Strategic Financial Planning for water supply and sanitation in Africa

- rationale
- methodology
- experience
- lessons learned

EUWI
EU WATER INITIATIVE

Finance
working group

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Rationale, methodology, experience, lessons learned

Formed in 2003, the EUWI Finance Working Group has representatives from the public, private and civil society and is focused on providing instruments for strategic financial planning of water and sanitation.

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Glossary of acronyms and abbreviations used in this report

AfDB	African Development Bank
DBSA	Development Bank of South Africa
DFID	UK Department for International Development
EAP	Environmental Action Programme (of EECCA)
EECCA	Eastern Europe, Caucasus and Central Asia
EIB	European Investment Bank
EUWI	European Union Water Initiative
FS	Financing Strategy
FWG	Finance Working Group of the EUWI
GWP	Global Water Partnership
IFC	International Finance Corporation
IFI	International financing institution
M&E	Monitoring and evaluation
MDG	Millennium Development Goal
MED EUWI	Mediterranean Component of the European Union Water Initiative
MOF	Ministry of Finance
MTEF	Medium-term expenditure framework
NGO	Non-governmental organisation
NPD	National Policy Dialogue
O&M	Operation and maintenance
ODA	Official development assistance
OECD	Organisation for Economic Cooperation and Development
PSP	Private sector participation
SFP	Strategic Financial Planning
SIP	Sector Investment Plan
SWAp	Sector-wide approach
SWIFT	Sector-wide Investment and Financing Tool
UNICEF	United Nations Children's Fund
VIP	Ventilated improved pit latrine
WASA	Water and Sewerage Authority of Lesotho
WASH	Water, sanitation and hygiene
WHO	World Health Organization
WSP	Water and Sanitation Program (of the World Bank)
WSS	Water supply and sanitation

1. Strategic Financial Planning for water supply and sanitation in Africa

1.1. Strategic Financial Planning in a nutshell

Strategic Financial Planning (SFP) matches national water policy to local resources, capacity, and available finance. A key part of SFP is the production of a national consensus on what water supply and sanitation (WSS) services the country can or should afford in the long term, and how these should be paid for. It proceeds by building a consensus around:

i) Agreement on the baseline situation for WSS;
ii) Estimation of the projected financing gap implied by current plans and ambitions;
iii) Identification of policy options that could help to close the financing gap;
iv) Development of alternative future WSS scenarios;
v) Production of a Financing Strategy (FS) that is realistic and affordable.

SFP comprises an *approach* and a *process*, at the heart of which is dialogue and iteration. It also usually leads to a *product* in the shape of a document (e.g. a Financing Strategy). However, the aim of SFP is for it to become fully embedded into the host government's budgetary and financial procedures; the production of a document is definitely not the end of the exercise, and if it is, the exercise will be incomplete.

SFP requires both an open policy dialogue and a sound analytical base that can be accepted by all stakeholders. Not the least important part of SFP is the assembly (sometimes for the first time) of comprehensive data on existing WSS, its costs – both for operation and maintenance (O&M), and replacements needs – and current and future financing for both capital and running costs from different sources. The SFP assesses alternative future options for service levels and funding. Where appropriate, it can be supported by the use of tools such as the FEASIBLE model (described in Chapter 4).

The financial implications of SFP should be fed back into national budgetary and financial systems and procedures, so that it becomes fully embedded.

1.2. The funding challenge for WSS

The latest estimates published by the African Development Forum, based on the Africa Infrastructure Country Diagnostic[1], indicate that Africa's infrastructure spending needs on WSS to meet the Millennium Development Goals (MDGs) could amount to US$21.9 billion annually. Current spending is estimated to be around US$7.6 billion. Allowing for some potential for raising tariff revenues (US$1.8 billion), and improved efficiency (US$1.2 billion), the residual funding gap is US$11.4 billion annually.

The above figures, like most discussions of the MDGs, refer only to household-level sanitation, where sewageis not collected and treated centrally. With the growth of urban populations there is no feasible alternative to collective sewerage and final treatment, which is expensive. At present this is widely neglected, and the cost of recovering the backlog is immense, tentatively estimated at US$5 billion per annum[2]. This is a guesstimate of the amount required for rehabilitating existing ageing infrastructure and installing new systems to deal with urbanisation.

1.3. Overview of African WSS financing status and problems

Water is widely under-funded in all respects. Much of its

[1] World Bank (2009).
[2] Almost half (US$70 billion) of the US$180 billion investment requirements for water estimated in the Framework for Action (GWP, 2000) presented to the World Water Commission, and quoted in the Camdessus Report (Winpenny, 2003) is accounted for by municipal wastewater collection and treatment.

infrastructure is out of sight and many governments give its financing low priority. Maintenance is easy to postpone, and so assets deteriorate. At first sight, there is a yawning gap between most estimates of investment and financing requirements over the next few decades, and what is currently being spent in the various parts ofthe water sector. Aid is unevenly applied, creating *donor darlings* but also *aid orphans*. Crucial parts of the water sector are starved of national – and international – funding.

Insufficient overall flow of finance

There is a basic distinction between *investment* in water, meaning the creation ofassets (infrastructure and other systems), and the *means of financing* it. Much of the work on estimating financial requirements is actually about achieving a specific rate of investment (e.g. in new connections) or activity (e.g. supply of a minimum daily amount of water) set to attain development targets. Where large increases in investment or other spending are required, finance is not necessarily the major constraint. Often, there are prior obstacles to raising the rate of physical investment or other activities under local conditions, captured in the term 'capacity constraints'. There are even reports from local field workers in the African water sector of unspent budgetary allocations being returned to the central government[3] and concerns over the flow of 'bankable' projects.

There are alternative ways of closing an apparent gap between requirements and available funds – such as revising targets, adjusting quality standards, rescheduling the investment programme, using locally-available technology, and the various kinds of demand management.

There are other ways of providing 'finance', not all requiring commercial sources – such as achieving efficiencies with current expenditure, self help, investment in kind (labour and materials), personal savings, and loans and contributions from family and friends.

With these important *caveats*, it is still clear that the current rate of flow of financial resources into water is insufficient to meet reasonable targets set by national governments and endorsed by the international community. In its 2010 update, the Joint Monitoring Programme of the World Health Organization (WHO) and the United Nations Children's Fund (UNICEF) concluded that Sub-Saharan Africa is lagging behind in progress towards the MDG target with only 60% of the population using improved sources of drinking-water despite an increase of 11 percentage points since 1990[4].

Finance is not uniform – specific sources of finance are relevant for different parts of the financing gap. For example, the need for capital expenditure may be more appropriately filled by national governments and development partners, while O&M funding needs to be derived from user charges, with part of the current gap closed by efficiency measures. Finance targeted at 'soft' areas such as utility reform, and other areas of governance – which normally comes from public sources – can reduce the overall need to mobilise new finance for investment. Private equity and international financing institution (IFI) loans often come with conditions or supportive resources which improve the efficiency and creditworthiness of the recipient.

Geographical imbalances

Middle-income countries have many more options than poorer developing countries for attracting *commercial finance* for water, including raising finance from their own capital markets. Much of the agenda of risk-sharing is relevant mainly to these middle income and emerging markets, especially those on the brink of access to commercial funding sources. The preference of financiers for less risky outlets during times of international financial turbulence leaves the poor developing countries even more exposed than before.

Water has always been the least favoured sector for private sector participation (PSP), generally accounting for less than 5% of the value of infrastructure projects involving PSP.

[3] e.g. WaterAid (2004).
[4] WHO/UNICEF (2010).

Within water infrastructure, a small number of countries, typically in the middle-income range, take the lion's share of new projects[5]. The correlation between need and aid response is clearly imperfect, though many of the countries least served by the present aid distribution are those in which it is most difficult to use aid effectively. The problem is particularly acute in fragile states, recovering from natural disasters or civil war.

Problems of financing O&M

The neglect and under-funding of maintenance, routine repairs and replacement of obsolete items means that infrastructure deteriorates and increasingly fails to provide the services it was designed for. In rural areas, the neglect of O&M budgets and cost recovery is one reason for the high rate of non-functionality observed in many systems. In Ethiopia, a survey[6] of almost 7000 rural water schemes found that 30–40% were non-functional; a shortage of finance for wages, fuel, materials and spare parts was an important factor in this.

