approaches (SWAps) is to increase aid effectiveness and to contribute to poverty reduction by addressing its structural causes. SWAps have emerged in response to the commitments made in the 2005 Paris Declaration, particularly the need to increase efforts to harmonise, align and manage development aid for results. Within the SWAp approach, developing countries take ownership of outcomes by setting sector policy, by developing sector and poverty reduction strategies, and by preparing a medium term budget where provision is made for strengthening their institutions and addressing issues of corruption, poor governance, and lack of accountability. Donor co-ordination and alignment to the sector objectives, sharing of information, and the use of national administrative, financial management, monitoring and reporting systems are all necessary features of successful SWAps.

Within a SWAp, accountability is intended to be mutual between donors and countries, with donors making commitments to transparent and predictable aid, and the country making

commitments to mutually agreed sector objectives and indicators. With the primary focus of donors and national governments on the MDGs, emphasis is given to the achievement and monitoring of water and sanitation targets and to the proper management of public funds. However, water and sanitation coverage figures provide no real indication of the quality of the service that users receive. This is a major concern and area of current scrutiny and effort in many countries. Accountability between government (policymakers), service providers and citizens should form a 'virtuous' circle. By placing greater emphasis on monitoring and reporting on the actual services provided, a SWAp has great potential to enhance accountability between government and service users as well as between government, service provider and users.

In terms of financing, SWAPs mean direct budget support or basket funding e.g. pooling donors' money and/or government money so as to support the implementation of the national strategy.

- SWAps and harmonization similarly seem to be a double-edged sword in respect to accountability. On the one hand, focusing efforts on a single plan, common fund and monitoring mechanism offers the potential to build a simpler system that works and reduces the burdens on limited government capacity. On the other hand, there is the danger that putting "all the WASH eggs in one basket", in contexts where administrations are weak, could lead to less oversight and greater misuse of funds. This can translate into low levels of spending as compared to the ODA available at country level, even when allocated through a direct support budget mechanism. In Burkina Faso, the Water Department fails to spend more than 50% of the donors money annually.
- Concerning financing, even in countries where a SWAP has started, traditional financing mechanisms generally survive. At country level, one can find a partial sector budget support next to a traditional project approach directly funded by a donor in favour of a local NGO, and decentralised cooperation between North and South communes[5] that are not properly reported to the intermediate or the national level.

Many developing countries do not yet have the financial management, monitoring and reporting systems in place to satisfy the conditionalities for sector budget support (Harpe and Butterworth, 2009). Thus part of the SWAp is to assist partner countries to put these in place to meet the budgetary conditions and to increase transparency and accountability. In South Africa, the water SWAp primarily provided institutional support to the sector (Harpe and Butterworth, 2009). This included support to local governments to: establish structures for co-ordination and stakeholder participation; strengthen local management, procurement and financial systems; enhance accountability and transparency mechanisms; and to address both their governance and provision capacity. As part of efforts to develop a common fund for rural water supply, the Mozambican national water directorate is currently developing a supporting anti-corruption strategy.

[5] Specific funding mechanisms allow communes from the North to develop water and sanitation aid policy towards communes in developing countries. This is the case in France where communes –water authorities- can allocate up to 1% of the budget of their water service to support water project through a twinning with a commune in the South.

3.3 Professionalisation of rural water provision: from drilling holes to providing a service

Though "community management is, and is likely to continue to be, the heart of what the [rural] sector does and how it works" (Moriarty & Verdemato, 2010), problems in rural water can largely be attributed to the lack of a framework for providing long-term support, and as a result too many community-owned and managed systems are failing – contributing to the problem of slippage. "Professionalisation" is identified as important trend in this context.

As of major importance is the need to address accountability and oversight within the community management model (as is the case with other service delivery models). Key questions identified are "How are community service providers to be held accountable for the quality of service received? And how are those supposed to support community management to be held accountable for the provision of these supporting roles?" (Moriarty & Verdemato, 2010) A key step is a more formal separation of functions (roles and responsibilities) for providing rural water services. In particular, it is widely felt to be crucial to separate service provision from service oversight (or regulation). "A vital failing of community management in its present form is that too often the providers of the service are also the regulator or overseer of the service." In conclusion, community management needs "an additional supporting framework of legal provisions, technical and financial backstopping, and proper regulation and oversight that will allow it to emerge as a fully fledged model for service delivery." These next phases in community managed rural water services are about strengthened governance and even more importantly, improved management, they are "about moving away from the scramble to do things (to build anything just to meet the crushing unmet need) to starting to doing the right things (providing services) in the right way (sustainably and predictably)." (Moriarty & Verdemato, 2010).