The deficit in financing O&M costs is a substantial additional item in the investment costs of the MDGs. Estimates carried out by the WHO take into account the high costs of sustaining existing systems. The WHO's conclusion is:

"From 2005 until 2014 inclusive, US$72 billion needs to be spent on water and sanitation *annually* in the [developing] countries included in this analysis, of which US$18 billion is on increasing coverage to the currently unserved population and US$54 billion is on maintaining and renewing existing facilities for populations already with water supply and sanitation coverage."[7]

For Africa, the WHO authors estimate that 60–70% of all annual spending on water supply and 40% of that on sanitation, in this period will be for operating, maintaining and replacing existing facilities (including those newly created by 2015). For systems that are financed through debt, financing costs can also be a substantial annual outlay to be funded from tariffs or from the state budget.

2. Sources of finance for WSS: the 3Ts

2.1. The 3Ts and repayable sources

Although different parts of the water sector require different types and combinations of finance, it is becoming customary to approach financing using the '3Ts' – tariffs, taxes and transfers. This approach makes a key distinction between basic *revenues*, on the one hand, and *repayable funding* sources, on the other. The revenues (3Ts) provide a cash flow which can be used to attract (or *leverage*) funding which will be repaid from these future revenues. If basic revenues are inadequate, and likely to remain so, then loans, bonds and equity are not feasible, and cannot substitute for this basic deficiency.

Tariff revenue is the foundation of future cash flows, and will always be the main source of funding for recurrent O&M expenses. In well-managed services with a good revenue base (e.g. in sizeable urban areas), tariff revenues from user charges should contribute to investment costs too.

Tax-funded subsidies are widely used to supplement tariff revenues. They can be applied predictably and transparently – e.g. to support specific groups of deserving consumers, or as part of a performance-related agreement between the government and the utility, or they can be used *ex post facto* to cover operating deficits as they arise. Government grants and loans on concessional terms are also widely used to fund capital investment. 'Soft' loans have the merit of containing the signals and incentives necessary to nudge utilities towards greater financial autonomy.

[5] OECD/DAC (2008–9).
[6] Ministry of Water Resources Ethiopia (2006).
[7] Hutton and Bartram (2008).

Transfers originate from external official development assistance (ODA) plus national and international 'solidarity' between citizens. 'Solidarity' funds are characterised by philanthropic intent, and the use of private, non-tax sources of revenue.[8] International solidarity from non-governmental sources provides major volumes of grant support for WSS projects. A number of large foundations are active in the area, transferring annual sums which rival those of official aid agencies. There is also a plethora of non-governmental organisations (NGOs) working mainly at local project levels, many with overseas links, but others drawing on national charitable, religious and community movements. Recently, a number of companies have also become active in providing water services as part of a corporate social responsibility agenda.

From a longer term viewpoint, user charges are the most sustainable and predictable of the 3Ts, and fall within the control of provider agencies. Budgetary transfers can normally only be programmed several years ahead as part of government medium-term expenditure frameworks, though commitments can be rolled over. The same is true of ODA, for which agreements tend to be made for 3–5 years ahead in line with the budgets of donor agencies, though longer term commitments are possible for some of the most deserving countries. Actual annual future spending from ODA commitments to WSS is, however, difficult to predict. Philanthropic transfers are also variable and difficult to programme.[9]

Sustainable cost recovery entails securing future cash flows from a combination of the 3Ts, and using this revenue stream as the basis for attracting repayable sources of finance – loans, bonds and equity – depending on the local situation. In a longer term perspective, the repayable sources cannot substitute for a shortage of basic revenues – they merely displace the burden to future years.[10] Even national state subsidies and ODA are performance-related to some extent, and hence depend on adequate revenue flows. In the long term, tariffs underpin water finance.

Loans are of various kinds. Short-term loans to cover working capital requirements and to cushion irregularities in cash flow are normally available from local banks. Medium- and long-term bank lending for the development of water infrastructure is uncommon in Africa, and where it arises tends to need government guarantees. Foreign currency lending is rarer still and risky for the borrower. Lending from IFIs, such as the African Development Bank, the International Development Association, the International Finance Corporation (IFC) and the European Investment Bank (EIB), is more attractive since the terms, and length, of the credits are more appropriate to the cash flow of the underlying assets, though they still entail forex risk.[11]

For local and community projects, *microfinance* is another source of funding, especially for schemes with a short payback period. Although microfinance agencies have made limited inroads into the water sector, there are niches where they could play a vital complementary role.[12]

Bond issues for municipal water projects are the exception in Africa. The few cases so far have depended on credit enhancement of various kinds.[13]

Private equity has been involved in concessions in some West African countries, but successful projects elsewhere have been rare.[14]

Sharia-compliant *sukuk* bonds are another variant, in which repayments are linked to returns on the underlying asset.

2.2. Specific risks of WSS

Of all the common sectors of public infrastructure, water is the most difficult to fund, and the riskiest for commercial and private finance. Water poses *specific or disproportionate risks* to financiers.

[8] The use of differential tariff structures and levels to cross-subsidise some consumers from others is better regarded as a tool of tariff policy, though it may also have 'solidarity' motives.
[9] Except where they are secured from long-term commitments by trusts and foundations, or from personal covenants (e.g. tithing used by some religious organisations).
[10] Though if the use of repayable funds such as equity improves the commercial performance of water undertakings, they can increase the cash flows from which they are repaid.
[11] Some agencies lend in certain local currencies, usually where they can raise bonds in the same currency.
[12] See Tremolet and Scatasta (2009) for examples.
[13] The Johannesburg city bonds were supported by guarantees from IFC and the Development Bank of South Africa (DBSA), and the bond in prospect for the Uganda water utility will be facilitated by government debt–equity conversion.
[14] Kauffmann and Perard (2007).

Water services always have a high social and political profile, and politicians and water users alike are ambivalent on whether water should be treated as a basic right – to be provided free or with a subsidy for the poorest – or whether it is a scarce economic product to be charged for. In any case, the delivery service to provide clean and safe water has to be paid for and the result is often an uneasy compromise where water services are priced below economic levels and the sector is chronically under-financed. Many municipal water supply and irrigation authorities exist on a financial hand-to-mouth basis, some of them bankrupt in a legal sense, reliant on infrequent and inadequate government subsidies. These improvised financial arrangements usually result in a poor level of service and deteriorating infrastructure.

Raising water tariffs is a sensitive local political issue. Water providers are mostly publicly owned bureaucratic monopolies, subject to extensive political interference over staffing and operations. There are exceptions: in some developing countries the public water service providers have become commercially and financially more successful; in Africa, the World Bank's Water and Sanitation Program (WSP) is working with 14 utilities to promote greater commercial orientation and financial self-sufficiency.[15]

Certain other features of water services hinder access to commercial loan finance or private equity investment:[16]

- Important benefits of water are not reflected in its price;[17]
- The infrastructure required for water supply is costly, and amortised over long periods;
- Once built, water infrastructure is a sunk cost with little or no alternative value;
- Revenues normally accrue in local currency – which entails a devaluation risk where debt and equity have to be serviced in foreign exchange.

For all these reasons, water requires substantial support and risk-sharing from the public sector. Various kinds of *facilities* exist to leverage repayable sources from the basic revenue streams. Examples include the specialised water facilities of the EU and AfDB, Partial Credit and Partial Risk Guarantees, municipal bond pooling schemes, and Output-Based Aid. These facilities can be viewed as bridges between cash flow and repayable funds. A number of them neutralise specific risks through various kinds of guarantees and insurance, which enables financing to take place, or improves the terms on which it is available. Many such facilities depend on subsidies, hidden or overt, from national or international public bodies, or not-for-profit actions by individuals and private companies.

3. Strategic Financial Planning for WSS

3.1. Objectives of SFP

SFP is a response to the chronic problems of WSS described in the previous chapters, resulting in persistent under-financing of the sector, skimping on O&M spending, and the absence of national financial frameworks for these services. SFP seeks to clarify *who* (users and taxpayers) should pay for *what* (operating/capital expenses, water/sanitation, and rural/urban/peri-urban areas) and what the future service level should be. It determines *how much* money is needed and *where* it would come from.

SFP is concerned both with the cost of future services and how they are to be funded, which presupposes agreement on the future service level. Key decisions are required about how to interpret international targets and their timing (e.g. MDGs) as well as national policy targets. Within the overall framework, the strategies have to consider the balance of resources (and, crucially, subsidies) between sub-sectors (water supply and sanitation), programmes (connection fees, lifeline consumption and basic needs) and geographical areas (cities, peri-urban areas, small towns and villages, and provinces).

[15] WSP/PPIAF (2009).
[16] In this paper 'commercial' is preferred to 'private' as applied to loan finance, since much commercial lending is from banks that are publicly owned or with a public equity holding. Also, 'investment' is used in the sense of risk taking, through equity holdings. A commercial loan is not an 'investment' (except in the case of a default!).
[17] For three reasons: it is in some respects a 'public good' (certain services are not profitable for private firms to supply, because they cannot exclude free-riding consumers from benefiting); it is a 'merit good' (users receive benefits they do not fully perceive, hence there is a public interest in raising general consumption); and there are external benefits – as well as disbenefits – e.g. benefits to public health and environment.

SFP would be a major step towards implementing the vision of the Paris Declaration on Aid Effectiveness. In particular, it would support the development and implementation of sector-wide approaches (SWAps), and promote consensus on sector targets between the different parts of government charged with responsibility for WSS. It is no silver bullet, though is likely to be a crucial part of the solution. Financial planning needs to be coordinated with other sector reforms as part of improved governance. During implementation the improved management of public expenditure will also enter the critical path.

In addition to the basic rationale for SFP laid out above, experience suggests other important objectives that may be attained during this process. SFP can become the forum for achieving consensus on policy objectives amongst key stakeholders. In this role it is the catalyst for resolving disagreements, once different parties understand the implications of their demands and the financial constraints that have to be confronted.

SFP should be a living process, enabling stakeholders to revisit WSS policies regularly in response to events and changes in affordability. It increases the transparency of sector planning. It can help to integrate the efforts of different ministries and levels of government involved in the WSS sector. It can also take account of private sector and civil society actions and self supply by users themselves.

SFP should improve coordination between WSS actors and stakeholders, specifically improving the link between policy and projects and bringing the two into closer alignment. It should link sector planning more closely into the budget system, delivering better and more predictable public budget resources for WSS. It can support an informed debate about tariff policy for the sector and ensure that considerations of affordability are sufficiently factored into these debates.

In developing countries, SFP is an essential part of building the case for external support through ODA or loans from IFIs. In this context, it identifies why and where such funds are needed to complement revenue from user-charges and domestic public budget resources, and demonstrate how financial sustainability can be attained. The development of an FS in Mozambique is being linked to the development of a SWAp (Box 1).

Box 1. The Mozambique Financing Strategy

With the support of WSP, the National Directorate for Water in Mozambique has been developing a rural water supply FS. This sector has historically been funded by fragmented donor-driven projects, each with its own project and financing modalities and institutional framework. As part of its efforts to attain the MDGs, this country has developed a roadmap for the rural water sector and is moving towards a SWAp. The roadmap contains complete estimates of the costs of improved water services. The FS would complement this by providing data on financing options and modalities.

There is interest from donors in expanding the exercise to include urban services. A government and donor round table is being arranged to review the analysis and strategy in the FS.

Source: Virjee (2007)

In short, the objectives of SFP are:

- Providing a structure to enable a policy dialogue to take place, involving all relevant stakeholders, with the aim of producing a consensus on a feasible future WSS;
- Illustrating the impact of different objectives and targets in a long-term perspective;
- Linking sector policies, programmes and projects;
- Facilitating external financing by providing clear and transparent data on financing requirements;
- Providing a reality check on the three sources (3Ts) of financing for the sector.

3.2. Essential elements of SFP

Different countries deal with the future financial provision for their WSS in different ways. Some countries achieve the main objectives of SFP without calling it such. Conversely, countries using a formal process of SFP may not achieve some of its basic objectives. There are six core elements which SFP, or its variants, should include.

i) Data collection and analysis: assembly of basic essential information about the current status of WSS. This should include technical data on infrastructure for supply and distribution of WSS services; customer base information (disaggregated by region, urban/rural location and type of connection); an estimation of the unserved population; indicators of service performance; and financial information – current funding status, financial flows and sources, and under-funded areas.

ii) Formulation of future plans and scenarios for WSS: the selection of clearly defined and well-considered options taking into account official targets, public opinion and external drivers. This should include business-as-usual scenarios, and other scenarios of varying ambition.

iii) Use of an analytical framework, such as a formal model, enabling the costs, financial implications and funding potential of various scenarios to be estimated, with capacity for iteration in order to vary key parameters where this is needed to reconcile ambitions with financial realities.

iv) Production of a realistic Financing Strategy, based on the assessment of affordability, both at household and government levels, and the availability of all feasible sources of funding.

v) A process for stakeholder dialogue and consensus building at all these key stages, involving agreement on the current situation, future scenarios, priorities, trade-offs and funding mechanisms.

vi) Integration of SFP into regular national planning and financial processes, such as annual budgets and medium-term expenditure frameworks (MTEFs).

3.3. Outcomes of SFPs

This section describes some of the results of recent SFP exercises in African and other countries.

Generation of relevant information

Undertaking an SFP requires the assembly of comprehensive background information about WSS demand, costs and finances. In some cases, this will be the first time such data has been produced. Although many countries have produced status reports, plans and strategies for WSS, it is only very recently that these have included data on future O&M costs and on financial flows and sources. SFP takes an iterative approach, including costs related to the existing (and new) system, affordability constraints from consumer budgets or preferences, and variable levels of service on different policy scenarios.

Impact on governance and processes

The process of SFP brings a dose of realism to WSS policies. Early versions of the Ethiopian FS,[18] despite lacking a structured format, contained data which had not previously been comprehensively assembled, and which permitted a more sophisticated policy debate. Amongst the topics it highlighted were: the shortcomings in the flow of finance from central government to local agencies; the existence of policy trade-offs and the importance of setting priorities; user affordability as a constraint on rapid implementation of the Universal Access Plan; the marginal role of the private sector as a source of finance as well as an operator; and the need to channel as much ODA as possible into common funds within normal budgeting processes.

Production of an FS will not necessarily have an immediate tangible effect on financial outcomes affecting the

[18] EU Water Initiative (2006).

water sector. It first needs to affect the *processes*, or the governance structures that are in place (Box 2).

Box 2. Ethiopia: Mixed Outcomes from the SFP

The Financing Strategy (FS) was completed in 2007. Although its main achievements have been in the realm of process rather than more tangible outcomes, some key initiatives have resulted from it, namely:

- A shift in donor financing between different national budgetary channels, from using 'Channel 2' (through sector ministries) and 'Channel 3' (off-budget) to the use of 'Channel 1B' (on-budget);
- Establishment of the annual Multi Stakeholder Forum;
- Designing a water, sanitation and hygiene (WASH) Capacity Building Pool;
- Strengthening monitoring and evaluation (M&E);
- Increasing accountability to stakeholders.

The FS has not yet been used to support policy decisions over sources of finance, such as increasing tariffs in urban areas. Nor has it been used to help identify alternative technological options to achieve the sector objectives. The FS's most concrete outcome to date has been the design of a WASH Capacity Building Pool for sector development.

The FS has also triggered institutional and governance developments. There has been a strong demand for improved sector M&E and reporting arising from that, matched by political commitment at ministerial level. High-level commitments made in one year are reported on 12 months later. This creates a transparent link between the sector's finances and its outcomes. Shifting donor funds towards the use of 'Channel 1B' reinforces decentralisation by reducing the role of central ministries in implementation.

The FS envisaged holding a financing round table with the aim of raising donor support. The FS was part of the momentum created by the European Union Water Initiative (EUWI) Country Dialogue process improving sector coordination and governance, all of which gave donors such as the UK Department for International Development (DFID) the confidence to make major commitments. In the same vein, the WASH Capacity Building Pool aims to bring in up to US$11 million of additional funds for technical assistance.

It was envisaged in the FS that the government should increase investment from its own sources, to complement its efforts to increase external assistance. Despite some signs of this, it is not yet clear that the sector ministries have used the FS as a tool to generate additional internal resources.

Source: Ethiopia case study in OECD (2009b)

Greater realism in the policy debate

In the Eastern Europe, Caucasus and Central Asia (EECCA) countries, only recently has WSS come to be regarded as needing its own governance and a robust financing system to cope with the gap between historical expectations and the constraints of an elderly, oversized and deteriorating infrastructure. Sector studies started by the Environmental Action Programme (EAP) Task Force and culminating in the Financing Strategies for Moldova, Armenia and Georgia (Box 3) contain, practically for the first time, information about WSS as a coherent system, the first step in making balanced and informed judgements on its future development.