3.4 Uncertainty on money available and the demand for cost-efficiency

Overall, the current financial crisis is having a very different impact on different types of donor organisations. Over the coming two to three years, for most bilateral donors, ODA disbursements to WASH will remain stable as funds have been already fully committed. Some bilateral donors (France, Sweden, Netherlands) have stated that their ODA will decrease in line with GDP decline and/or that WASH commitments will decrease as a share of ODA. Similarly, some Development Banks have mentioned that lending for WASH will not increase as expected given the overall disappointing impact felt on infrastructure delivery. NGOs and foundations have reported that WASH grants have not grown as predicted in 2009 and it is uncertain what their budgets will be in the coming years. Also of great significance, the financial crisis has caused currency exchange rate fluctuations. The pound sterling and the Australian dollar have been some of the most affected currencies, affecting implementation in countries (one agency has mentioned a 30% increase in prices to do the same amount of work)[6].

[6] Personal communications and reports in the context of developing the GLAAS 2010 report – C. Fonseca.

Increasingly, governments in developed and developing countries need a stronger economic case to keep pouring money into the WASH sector. Many of the new elected right-centre European governments want to cut development aid. In France, the Development Agency, AFD, cut the level of grant from 70 million Euros in 2007 to 15 million Euros in 2009, converting massively its development aid into loans (CISEA AFD, 2010). With an eye to cost effectiveness, development agencies are being asked by their cabinets to produce unit costs – similarly to other sectors – and to be more impact oriented. In turn, bilateral agencies are making the same questions to the multilateral agencies and international NGOs through which most WASH programmes are implemented. There is also more and more interest in promoting private sector business and financing models within the aid sector.

Since a first literature review of water and sanitation unit costs in the sector (Fonseca and Cardone, 2004), many more studies on costs have emerged, specifically for water and sanitation. They are becoming more country specific, but, as initial studies, focus is still on capital expenditures (Fonseca, 2010). At country level, Ghana (Kwame Asante Associates, 1999), Kenya (PEM/WSP, 2005), South Africa (DWAF, 2007) and Uganda (GoU, 2008) have commissioned detailed unit costs studies. However, a history of lack of records still leaves many questions unanswered. The latest report produced by the Government of Uganda concludes that "whilst this report increased the WSS understanding and developed hypotheses [for] the reasons contributing to cost variations, the report, being a desk study of the available information at District Water Departments, did not provide sufficient depth to reach concrete, independently verifiable conclusions. The sector is still not able to clearly state what caused the rise in unit cost" (GoU, 2008).

PLAN International was the first international organisation to look at the costs of their own projects and to publish their own expenditure review (Robinson, 2009). The justification for conducting the study was to try and track their costs for cost-efficiency purposes and better targeting. One of the conclusions is that their tracking systems (financial tools) are not geared to being able to calculate disaggregated costs, which is also one of the main reasons that multilateral and bilateral agencies cite for not being able to report on costs at the level of detail requested by the WHO-Water GLAAS report. It is difficult to be transparent or accountable (and to ask that from others) when the financial tools of your own organization are not conducive.

Conclusions of the PLAN study include that reliable evaluation data are in short supply, and the sort of data that is required for a meaningful assessment of cost-effectiveness (detailed data on outcomes and impacts) is often missing from qualitative evaluations. Nevertheless, it is hoped that this expenditure review will contribute towards efforts to improve evaluation methodologies, to ensure that evaluations collect and assess cost data, and to promote evidence-based policy-making linked to detailed assessments of cost-effectiveness."

IRC, WSP and WHO, to name a few, have been developing new methodologies that allow for better tracking of inputs (costs) and outputs (service levels) and estimation of the life cycle costs of WASH interventions. At the symposium, several tools which have been tested will

be presented. In the sector, as a whole, we have the knowledge now to improve the collection of cost data and to practice evidence-based planning and budgeting.

4 WHERE WE WANT TO BE?

4.1 The vision

Our vision for the WASH sector lies in a paradigm shift from infrastructure development to service delivery. It means that the goals and objectives of the sector should in future be defined and monitored in terms of actual users provided with water and sanitation services at an agreed level, and no longer in term of theoretical design populations presumed to be provisioned by supposedly functioning infrastructure. It does not mean that new infrastructures are not needed. It means that decisions are to be made looking beyond construction of systems in order to ensure that services will be delivered forever, in compliance with environmental, economic and equity criteria. Levels of service for targeted population in defined areas are to be defined with respect to long term water resource availability and consideration to all life-cycle cost components, and delivered to users at an affordable price.

Achieving this vision entails that fundamental questions have been addressed, such as (in the case of water supply):

- The volume of water resources available to meet the demand –both domestic and productive- in the next 20 years, taking into account variation in availability due to climate change and in demand due to demographic growth and rural migration;
- The costs (development, post-construction, support) associated with different levels of service;
- The sources of funds (who is paying?) to match all the costs (what expenses?) of the different services levels (for what service?);
- The institutional framework which defines the responsibilities of governance levels (national to local), services providers and users in service delivery and accounting procedures and mechanisms.

<u>On finance, this vision implies that:</u>

- At every governance level, a financial strategy is developed based on sources of funds, levels of services, life cycle costs;
- Financing mechanisms are in place to transfer financial resources, in particular ODA and national tax, towards different governance levels according to their legal responsibilities over service delivery and its associated costs (investment, maintenance, rehabilitation, support function);
- A regulatory framework and mechanisms are in place to monitor financing flows against costs in order to ensure that secured funds are available to cover all cost components related to each service delivered.