Recognition of the priority of sanitation

In Uganda (Box 4) the development of an FS has raised national awareness of hygiene and sanitation, promoted the involvement of district administrators, and improved coordination between the three main responsible ministries. As a WSP follow-up mission reported:

"The respondents overwhelmingly considered the financial strategy development process as being seminal in organising and clarifying discussions among the multiple institutions that were involved in sanitation. The tool was

seen to have allowed better informed discussions around lines of responsibility, accountability and implementation of the Memorandum of Understanding between the three Ministries [responsible for education, health and water] and district governments, largely because sanitation programs were broken down to the level of activities, costs and cost implications for each stakeholder". [19]

In this case it seems that financing brought discussions down to a practical level, from which progress could be made.

Box 3. Results of Financial Strategies in Moldova, Armenia and Georgia

In *Moldova*, the FS (formally, the study on *Facilitating policy dialogue and developing a national financing strategy for urban and rural water supply*) took place over an 18-month period and was led by the Minister for Local Public Administration. It provided a key input to the National Water Strategy, initiated by the President. The FS helped to inject realism into these plans and led to a demand to translate the FS into an action and investment plan and to link it into the MTEF. In *Armenia*, the Dialogue on Financing Rural Water Supply was led by the State Water Committee. It identified realistic policy objectives for minimal water supply standards for rural populations. A law incorporating these conclusions is in the process of adoption.

The *Georgia* National Policy Dialogue (NPD), focusing on urban water supply, was led by the Deputy Minister of Economy and Trade. It produced evidence of the very grave situation facing urban water users, the high cost of all development scenarios, and difficulties raising the necessary funding. A follow-on project is being planned to develop an FS for rural WSS.

Source: OECD (2009b)

Box 4. Uganda: Sanitation and the Financing Strategy

Since the early years of the Millennium, Uganda has been concerned with the costs and financial means of implementing its Poverty Eradication Action Plan and the MDGs. The Sector Investment Plan (SIP) produced in 2004 was the first attempt to produce coherent cost estimates of its aspirations in WSS. The SIP identified seven different sub-sectors (rural water, large towns' water, small towns' water, sanitation, productive use, water resources management, and sector programme support). It also developed a number of policy and technical variables (e.g. coverage targets, subsidy levels, tariffs, unaccounted-for-water levels, service levels and technology) that could be used to generate different scenarios. The total financing needs of the sub-sectors are generated for different scenarios, with assumptions about the level of public subsidy available. The result is a costed (and iterative) SIP up to 2015.

As a spin-off from the full SIP, a separate sanitation and hygiene Financing Strategy was developed. This was intended to show clearly how much finance would be required for the 'software' elements of meeting sanitation targets and to provide a tool showing the effect of funding deficits, and offering an aid to optimal spending of existing budgets. More generally, it provided a national platform on which district strategies could be developed. An important building block for the strategy was the production of Rapid Situation Assessments for each district. These developed a consensus on key elements of the strategy, and also indicated the wide differences between the circumstances and aims of each district.

The cost elements of the strategy are contained in an updateable spreadsheet using Microsoft Excel. District managers are studying this for their local purposes. Because the Uganda Government has a very explicit policy towards subsidy for sanitation (channelling funds to 'public goods' and demand promotion, and leaving individuals to fund their own facilities) the strategy is able to assign prospective funding sources to specific activities during the planning period.

continued

[19] OECD (2009b).

The development of the strategy has led to better-informed discussions between the three ministries involved in implementation (education, health and water) and between them and district governments. WSP missions reported that it has:
"...contributed to increased awareness, especially of district governments, of the importance of sanitation, and therefore, following the process, some have made increased commitments for sanitation activities as part of the planning process."
Source: Uganda case study in OECD (2009b)

Summary of SFP outcomes
The Organisation for Economic Cooperation and Development (OECD) Secretariat summarised the outcomes of FSs, based on its own experience of work in this area, as follows:

- A shared understanding of issues;
- Consensus on realistic WSS infrastructure targets;
- More objective discussion of tariff policy;
- More reflection on the realism of social and environmental objectives;
- An opportunity for dialogue with the Ministry of Finance (MOF);
- Incorporation of results into the national MTEF.

4. FEASIBLE

SFP is basically about describing possible future scenarios for WSS, estimating what they would cost, what funds are likely to be available, and adjusting plans accordingly, after dialogue and iteration. This process becomes more rigorous, transparent and determinate if the data can be entered into a quantitative tool, such as FEASIBLE or SWIFT[20]. This chapter outlines the use of FEASIBLE, which is the more highly developed and widely applied of the two.

4.1. The FEASIBLE methodology and tool

FEASIBLE is a rigorous decision-making tool for estimating costs and closing possible financing gaps through an iterative process involving key stakeholders. It can be applied to the water and wastewater sectors of entire countries, regions and large cities. The heart of the tool consists of generic cost functions, which can be adjusted to mirror the local situation. These generic cost functions cover the most common water supply and wastewater technologies and collection systems and are drawn from a large international data base, including data from developing countries. FEASIBLE has been developed by the OECD with the support of COWI consultants, with the aim of supporting the development of environmental financing strategies for the water and waste sector (Box 5).

FEASIBLE Version 2.4 enables analysis of the following sectors: water supply, wastewater collection and treatment, and municipal solid waste management. The tool is structured in four main components:

General, which contains the definition of the geographic area covered, subdivided into regions, municipalities and groups of municipalities, plus the basic macro-economic data in the tool scenarios.

Expenditure need, which calculates the projected expenditure (for O&M, re-investment, renovation and new investments in WSS infrastructure) based on data from the existing situation and the targets for service levels entered by the user.

Supply of finance, which describes the existing and future supply of finance from user charges, public budgets, loans and grants.

[20] The Sector-wide Investment and Financing Tool (SWIFT) was developed by the World Bank's Water and Sanitation Program. It covers only water supply, is not fully developed for wide-spread application, and is no longer in active use.

Financing gap/results, in which the overall financing gap and selected technical parameters are calculated.

The structure of the tool is illustrated in Figure 1 below.

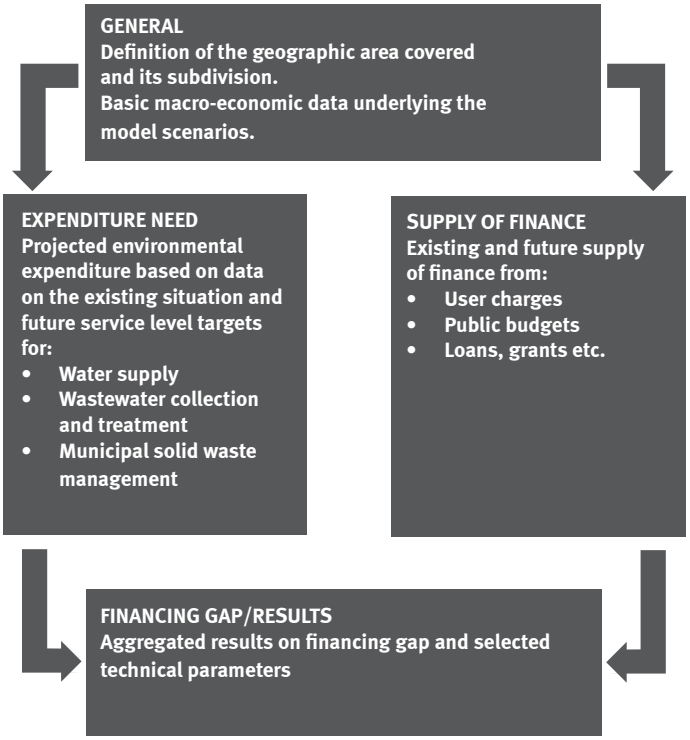

Figure 1. Structure of FEASIBLE

Box 5. FEASIBLE in a Nutshell

FEASIBLE is a computer-based tool which serves to consider the expenditure needs (in terms of investment and operation and management expenditure needs) to meet specific and time-bound targets, including their financing by means of grants, loans, user charges and public subsidies. It covers water – i.e. water supply, wastewater and sanitation – and also solid-waste sectors.

The tool uses generic expenditure functions to generate both investment and operating andmaintenance expenditure needs based on inputs describing the existing physical infrastructure and the future physical infrastructure, which will be needed to meet the targets. The tool encourages the user to adapt the expenditure functions to local, relative prices, but includes default values if such information is not available. The tool also encourages the user to specify the present infrastructure and infrastructure needs in considerable detail and for a large number of regions (or municipalities). Thus, FEASIBLE may support the development of a fairly detailed investment programme to be included in the Implementation Plan.

The tool allows the user to specify terms and conditions for market borrowing and calculate debt service. Furthermore, the tool allows the user to compare user charges (for each household/user group defined) with the household budgets (for the group) thus facilitating easy consideration of affordability.