On costs, this vision implies that:

- Information on life-cycle costs per service level are available, shared and used, at all levels, in the context of decentralisation of key functions at intermediate and local levels;
- Financial planning and budgeting are cost sensitive at all levels;
- Development, post construction and support costs are managed at cost effective scales, leading to an overall decrease of the cost of providing sustainable services to users.

For accountability, this vision implies that:

- All governance levels are accountable in terms of service delivery, especially to the poor through a mix of direct and indirect accountability;
- Reporting, monitoring and evaluation are based on service delivery indicators, including for hygiene;
- Check and balance processes, mechanisms and tools are in place at all levels to decide, validate and check financing against cost and service level.

4.2 Milestones and intermediate outcomes (five years time)

With that vision in mind, we identify here some medium-milestones, perhaps achievable by 2015.

a) **There is a consensus in the sector on service delivery approach (as opposed to coverage).** At the moment the emphasis is on infrastructure, thus the reporting is limited to the number of boreholes or latrines built at the country, regional, district or local level. The number of people impacted is a conversion of the number of infrastructure developed. We are mixing the potential service that an infrastructure delivers with the effective service the infrastructure provides. What matters is not the potential service delivered by a system but the effective service a system provides to a well defined area and a targeted population, forever. National governments and donors need progressively to shift paradigm and redefine their objective in terms of service delivery, looking beyond 2015. They need to become sensitive to the risks of wasted investment when post-construction and support costs are not considered, no match funded resources made available to cover them, no regulatory mechanisms to ensure it will be checked and monitored. By repositioning themselves around service delivery, they will help to disseminate the service delivery approach.

✓ ***As an intermediate outcome, service delivery indicators are developed and complement coverage indicators; they start being incorporated in all reporting processes and monitoring tools***

b) **There is a consensus in the sector on the life-cycle cost approach (as opposed to construction cost).** Other infrastructure intensive sectors such as the transport and energy sectors are driven by cost analysis. Within the WASH sector, many urban utilities and service providers make investment decisions based on costs/revenues. The problem at the moment lies in financing and costing services in rural and peri-urban areas (including slums and small towns). With life cycle costs, decisions can be made about the level of services to be provided. Only when it is known how much it costs to

operate and maintain a specific set of technologies can choices be made about upfront high capital expenditures with little requirements for maintenance (when it is obvious that there is little support to post construction) versus lower capital expenditures with higher operation and maintenance costs annually. The WASH sector could make use of the life-cycle cost approach and the many tools available for costing all the components which make a service sustainable (Figure 4), and have consistent reliable information on how much it costs to move from one service level to another. For every project budget, expenditure or completion report, life cycle costs would become available through existing or developed (governmental) decision support tools and more aggregated at international level. One of the most urgent needs is to compile comprehensive data on existing WASH costs both for operation and maintenance and replacement needs as well as current and future financing for capital and running costs. The WASHCost team has developed easy to understand briefing notes and working papers which can be tested and used in many different contexts.

- ✓ ***All life cycle cost components are made explicit against services levels and they start being incorporated in planning and budgeting processes***