The outputs of the tool come in four categories: (1) technical information, (2) expenditure needs, (3) financing, and (4) financing gap. Data for each category are provided on a year-by-year basis broken down into sub-sectors and regions (or municipalities). Thus, the tool facilitates an iterative process of matching the expenditures required to meet set water-development targets with available finance. In other words, it facilitates the development of the baseline scenario and development scenarios in the process of strategy development.
Source: COWI website (www.cowi.com)

The *basic building blocks* in the process are:

- Creation of a Baseline Scenario;
- Identification of alternative Development Scenarios;
- Analysis and testing of methods of closing the financial gap;
- Proposals for a Financing Strategy.

FEASIBLE provides the rigorous quantitative underpinning for each of these building blocks.

The exercise typically involves a *National Policy Dialogue (NPD)* involving all key stakeholders who should be involved at all major stages in the above process, aiming to reach consensus on the main points, and providing legitimacy to the outcome of the FS. As a subsequent process, the FS can be embedded in *national budgetary processes* and *public investment programming* such as in medium-term financial frameworks.

The *Baseline Scenario* is frequently referred to as the *business-as-usual* scenario, depicting a future situation with unchanged service levels, typically 20–25 years ahead. What 'unchanged service levels' actually means needs to be clearly defined. One possible definition is that coverage ratios for water supply of different types (piped and household connections, kiosks, hand pumps etc) and also for sanitation of different types (wastewater collection and treatment, septic tanks and improved pit latrines) will remain unchanged. In such a Baseline Scenario, the only cost driver is population growth or (in the case of urban systems) a growth in urbanisation. Since population growth – in particular in urban areas – may be sizeable, the Baseline Scenario is still likely to involve a substantial increase in costs to maintain the original level of coverage.

Expenditure needs and available sources of financing are calculated for each year in the planning period – and the resulting financing gap/surplus is highlighted.

The *development scenarios* model the net impact of a set of *policy variables*, such as:

- Water sector development targets, including priorities and deadlines for investments, levels of service coverage and quality of service.
- Level of user charges – and, not least, increases in user charges taking into account outcomes of accompanying affordability and willingness-to-pay analyses.
- Other domestic revenue increasing policies – such as increased collection rates, reduction of water losses due to theft and increased support from public budgets in the short to medium term.
- Level of support from IFIs and donors – broken down by investment support and O&M support.

The expenditure needs and available sources of financing are calculated for each year in the planning period and the resulting *financing gap/surplus* is highlighted. This analysis is made for each development scenario dealt with.

The *Financing Strategy* marks a logical continuation of the abovementioned work on development scenarios. It is a development scenario which is feasible in the sense that it minimises the financing gap and is affordable in terms of proposed increases in user charges and budget support.

The distinctive idea in the FEASIBLE method is the integrated and simultaneous consideration of expenditure needs and supply of finance. The method allows for considerations of the implications of alternative policies as well as alternative implementation schedules – readily quantified and evaluated using one internally consistent tool. A major advantage of the FEASIBLE tool is that any assumptions made become visible.

Further information about the FEASIBLE tool can be found at www.oecd.org and at www.cowi.com.

4.2. Experience with FEASIBLE

This section briefly reviews the application of FEASIBLE in three recent cases: Lesotho, Egypt and Kyrgyz Republic. Other case reports are also available.[21]

4.2.1. Lesotho

Overview

The Ministry of Natural Resources and its office of the Commissioner for Water inpartnership with the MOF and Development Planning and other stakeholders launched the project to strengthen the SFP in the water sector. This initiative is supported by the OECD and EUWI/Finance Working Group.

The SFP project aims at providing a transparent and long-term overview of the overall financial needs of the water sector in order to meet its targets. The tools developed will enable the sector to better manage any financial gaps through policy dialogue on sector strategies (how to increase sector efficiency and effectiveness) and through enhanced fund-raising and revenue generation. The intention is that these tools and methods will become embedded into the sector financial planning routines and link closely to the MTEF process. The process so far contains a number of lessons of wider interest.[22]

Outputs and results

To improve understanding of the dynamics of the sector and overcome gaps in data, a number of surveys were done:

- The Water and Sewerage Authority (WASA) connection survey (to throw light on customers' behaviour and priorities);
- Peri-urban survey (to gain insight in the rapidly changing peri-urban areas);
- Private rural connections (to improve the realism of assumptions about the use of rural systems);
- Willingness and ability to pay in highland areas (for better understanding of the poorest users).

The key findings from these surveys are summarised in the table below:

WASA – Urban customers • 26% of connections serve rented accommodation (av. 4.1 households) • 20% connections serve neighbours (av. 2.8 households) • 6.5 persons served per connection • 52% of connections are house installations and 48% are yard taps • 8% have alternative water supply from boreholes and 35% collect rainwater • 64% use water storage • The average per capita consumption is 5L/d (yard taps 42 L/d and house connections 67 L/d)	**Peri-urban survey** • Sanitation – 57% use pit latrines ; 25% VIPs; 4% share; 14% open defecation • In some areas (e.g. Penpena) a significant number of households with income › LSL1000 do not have sanitation • In some areas only those earning ‹ LSL1000 are without sanitation (e.g. St Monica) • Affordability is an issue but not the only issue • Hygiene promotion is more effective in some areas • Water – 56% public water supply; 19% springs; 18% share supplies; 7% use private supply • 28% of households cannot afford the water tariff according to the threshold of 5% of income used for water
Private rural connections • Study reveals main perceptions for not making connections: • For DRWS – lack of information • For communities – cost • Local government – standposts are adequate • In Masana, Matsieng and Tsikoane, the users said cost was the dominant constraint • In Haschelel and Moholehoa, the users said private connections were prohibited or the system was not designed for the purpose • Vast majority of users see public subsidy as the main means of obtaining private connections in the future	**Willingness and ability to pay** • The 30% that are only willing to pay less than LSL30 per month is important – corresponds well to the affordability statistics that about 30% of the households cannot afford water using the 5% of household income as the threshold for affordable cost of water • Compared to urban areas, the number of households only willing to pay ‹ LSL30 per month is almost 75% – this has implications for the extension of urban systems to the rural communities. Contradicted by the fact that 40% are willing to pay › LSL2000 for a connection

[21] OECD (2009b).
[22] EUWI-FWG (2010).

These findings imply:

- Tariff design will need to take into account the 20% of connections that are shared between households, which hinders cross subsidisation between rich and poor and between high and low water users.
- The affordability of sanitation is an issue but it is not the only factor affecting access; low coverage areas can learn how to better promote sanitation from high coverage areas.
- Affordability is a problem for nearly 1/3 of householders, which implies that financing will need to come from taxes as well as tariffs if systems are not to be under-maintained.
- Tariff increases would have to take into account the prevailing attitude of consumers that the sector should be subsidised through taxes.
- There are different reasons for the low connection rate in rural areas.
- Contingent valuation (willingness-to-pay surveys) produced inconsistent answers, pointing to the importance of complementing them with market observation.

Key issues arising

- *Urban water tariffs and 'free basic water'*: the increase needed in the WASA tariffs to provide full cost-recovery for urban water services is substantial and will affect affordability for the poor.
- *Urban water operating efficiencies*: the improvements in operating efficiencies of the urban water services are crucial to sustain high-growth scenarios and to achieve cost-effective urban services in the longer term.
- *Bulk water supplies*: the implementation of the Metolong project is a major investment for the water sector that goes beyond even the 2035 demand.
- *Rural water implementation costs*: per capita costs for the implementation of rural water systems have increased over the last 10 years for various reasons. Good coordination with the planning in urban areas and the lowlands bulk water systems would be required to avoid investment in production capacity in rural water systems that would later be served by the larger pipe systems.
- *Rural water O&M*: the new water policy and the policy of decentralisation provide an opportunity to improve consistency in strategy. A consensus in the sector on the responsibilities of local governments versus the Department of Rural Water Supply for support to O&M with capacity building of the local councils and the village water committees could improve the functionality of the rural water systems and eventually reduce the investments in replacement of systems.
- *Sewerage and cleaner technologies*: the treatment of industrial effluent needs attention as only 10% of the water supplied to industries enters the sewerage systems. Investment in cleaner technologies might reduce the sewerage treatment investment and O&M costs. Low-cost sanitation is necessary.
- *On-site sanitation*: the level of funding for on-site sanitation needs attention. The present subsidy of 90% in rural areas is high and a good sanitation strategy with a mix of social marketing, hygiene education and different low-cost technology options could possibly reduce the Government of Lesotho's investment requirements. The income levels in rural areas however indicate that substantial subsidies will be needed to reach the sanitation targets.
- *Private investments*: private investments in the water sector in Lesotho beyond the investments in self-supply could be considered, e.g. irrigation and industrial sewerage treatment could be relevant for private–public partnerships.
- *Increased funding*: the funding gap for achieving the ambitious target of full coverage by 2020 could be closed by lowering the target – or by increasing the government and donor grant funding to the sector. Loan funding could be considered for urban water

and sewerage and bulk water supplies, where there are prospects of cost recovery.