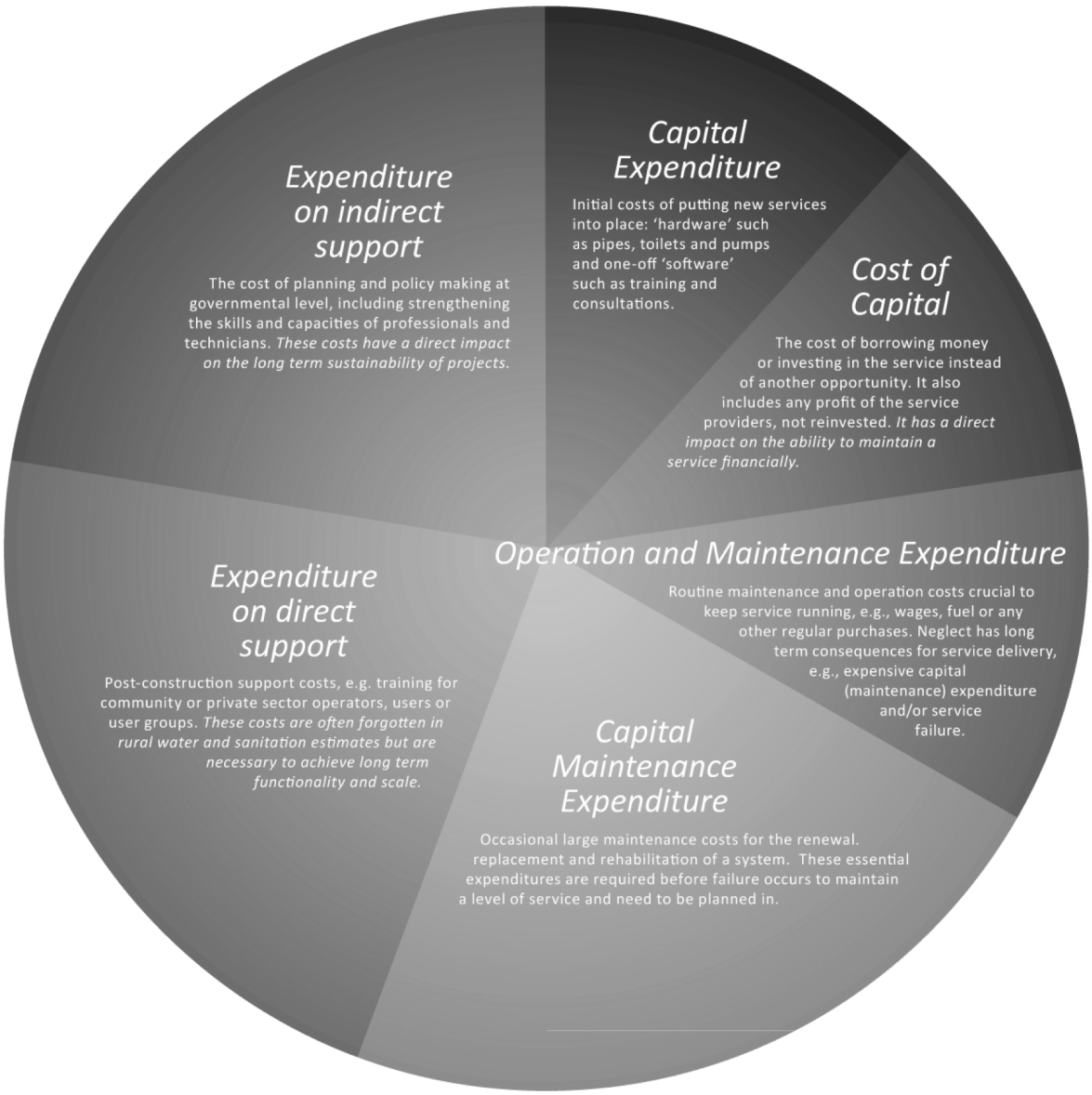


Figure 4 **Life-cycle costs components** (Fonseca et al. 2010).

Note: graph not proportional, the smaller cost components are usually taken into account for planning and budgetting, the larger blocks are not.

c) **In each country, the information on financing flows is available**. The sector knows where the money comes from, what costs each fund source covers, for what level of service, at all governance levels. Each contributor (donor, State, users) is untitled to know what has been done with its money. To ensure the financial sustainability of WASH services, each cost component needs to be covered by transfer, tax or tariff. The various sources of funds also challenge the reporting process. Being accountable to all of them means tracking the use of specific fund but, more importantly, to ensure that, combined with other funds, the grant/loan/fee/transfer ensure the delivery of a proper service to end users. The coordination, combination and use of these funds to plan and

budget the development and the post construction and support to WASH services is a major challenge. Various issues must be carefully addressed, including:

- An equitable design of tariff per service level – the lower the service level, the lower the tariff.
- A clear institutional framework which identifies the responsibilities of each governance level over cost recovery - The responsibility for financing each life cycle cost components must be clarified.
- Transparent transfer mechanisms to the governance level end responsible for financing specific costs – whatever the fund sources, finance should flow down and up to the level where expenditures are covered. The governance level responsible for investments should receive and manage adequate funds to develop, enhance, and extend WASH services. The governance level which is responsible for providing WASH services should receive enough to match-fund users' fees to cover O&M costs. The intermediate body responsible for specific support function should have the budget to fulfil this mission; etc
- Decision-making, reporting and monitoring processes that reconcile possible gaps between the scale of service provision and the level of governance – economies of scale matter and differ according to technologies and functions. It may, for instance, be more cost-effective to contract with a single operator to run the water and/or the sanitation services of several communities or districts. Thus the scale at which expenditures are made to optimise certain cost components differs from the scale of governance which manages funds.

✓ ***Financial decision are based on the risk analysis of uncovered cost components and risk mitigation strategies are available***

d) **Strengthened direct (user-provider) and indirect accountability (where authorities and regulators hold providers accountable) mechanisms.** In any location, the best mix of indirect and direct accountability mechanisms will have been identified, and measures put in places to strengthen these 'long' and 'short' arms of accountability, including:

- Where communities are involved in decision making about service level options, cost effectiveness can be improved. Wider use of community contracting enables rural communities to make more of the choices about the investments they 'receive'.
- Better access to different kinds of information at appropriate scales and time periods should also enables all costs to be much better tracked, by different organisations, against service outcomes.
- The separation of authority and provider roles, and a longer reach of effective regulation in both urban and rural areas will improve decision-making and prevent corruption.
- Where direct and indirect accountability is not working adequately, social accountability initiatives can start to fill the gap that normal contracts and consumer relations should address.

✓ ***Communities and others have more oversight over the way investments are made on their behalf.***

e) **Professionalisation of the sector, especially through capacity development of support functions including key regulatory, monitoring, reporting and planning functions and tools.** A lack of operational capacity, the need for increased investment, access to management expertise, improved performance, and improved accountability are amongst the main drivers for governments to seek alternative institutional options for the provision of water and sanitation services. Especially in the rural sector, further professionalization that promotes services rather than just one-time access is required. Where normal accountability arrangements including consumer relations and communications are weak or not functioning, initiatives to strengthen them and to build direct accountability such as strengthening 'citizen's voice' to demand better services from their providers, and to support service providers to respond can fill the gap

- ✓ ***Culture of professionalization supports accurate and timely reporting and open access to information in the sector supporting accountability through different channels.***

5 CONCLUSION AND QUESTIONS FOR THE SYMPOSIUM

5.1 Conclusions

The delivery of sustainable and decentralised WASH services is a complex issue and limitations in sustainability and decentralisation are acknowledged as major obstacles in reaching the MDGs. In this paper, we have tried to bring together the knowledge in terms of finance, cost and accountability, identify the biggest challenges the financing, costing and accounting for sustainable and decentralised WASH service face, and explain why combined improvements in these areas rely on a paradigm shift from infrastructure development to service delivery.

Solving the sustainability issue entails the consideration of costs that are mostly ignored at present, taking a life cycle cost approach which includes post construction and support costs together with capital investment cost in order to plan and budget sensitively. The consequence of not doing so is rising through slippage evidence and the related waste of money invested in the sector. Equity concern supposes that the allocation of transfers and taxes are geared towards the poor to offset the weight of tariffs that the poor cannot afford. Adequate and accessible information provision is at the heart of sustainability as tracking costs and finances is the basis for accountability and cannot be reached without clear definition of roles and responsibilities over cost recovery and funds allocation.

The issue of decentralisation raises the level of complexity in financing, costing and setting accountability mechanisms, as new levels of WASH governance are added with often unclear roles and a fundamental lack of capacity. Institutional support is much needed to perform the decentralisation of WASH services, and it must be acknowledged that this is a much broader governance issue than a WASH issue and is one for which economies of scope through a multisector approach should be considered to make it effective.

Trend patterns can be looked at as concerns but also as opportunities. The world has turned more than 50% urban, and so the focus in meeting the MDGs in the water sector has shifted emphasis too. Loans are rising compared to grants, reducing the funds available to develop rural WASH services. Providing services to urban users often costs far less per capita than that for rural users. It can also be achieved more easily in that urban areas are usually at least partially serviced by utilities. Channelling transfers and taxes to these urban utilities, which cover the remaining costs through tariffs, prevents donors and governments facing the challenges of decentralisation as they mostly deal with a single company per country (this is the case as utilities enjoy a monopoly position to supply all urban areas, at least in most African countries). They also reduce the scale of the challenge of sustainability, as most utilities already plan and budget according to a life cycle cost approach and have developed monitoring and reporting processes which allow them to be accountable on the use of funds they receive.

In terms of decentralisation, it is interesting to note that the support functions whose development is so crucial to the delivery of rural WASH services are offset for the provision of urban services. More specifically, many support functions are internalised within a monopoly urban utility and provided to local operating centres in small towns. The service can then be provided even if the urban water authority has not developed its requisite regulation and planning functions. In the short run, the access in urban areas can increase without further development of these core support functions. It may even be done through cost-effective financing mechanisms such as cross-subsidies between big and smaller towns. In some countries where decentralisation cannot be achieved rapidly and where a performing historical urban monopoly is in place, such as Morocco and Senegal, these utilities have been asked to extend their provision responsibilities to rural areas.

These trends are worrying for rural WASH services, and even more for countries which are mostly rural (for instance Benin, Burkina Faso, Mali, Mozambique, Niger, etc). But they can also be considered as opportunities. The issue is indeed to professionalize the rural provision of water, by addressing some of the rural issues in a similar fashion as with utilities which aim to provide a service for a given population in a well defined territory. This can be done in many different ways but probably entails, at the national level, to start looking at the sector as a single entity, instead of two different sub-sectors, one urban where users are entitled to receive a service, and one rural, where users can be at best provided functioning infrastructure.

So, to conclude, looking beyond 2015, we believe that the central issue will not be to increase coverage to halve the worldwide population with no access to WASH, but to ensure a minimum and reliable service level for all. **It is time to endorse a new paradigm in the provision of universal WASH services**.

5.2 Questions for the symposium

The following aspects are still unresolved and we would welcome participant's ideas to the ongoing debate.

The issue of scale and density

What are the most cost effective scales to operate, maintain, and rehabilitate different types and levels of services? Within a given service level, economies of scale are mainly technology driven, which advocates for a low diversity of systems developed in a defined area. In the water sector, governance levels have not been defined according to cost-effective scales and it entails a separation between regulatory functions and service delivery function. The design of interfaces is critical in terms of organisation, contract, monitoring and evaluation.

Who is accountable for post-construction and support functions and costs?