Lessons learned

The exercise took much longer than expected due to greater time needed for data collection and for training in the use of the FEASIBLE tool. These difficulties do not appear to be specific and isolated cases, but can be expected to arise more generally. Examples follow.

i) Consultants found that the generic FEASIBLE tool, whilst providing a sound basis, did not capture all the specific features of Lesotho necessary to make it credible to users. Hence a great deal of additional work was needed by consultants, specifically for the development of a tailor-made SFP model fitting the Lesotho situation and corresponding to the national Vision 2020, which in turn provides an input to FEASIBLE.

ii) The existing national assets register did not have adequate information on the pipe network. This required extra work from the national agency involved.

iii) Further analysis was required of the population and Geographical Information System data, entailing the issue of 1200 questionnaires.

iv) The analysis of industrial demands revealed huge differences in the forecasts by different bodies. Subsequent consultation resulted in some convergence in these different plans.

Consultants considered, but rejected, the direct use of the SWIFT tool as developed by the WSP. This was used as inspiration for the customised model used, but was considered unsuited to Lesotho without substantial modification. The tool covers only water supply, and is not fully developed for widespread application.

The general moral of the above is the need for a balance between generality and specificity for each application of FEASIBLE. A tool that is too general or rigid is likely to omit key features and over-simplify reality, resulting in a loss of its credibility to potential users. However, working at an excessively detailed level makes the tool very cumbersome, and will require additional data collection by national partners (with their own priorities and capacity constraints) and extra work by consultants.

In the course of overcoming these difficulties, the Lesotho project has produced positive outcomes. The need to populate the tool with accurate data has driven improvements in key information about WSS, which will improve future management and policy making. It has also forced some rethinking, and eventual convergence, of demand forecasts, especially by bulk users.

The process of using FEASIBLE has led to some very positive consensus building amongst the main parties involved in Lesotho's WSS. Data collection, which has been laborious and time consuming, and which caused delays to the work, has been patiently undertaken, and should lead to greater ownership of the finished product. It should also produce an excellent integration of the process into the MTEF and other official budgetary and financial procedures.

There were frequent interactions between the consultants involved in this study and COWI, the originators of FEASIBLE, resulting in revisions to the tool that should assist future users.

4.2.2. Egypt: Greater Cairo

Overview

In 2006, the Government of Egypt requested the support of the Mediterranean component of the EUWI (MED EUWI) to strengthen its capacity to meet internationally set water-related goals in accordance with national water sector priorities and related development plans. While doing so, the aim is to ensure that WSS infrastructure development objectives remain affordable for consumers and the public budget and in line with the integrated water resources

management framework. Acting on this request, the MED EUWI Egypt Water Policy Dialogue was formally launched in November 2006. Subsequently, MED EUWI engaged the OECD to provide technical support for the implementation of the Egypt Water Policy Dialogue.

The overall objective of the project is to support the Government of Egypt in elaborating and strengthening its capacity to implement a sustainable Financing Strategy for the WSS sector. The more specific objective is to assist the Government of Egypt in the preparation of a solid Financing Strategy for the WSS sector in the Greater Cairo area. This strategy will define financially realistic targets for the development of the WSS sector, identify the financing sources to achieve them and put forward urgent actions required in that direction. The base year is 2006, and the target year is 2026.

More specifically, the project has involved a structured policy dialogue among key stakeholders in the WSS sector in Greater Cairo in order to: (i) help build consensus in identifying financially realistic targets and the policies that will support their achievement; (ii) help strengthen the coordination of activities undertaken by different parties involved in the WSS sector; and (iii) help identify governance and capacity development needs. The Financing Strategy is expected to complement the National Water Resources Plan 2017, the National Master Plan for the Water and Wastewater Sector in Egypt and other key strategic plans currently under preparation by the Government of Egypt.

Results

The basic dilemma is that full cost recovery from tariffs is considered unaffordable for users, but restricting user charges to covering O&M costs only would require an unaffordable level of state subsidy. Consequently, it is recommended to set a target of recovering O&M costs, renovation and parts of re-investment costs through user charges, and agree on a Financing Strategy to meet this target. This option is judged affordable to the population and feasible for the state budget, though a high state subsidy will be required in the short to medium term to allow a gradual increase of tariffs towards cost-recovery levels.

The recommended Financing Strategy includes the following measures:

- Domestic user charges would have to increase by a factor of 5–10 for first-block tariffs and a factor of 10–15 for second-block tariffs in the period up to 2018.
- Income support from social protection programmes would have to be provided to households for which WSS expenditures' share of household expenditure would reach more than 2% (or, for instance, 3%, if it is politically decided to increase the affordability level).
- State budget support in terms of state investments would have to increase by a factor of 2–4 in the short term, provided domestic user charges are increased, and by a factor of 2–3 in the medium to long term. State investments into the WSS sector in Greater Cairo would amount to EGP 4–6 billion annually in the period after 2018.

Specific features and general lessons learned

WSS in Cairo received no ODA or other transfers or loans on market terms (including from IFIs) in recent years, hence these sources were omitted as options for closing the future financing gap. This assumption reduced the financing options to two, namely user tariffs and budgetary support (i.e. only 2Ts, not 3Ts). This simplification established a sharp trade-off between consumer and taxpayer funding, which made modelling of options to close the financial gap easier, while closing off other financing options that might be feasible in the long term.

The definition of the Baseline Scenario is complicated by the expected rapid growth of the city's population. This is

a specific instance of the general point that the definition of 'business as usual' is crucial to the model's output. The assumption was made that the present proportion of service coverage (92% connected to in-house piped water and 98% to the public sewerage network) would be maintained for the much larger future population. This entails major investment in expanding the water and sewerage networks. It is far from being a static assumption, and could be considered arbitrary (e.g. why not aim at higher coverage levels?).

Budget support, which is the predominant form of finance at present (› 80%) and for the foreseeable future, is divided into subsidies for O&M, and for capital expenditure, to reflect the institutional reality in Egypt which gives responsibility for the two aspects to different bodies.

Compared to the other FEASIBLE studies that have been carried out, the WSS sector in Cairo is relatively homogeneous – an urban population, with already high levels of connection to both water and sewerage. This simplified the modelling of costs using FEASIBLE's generic functions, although some of the cost parameters for specific items had to be adjusted, sometimes drastically, to reflect Egypt's specific features.

Despite Egypt's status as a 'lower middle income' country, its water tariffs are very low both in absolute terms and as a percentage of average household incomes. This should be borne in mind in interpreting the tariff increases specified in the recommended strategy. The 'affordability' criterion (2% of household income for the 'lifeline' consumption level of 100 L/household/d) is also low compared to those used in other countries for which the FEASIBLE tool has been used. The 'affordability' ratio is a rough rule of thumb, and is set according to national considerations. The choice of a low household affordability ratio is the main reason why the recommended strategy still relies overwhelmingly on (increased) budgetary allocations, for both O&M and investment, to fill the future financing gap. State investment in Cairo's WSS is currently 9.1% of all state investment, and over one-third of all state WSS investment in the whole country. For comparison, state investment in education and health is 9.8% and 5.6%, respectively.

In evaluating the tool's use of water tariffs it should be borne in mind that this is an exceptionally sensitive social and political issue in Egypt.

Reflecting on the process, consultants found it valuable to organise workshops at an early stage in order to introduce future partners to FEASIBLE and the data collection it entailed. Without this, it could have become very cumbersome, and not very cost-effective, for external consultants to make frequent visits to collect and enter the data themselves.

4.2.3. Kyrgyz Republic

Overview

A strategy for financing urban and rural WSS in the Kyrgyz Republic through a NPD was presented in 2009. This was sponsored by the OECD/EAP Task Force and their appointed consultants, working closely with a Coordination Council created by the host Kyrgyz Government. To inform and facilitate the NPD, a number of background documents based upon the results of data and information analysis and scenario simulation were produced and discussed. The information fed into the FEASIBLE tool was collected on the rural and urban WSS sector, through published statistics and accounts, interviews with government ministries, local government organisations (mayors and others), *vodokanal* agency staff and communities.