NGOs or civil groups have historically initiated pressure groups around gender, poverty, sanitation etc. However, some of these same NGOs are part of the problem of non-sustainable services, by focusing, like many others, on short terms approaches. Decentralised levels of government must champion sustainability as they are responsible to the citizens for service provision. But this approach needs support among those which are paying for implementation and pressure from tax payers and other consumer groups.

In developed countries, how to shift communication and advocacy messages towards more accountability of donors for sustainability?

In the education sector, when money is requested from northern tax payers through charities, the focus is on providing education to children over several years (as against 'merely' building schools). There is clear focus on messages over the long term, not only on "coverage". How can we make progressively make this same shift in the sector?

How to handle long term costs when funding and contracts for service providers are short term?

Post construction costs and in particular high capital maintenance in rural and peri-urban areas need to be budgeted for and be part of the "business" model similarly to how utilities are run. The maintenance of the sector cannot be dependent on donors' and governments' fluctuating sector priorities. Similarly to the road sector, should the WASH sector create a "mandatory ring fenced post-construction fund" for any infrastructure project? Other options include operating services at a scale large enough to recycle rehabilitation provision into investment in new/improved services to offset the high opportunity cost of having money saved for a long time. Should we promote the creation of a sector bank to make the money generated in the sector accessible at low costs to develop WASH services?

What to do about existing poor expenditure tracking systems (from donors all the way to local government and NGOs)?

One of the recommendations of the PLAN study (Robinson, 2009) reflects the challenge ahead "it is recommended that the Plan expenditure tracking systems should be updated in order to improve the availability of unit cost data, with a regular system of reporting introduced to utilise better the expenditure, output and beneficiary data collected by the Plan information systems.[...] It is also recommended that more sub-output codes are included to differentiate clearly between the many different types of water supply and environmental sanitation technologies and activities. It is also important that clearer

guidelines are provided on appropriate output units, in order that the expenditure and output data can be readily compared across country programs and regions."

How to shift from the disproportionate time spent in the process of procurement towards analysis of impact in the WASH sector, in particular in terms of hygiene?

A lot of time and effort goes into the process of procuring contractors and infrastructure etc, while very little time goes into making sure that the money invested delivers what it was aimed at. Arguably there is so much interest in the first process and not in the second because there is money to be made in the first one. So far, discussions on harmonisation and coordination in the sector have been focusing at the macro level of policy, disbursement of funds, outcomes, etc. In the sector, with the exception of the Development Banks which all, consistently, use their own procurement procedures, with the result that there is a large mix of procedures for using countries procurement systems:

- Within the same donor agency there are different procedures depending on the funding stream used;
- Within the same donor agency there are also different procedures depending on the recipient countries;
- Within the same donor agency there are different procedures if it concerns loans or grants.

These are all very complex and make it difficult to understand if aid is indeed untied, for instance, and where is the accountability?

What are the most important steps that need to be taken to address corruption risks in the WASH sector?

Preventing corruption tends to require comprehensive strategies that are specifically tailored to the context. Beyond recognising the scale of the problem, and recognising that it can be addressed, what are the most critical steps and useful strategies? Anti-corruption strategies also need to be as inclusive as possible (i.e. involving government, the private sector, NGOs and wider civil society) which is always a challenge. Switching from making service providers accountable to users to making water authorities and central government end accountable to user's needs to be further explored.

Using the service delivery approach to balancing economic and equity criteria

It is very well acknowledged that there cannot be a one size fits all approach to financing WASH services costs. Recent studies have even recognised the efficiency of subsidising sanitation in certain places, an intervention which earlier had been badly discredited as an appropriate option anywhere for its inefficiency (Tremolet, 2010; WSSCC, 2009). Given the very different relative magnitude of cost components per service level, and considering the various objectives pursued in providing services (safe water for consumption, adequate water for sanitation and small-scale productive uses etc), there are solutions to explore in order to reconcile the necessity to recover costs with the level of contribution required from users, based on the level of service effectively received, rather than on the cost component to be financed through tariff.

6 REFERENCES

Agence Française de Développement, 2010. *Cadre d'intervention sectoriel Eau et Assainissement 2010-2012*. [pdf] Paris: Agence Française de Développement. Available at : http://www.afd.fr/jahia/webdav/site/afd/users/administrateur/public/Portail%20Eau%20et%20Assainissement/pdf/CIS%20E&A.pdf [Accessed 4 November 2010].

Asthana, A.N., 2004. Corruption and decentralisation: evidence from India's water sector. In WEDC (Water, Engineering and Development Centre), 30th WEDC International Conference : People-centred approaches to water and environmental sanitation. Lao PDR October 2004. WEDC : Loughborough.

Butterworth, J. and de la Harpe, J., 2009. Improving the framework? Institutional reform and corruption in the water sector. *U4 Brief*, [Online] 28. Available at http://www.u4.no/document/publication.cfm?3518=improving-the-framework [Accessed 01 November 2010].

Davis, J., 2004. Corruption in Public Service Delivery: Experience from South Asia's Water and Sanitation Sector. *World Development*, 32 (1), pp. 53–71.