Results

Some key results of the NPD were as follows:

- A consensus was created that built on, and raised awareness of, the main challenges facing the WSS in the Kyrgyz Republic – technical, socio-economic, environmental, geographic, financial and

institutional. Agreement was reached on the realism of key assumptions of the Baseline ('business as usual' or 'no new policy') scenario.

- Agreement was reached on the key measures to close the baseline financing gap, amounting to 1.5 billion Kyrgyz Soms which are:
    - o increasing tariffs from the current levels of ‹ 0.5% of household income to the maximum level of affordability (2.5%) after 20 years.
    - o increasing collection rates from current levels of ‹ 25% in rural areas and ‹ 50% in urban areas, to 60 and 85% after 5 years, respectively.
    - o increasing public budget expenditure on WSS from current levels of about 0.3% to 2% of total budget (still less than most countries) after 20 years.
- Having considered three alternative development scenarios, the Coordination Council unanimously chose the 'preferred scenario' involving the achievement of the MDGs for WSS. This scenario provided the best opportunity for getting the required improvements in WSS services with a realistic need for total financing and external funding.
- A feasible Financing Strategy associated with the 'preferred scenario' was proposed, including the three elements outlined above and approaches to potential sources of external funding.
- Agreement was reached on the policy measures needed to implement the 'preferred scenario' and the associated Financing Strategy. These included linking the Financing Strategy to the budgetary processes (MTEF and annual budgets), national coordination of the urban and rural WSS sectors to improve management and financing, and a coherent national policy for the whole WSS sector.

Specific features and lessons learned

The production of the Financial Strategy depended heavily on a strong NPD which gave unequivocal backing to the choice of Development Scenario and the measures proposed to reduce the current financial deficit and to finance future programmes. Care taken in the preparation of meetings with the Kyrgyz Government's Coordination Council helped keep the project on track and ensured an acceptable outcome.

Due to the fragmentation of the Kyrgyz Republic's WSS sector and the disparities between and within different communities, the choice of the optimum level of detail and aggregation was critical. The gain to credibility from entering data for all the communities for which they were available had to be balanced against the extra difficulties this would have caused when using the tool. Consultants spent considerable time getting this balance right, and in the process some detailed data had to be sacrificed. This point is recognised in the latest FEASIBLE User Guide (section 2.4).

Nationwide, WSS systems are highly fragmented, and there are great geographical disparities. The national dialogue has been both a spur and an opportunity to improve national coordination and more coherent planning and policy-making in WSS. The creation of a new central government department responsible for WSS was one of the early outcomes of this process.

WSS services are currently run with minimal funding. Revenue from tariffs is very small and very little is budgeted from the central government. The current levels of finance are insufficient even to maintain WSS infrastructure at its current level. As a result, many of the centralised piped water supply systems do not operate effectively, and offer a low level of water quality and reliability.

The FS proposed substantial increases from both tariffs and budgetary sources, both of which are considered feasible and affordable. The Kyrgyz Republic has a partial social security system, which could be the basis of a system of subsidies to the poorest households to cover their increased water bills.

The project was extended to include subsequent work to integrate the FS into the national processes for the budget and the MTEF.

4.3. Overall assessment of FEASIBLE

FEASIBLE is a rigorous and transparent way of reconciling WSS ambitions with financial realities. The cost implications of different development scenarios are clearly laid out, likewise the impact of different policy variables such as tariffs, subsidies, ODA and commercial sources of finance. The tool easily lends itself to iteration, in which changes in variables can be tested and run back to produce a more viable outcome. This analytical structure provides a solid foundation for political and social policy debates about WSS.

FEASIBLE is, however, very data-intensive and calls for well-developed modelling skills. All six of the country exercises carried out so far with the support of OECD have involved external consultants, though several have been in partnership with local firms. Even so, much of the data collection and preliminary analysis has fallen to national counterparts. The scale of effort entailed for local administrations should not be underestimated.

Modelling can, however, drive the assembly of essential data, and build consensus and ownership amongst the parties involved in the exercise which can benefit the *governance* of WSS, independently of the value of its results. The data requirements of the tool compel the search and assembly of updated information on a country's WSS which is useful *per se* for policy making. The stakeholder consultations and policy dialogues that accompany FEASIBLE raise the standard of national debate on WSS, and can lead to institutional changes of permanent benefit. Whatever the benefit of the specific financing recommendations that result from the analysis, the methodology challenges all stakeholders and political leaders to confront the difficult choices to be made.

FEASIBLE is a sophisticated tool, but like all computer tools it relies on some simplification of reality. If the study population is treated as fairly homogeneous, the national geographical variations are minimised, and the development scenarios and policy variables are restricted in number, the modelling becomes relatively straightforward and the results will be clear. However, if the targeted users (policy makers) find these features of the model unrealistic and over-simplified, the results will lack credibility. If, on the contrary, modellers choose to include detailed data reflecting a variety of user and geographical characteristics, with a range of scenarios and policy variables, the exercise becomes complex and time consuming.

Striking the right balance between complexity and simplification is a fundamental choice for FEASIBLE users. The latest version of the User Guide reflects this point: "Make sure the geographical structure is considered carefully before entering too much data/many new scenarios. Check if the geographical structure supports a meaningful split of water sources, network etc. Check if the geographical structure supports analysis and reports needed afterwards."

In brief, the FEASIBLE tool provides an excellent overall structure and approach to SFP for WSS. The elements it uses are essential to any serious SFP. Whether the actual tool is used, with the elaborate data collection that it entails, rather than a less technical country-specific process, is a matter for local judgement. The evidence reviewed briefly above is that the technical problems of using the tool, and the effort of data assembly, are not to be underestimated. Whilst the first-time use may be data intensive it does provide a solid basis for future assessments and quickly examining 'what-if' scenarios. Equally, the process can produce vital information previously lacking, and generate enthusiasm and consensus that bodes well for the future provision of WSS.
On a final note, the FEASIBLE tool is a work in progress,

and is being continually revised and updated in the light of feedback from practitioners.

5. How to do SFP: lessons learned

Countries start from different levels of institutional capacity, available planning tools, and legal and organisational status. Hence SFP has to be tailored to each country's situation. This final section draws some lessons from the experiences so far with SFP in Lesotho, Egypt, the EECCA countries, and other countries, particularly in Africa, which have used elements of this process. Reflecting the structure used in Chapter 3, SFP is broken down into seven elements, which overlap:

- Setting overall objectives and expected outcomes;
- Creating the process: consultation and national dialogue;
- Embedding the SFP in regular planning, budgeting and financial processes;
- Designing an appropriate analytical framework;
- Data collection and analysis;
- Definition of Baseline and Development Scenarios;
- Production of a Financing Strategy.

5.1. Objectives and outcomes

Some of the main objectives of an SFP identified in Chapter 3 were:

- Providing a structure to enable a policy dialogue to take place, involving all relevant stakeholders, with the aim of producing a consensus on a feasible future WSS;
- Illustrating the impact of different objectives and targets in a long-term perspective;
- Linking sector policies, programmes and projects;
- Facilitating external financing by providing clear and transparent data on financing requirements;
- Comparing the different elements of the 3T revenue streams, and the relative potential of each to fund future needs.

There will of course be others as different countries will vary in what they expect from SFPs, and in the relative weights they place on different expected outcomes. Some countries will regard the main purpose of the exercise as bringing greater coherence and unity to the various institutions and geographical levels involved in managing WSS. Some will regard it as a means of producing a coherent national position *vis-à-vis* international funding agencies. For many countries, deciding on financing options for meeting MDGs will be an overriding motive. In some cases, the national MOF may be a key driver, concerned to ensure more efficient use of its allocations to WSS.

The first step will therefore be to consider which of the various objectives of SFP are really important, and to focus resources on achieving these. This is necessary if and when the outcomes of the SFP come to be evaluated.

The second step is to identify the key stakeholders in the process – central government ministries such as finance and environment, public utilities, donor coordination groups and NGOs, and involve them in discussions about the SFP at an early stage. These stakeholders will each have a different interest in the SFP which should be understood and respected. Some will be very positive, others more reticent, some even hostile. Some government officials even view the prospect of WSS ministries developing SFPs as a distraction from their more urgent task of improving the performance of their sector. In this respect, conducting a thorough SFP exercise and embedding it into national budgetary processes should greatly enhance the prospects of WSS in annual budgetary negotiations.

To overcome any reluctance by specific stakeholders to invest time and managerial resources in SFP it is useful for the process to have a 'champion'. This requires support by government at a suitably high level with a realistic

expectation for 'rewards' in the shape of additional finance and/or relevant policy outcomes (Box 6). Support from the MOF is likely to be crucial in this regard.