Department of Water Affairs and Forestry, 2007. *South Africa Costing of Household Sanitation*. South Africa: Department of Water Affairs and Forestry.

Devarajan, S. Swaroop, V. and Heng-fu Zou, 1996. The composition of public expenditure and economic growth. *Journal of Monetary Economics,* 37, pp. 313-344.

EUWI-AWG, 2008. *Working together to improve aid effectiveness in the water sector: Mapping EU development assistance to the water sector in Africa*. Delft: IRC International Water and Sanitation Centre in assoc. with European Union Water Initiative – Africa Working Group.

Evans, P., 1992. *Paying the Piper: An overview of community financing of water and sanitation.* Delft : IRC International Water and Sanitation Center.

Fonseca, C. (forthcoming). *A review of the literature and decision support tools which use unit costs for rural and peri-urban water supply and sanitation in developing countries*. The Hague: IRC International Water and Sanitation Centre.

Fonseca, C. and Cardone R., 2005. Analysis of cost estimates and funding available for achieving the MDG targets for water and sanitation. *Background report for WELL Briefing Note 9,* [Online]. Available at: http://www2.gtz.de/Dokumente/oe44/ecosan/en-Analysis-cost-estimates-funding-available-achieving-MDG-targets-water-sanitation-2005.pdf [Accessed 4 November 2010].

Fonseca, C. et al., 2010. Life-Cycle Costs Approach: Glossary and cost components. *WASHCost Briefing Note 1.* [pdf] The Hague: IRC International Water and Sanitation Centre. Available at: http://www.washcost.info/page/752 [Accessed 2 November 2010].

Foster, V. and Briceño-Garmendia, C. eds., 2010. *Africa's infrastructure. A time for transformation*. [pdf] WA DC: Agence Francaise de Développement in assoc. with the World

Bank. Available at: http://siteresources.worldbank.org/INTAFRICA/Resources/aicd_overview_english_no-embargo.pdf [Accessed 5 November 2010].

Franceys R. and Pezon C., 2010. Services are forever: The importance of capital maintenance in ensuring sustainable. *WASH services, Briefing Note 1b*. [pdf] The Hague: IRC International Water and Sanitation Centre. Available at: http://www.washcost.info/page/866 [Accessed 4 November 2010].

Hall, D., 2010. The past, present and future of finance for investment in water systems. In: IRC International Water and Sanitation Centre, IRC Symposium 2010, Pumps, pipes and promises: costs, finances and accountability for sustainable WASH services. The Hague, The Netherlands 16-18 November 2010. IRC International Water and Sanitation Centre: The Hague.

Harpe, J. de la and Butterworth, J. 2009. Improving the framework? Institutional reform and corruption in the water sector. U4 Brief 2009: 28. Bergen, Chr. Michelsen Institute [online] Available at www.u4.no/themes/natural-resources/

JMP, 2010. *Progress on Sanitation and Drinking-Water: 2010 Update.* [pdf] France: WHO and UNICEF. Available at: www.wssinfo.org [Accessed 5 November 2010].

Kwame Asante Associates, 1999. *CWSA Ghana unit cost report.* Ghana: Community Water and Sanitation Division.

Ministère de l'Agriculture, de l'Hydraulique et des Ressources Halieutiques, PN-AEPA 2015, Rapport sectoriel Bilan annuel au 31 décembre 2009, Février 2010.

Ministry of Water and Environment, 2008. *Tracking study for the water and sanitation sector (WSS) cost variation*. Government of Uganda: Ministry of Water and Environment Directorate of Water.

Moriarty P. et al., 2010, Ladders for assessing and costing water service delivery. *WASHCost Working Paper 2*. [pdf] The Hague: IRC International Water and Sanitation Centre. Available at: http://www.washcost.info/page/753 [Accessed 5 November 2010].

Moriarty, P. & Verdemato, T., 2010. *Report of the International Symposium on Rural Water Services, Providing Sustainable Water Services at Scale*. [pdf] The Hague: IRC International Water and Sanitation Centre. Available at: http://www.scalingup.watsan.net/page/351 [Accessed 4 November 2010].

OECD, 2008. *2008 DAC Report on Multilateral Aid*. [pdf] OECD. Available at: http://www.oecd.org/dataoecd/59/11/42901553.pdf [Accessed 05 November 2010].

OECD, 2010. *OECD. Stat Extracts, 2010.* [Online] Available at: http://stats.oecd.org/Index.aspx?DatasetCode=ODA_SECTOR [Accessed 05 November 2010].

Pezon, C., 2010. Decentralisation and the use of cost data in WASHCost project countries. Synthesis of country reports 2009. *WASHCost Briefing Note 2*. [pdf] The Hague: IRC International Water and Sanitation Centre. Available at: http://www.washcost.info/page/842 [Accessed 3 November 2010].

Plummer, J. and Cross, P., 2006. Tackling Corruption in the Water and Sanitation Sector in Africa: Starting the Dialogue. *WSP Working Paper.* [pdf] Available at

www2.wsp.org/UserFiles/file/712200782528_Tackling_Corruption_in_the_Water_and_Sanitation_Sector_in_Africa.pdf [Accessed 5 November 2010].

Plummer, J., 2007. Making Anti-Corruption Approaches Work for the Poor: Issues for Consideration in the Development of Pro-poor Anti-corruption Strategies in Water Services and Irrigation. *Report 22*. [pdf] Stockholm: SIWI. Available at http://www.siwi.org/documents/Resources/Reports/Report22_Making_Anti-corruption_Work_2007.pdf [Accessed 4 November 2010].

Potter A. Klutse, A. et al., 2010, Assessing sanitation service levels. *WASHCost Working Paper 3.* [pdf] The Hague: IRC International Water and Sanitation Centre. Available at: http://www.washcost.info/page/902 [Accessed 5 November 2010].

Ranjiv Gandhi National Drinking Water Mission, Department of Drinking Water Supply Ministry of Rural Development, Government of India, 2008. Presentation to NAC on 26th February 2008.

Reddy, R.V., Rammohan Rao, M.S. and Venkataswamy. M., 2010. *'Slippage': The Bane of Drinking Water and Sanitation Sector (A Study of Extent and Causes in Rural Andhra Pradesh).* [pdf] WASHCost India. Available at: http://www.washcost.info/page/705 [Accessed 5 November 2010].

Rioja, F.K., 2003. Filling potholes: macroeconomic effects of maintenance versus new investments in public infrastructure. *Journal of Public Economics,* 87 (9-10), pp. 2281-2304.

Robinson, A. 2009. Global Expenditure Review: Water Supply and Environmental Sanitation. [pdf] Plan International. Available at: http://plan-international.org/about-plan/resources/publications/water-and-sanitation/global-water-and-expenditure-review [Accessed 5 November 2010].

Robinson, M., 2007. Introduction: Decentralizing service delivery? Evidence and Policy implications. *Institute of Development Studies Bulletin*, 38 (1).

Ryan, P., 2008. Stepping into Action: *The second report on citizen's action for accountability in water and sanitation. WaterAid Report.* [pdf]. London: WaterAid. Available at http://www.wateraid.org/documents/plugin_documents/stepping_into_action.pdf [Accessed 5 November 2010].

Skinner, J., 2009. Where every drop counts: tacking rural Africa's water crisis. *IIED Briefing,* [pdf] March 2009. Available at: http://www.iied.org/pubs/pdfs/17055IIED.pdf [Accessed 5 November 2010].

Taylor, B., 2009. *Addressing the sustainability crisis: lessons from research on managing rural water projects*. [pdf] July 2009. Available at: http://www.wateraid.org/documents/plugin_documents/sustainability_crisis.pdf [Accessed 4 November 2010].

Transparency International Kenya and Maji na Ufanisi, 2009. *Water governance study: reforming the Kenya water sector*. [Online] 23 June 2009. Available at: www.tikenya.org/viewnews.asp?id=1253 [Accessed 15 July 2010].

Trémolet, S. with Kolsky, P. And Perez, E., 2010. Financing On-Site Sanitation for the Poor. A Six Country Comparative Review and Analysis. WSP Technical Paper. [pdf] WSP/WB. Available at:

http://www.wsp.org/wsp/sites/wsp.org/files/publications/financing_analysis.pdf [Accessed 5 November 2010].

Evans, B. Voorden, Carolien v.d. and Peal, A., 2009. Public funding for sanitation. The many faces of sanitation subsidies. [pdf] Geneva: WSSCC. Available at: http://www.wsscc.org/fileadmin/files/pdf/publication/Public_Funding_for_Sanitation_the_many_faces_of_sanitation_subsidies.pdf [Accessed 5 November 2010].

World Bank, 1994. *World Development Report 2009: Infrastructure for development.* WA DC: World Bank.

World Bank, 2003. *Technical note on rural transport in multi-sectoral and community driven projects.* WA DC: World Bank.

World Bank, 2003. Making Services Work for Poor People: 2004 World Development Report. WA DC: World Bank and Oxfor University Press.

World Health Organization, 2010. *GLAAS 2010: UN-Water global annual assessment of drinking water and sanitation – targeting resources for better results*. World Health Organization.

WSP, 2003. *Governance and Financing of water supply and sanitation in Ethiopia, Kenya and South Africa: A Cross Country Synthesis*. Nairobi: Water and Sanitation Program.

WSP, 2005. *Guidelines for assessing unit costs for water supply and sanitation services*. Water and Sanitation Programme.

Zinnbauer, D. and Dobson R., 2008. *Global Corruption Report 2008: Corruption in the Water Sector*. [e-book] Cambridge: Cambridge University Press. Available at http://www.transparency.org/publications/gcr/gcr_2008 [Accessed 5 November 2010].

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CONTACT DETAILS

IRC International Water and Sanitation Centre
Bezuidenhoutseweg 2
2508 EH The Hague
The Netherlands
Christelle Pezon pezon@irc.nl
Catarina Fonseca fonseca@irc.nl
John Butterworth butterworth@irc.nl