Box 6. Financing Strategy in Senegal

Senegal is an example of early consensus on WSS objectives and policies. A concerted effort of all major stakeholders on the basis of this consensus resulted in the successful reform and re-orientation of the water sector. This was possible thanks to a financial model that was endorsed by stakeholders and used to support an iterative, participatory process of sector planning that has continued for the last 10 years.

Source: OECD (2009b)

Finally, at this preliminary stage, consideration should be given to resources available, which will determine the feasibility, scale and ambition of the exercise. Important technical constraints have to be dealt with in the areas of modelling, data and expertise. In this context, improved financial planning is often impeded by a shortage of supporting capacity in the organisations concerned, applying especially to financial and engineering expertise.

Checklist 1: Overall Objectives

1. What are the main motives and objectives of the SFP? Which of them are critical? What are the desired outcomes?
2. Who are the principal stakeholders in this process? What is the best way of involving them? Is there an obvious 'champion' of SFP?
3. What resources are available for carrying out the exercise? What are the main constraints? How does this affect the scope and timing of the exercise?

5.2. The process: consultation and national dialogue

For best effect SFP should be closely aligned with existing institutional arrangements for sector policy making. Its methodology should be credible and endorsed by all major stakeholders. It should provide for effective dialogue between water sector experts and financial specialists, in language intelligible and resonant to both sides.

SFP must be fully 'owned' by host country institutions, supported by their government at a suitably high level. This applies particularly to the engagement of stakeholders both in and outside the water sector, civil society and external funding agencies. In many countries, the latter are important stakeholders in SFP. The process should be supported actively and flexibly by donors, who should adapt their sector strategies and funding modalities to the outcome of the FS and be prepared to offer financial support for its implementation.

Different sectors, such as water supply (urban and rural), sanitation, industrial wastewater treatment, irrigation, and water resources management, may have different institutional structures, responsible ministries and subsidy regimes. The structure of the SFP, as well as the design of the planning process and decisions on which stakeholders to involve, all need to take this into account from the beginning.

A well-designed SFP includes:

An iterative process. In most cases the expenditure needs of the initial investment plan are likely to be far from what can be financed in a sustainable manner, and even further away from current revenues. An iterative process should progressively review targets and revenue sources until expenditure needs are matched by revenues available. This applies to both recurrent and investment cost items, and within all administrative geographical boundaries.

Adequate time. Development of a SFP is a process which should allow enough time for stakeholders to deliberate their traditional positions.

Involvement of stakeholders at the appropriate level of seniority. The involvement of the right group of stakeholders is crucial for getting an acceptable result, but it should also be represented by personnel at the right level of seniority in order to make results more acceptable in the sponsoring bodies. The participation of people who are too senior creates a risk that they will not attend all the sessions. On the other hand, people who are too junior may not be able to carry their institutions along with decisions that have been made.

Checklist 2: Creating the Process of SFP

1. Is the SFP aligned with existing institutions for WSS?
2. Is it backed by all key stakeholders?
3. Are its deliberations and documents intelligible to all stakeholders?
4. Are external funding agencies involved?
5. Does the SFP allow for iteration? Has adequate time been allocated?
6. Do consultative and dialogue meetings involve people at the right level of seniority?

5.3. Embedding SFP in regular planning, budgetary and financing procedures

The SFP should facilitate policy reform and achieve practical results. It is therefore important to link SFP to regular budget processes, in particular the MTEF, and other procedures such as long-term sectoral and regional plans. How these links are established will differ from country to country. In some countries, the institutional and planning framework for WSS is easily defined, while in others it is very complicated. Whereas water supply can be straightforward; sanitation, household hygiene, urban drainage and irrigation tend to be more complex and are likely to involve multiple ministries. The boundaries of the SFP need to be set at the outset and take account of the institutional system. In Kenya, for example, the SFP reflects the institutional structure laid down in the Water Act (Box 7).

Box 7. Financing Strategies that Reflect Institutional Status in Kenya

The Water Act of 2002 in Kenya aimed at separating policy formulation from regulation and service provision. It also separated WSS from water resources management. This led to the creation of seven Water Service Boards covering the whole country (regulated by a water services regulatory board) and six Catchment Area Management Committees and a Water Resources Management Authority. These institutions, rather than the administrative districts and regions, are responsible for water sector investment and finance. The SIPs and FSs have been structured to reflect these specific institutions of the water sector.

Source: Virjee (2007)

Countries that are highly decentralised need both functional and geographical planning streams. These may involve regions, provinces and lower administration units such as districts. Usually there will be advantages in 'bottom-up' planning from the lowest budget holding unit since this is where the implementation of the SFP has its real test. The number of relevant decentralised units varies according to the size and administrative nature of the country and sector, e.g. the *woredas* in Ethiopia (› 600); districts in Uganda (› 60), and the seven Water Service Boards in Kenya. Best practice approaches combine bottom-up and top-down methods in developing a SFP based on the lowest planning and budgeting units of government.

The MOF must fully adopt a fund-raising strategy for internal and external public sector finance. The MOF is also a crucial party in the development of economic instruments for the water sector, especially those that require substantial fiscal reform. If a strong alliance can be built between WSS agencies and the MOF, there is a better chance of the sector focusing on improving its efficiency and enabling subsidies to be better used. There will also be better prospects for using innovative economic instruments such as tariffs and licenses (e.g. for water abstraction).

SFP may be easier to develop when linked to a SWAp, which sets a time limit on completion of the strategy (as in Ethiopia, Kenya, and Malawi) and which provides an opportunity for a firm institutional anchorage extending beyond a single ministry. The SFP itself can also contribute to a SWAp and can be a vehicle for harmonisation (as in Ethiopia).

The prospect of access to finance is a powerful spur to SFP. Donors typically play three roles: a source of finance for the plan preparation and the eventual spending programme; support to WSS capacity building; and engagement in policy dialogue. Although their command over finance is important for their credibility, donors also have a vital role in capacity building and driving reforms to governance. Donor finance has been an important element in creating and implementing recent SFPs in developing countries. SFP is an ideal opportunity for aligning donors' expectations and requirements with each other and with the host government – putting the Paris Declaration into practice, and fitting their programmes into national SWAps (Box 8).

SFP exercises have highlighted bottlenecks in capacity in WSS, especially in local administrations. At this level, much of the planning and management is carried out by technical personnel lacking sufficient familiarity with financial management. More generally, throughout the sector there is a need for more commercial skills and customer-orientation. Donors can promote peer-group support directly though 'twinning' using their own utilities, or indirectly by funding such organisations as the Water Operators' Partnership. Other areas for capacity building in utilities are leadership development, change management, contract management and specific technical and financial skills.[23] ODA can also be used in the provision of technical assistance for strengthening public expenditure management systems.

Despite the key potential role of external funding agencies in SFP, they should avoid seeking too prominent a role, which could risk undermining the 'ownership' of the process by their development partners. SFPs that are excessively donor-driven are unlikely to be sustainable.

Box 8. Strategic Financial Planning and Governance in Ethiopia

The SFP in Ethiopia proved the crucial importance of continuing the reforms and consolidating what had already taken place, such as the local capacity building and collaborative decision-making structures at local, regional and national levels. The SFP exposed the large number of programmes for improved WSS, and the confusion caused by their different approaches, financing modalities, accountability and reporting mechanisms, and institutional arrangements. The SFP highlighted capacity building and governance improvements as necessary first steps.

Source: OECD (2009b)

[23] Van Ginneken and Kingdom (2008).

Checklist 3: Embedding SFP in Regular Planning, Budgeting and Financial Procedures

1. Identify the key institutions and processes involved in planning and financing WSS; ensure they are fully engaged in the SFP process.
2. Ensure that data used in the SFP or any tool corresponds to relevant administrative agencies and their geographical and functional divisions.
3. Ensure that key data in the SFP is regularly updated and available in a timely fashion and in a form compatible with the regular national budgetary and MTEF cycles.
4. Ideally, the SFP should be based on the lowest planning and budgeting units of government.
5. The SFP can be an opportunity to forge strong links between WSS agencies and the MOF.
6. The parallel development of the SFP and the SWAp will provide synergy that will reinforce both processes.
7. Where external donor funding is important for WSS, the SFP should create links with donor coordinating bodies and its outcomes should be in a form useful to donors in planning their country programmes.
8. The SFP should uncover capacity bottlenecks and deficiencies in WSS and be used to promote institutional strengthening.

5.4. The choice of analytical framework

The methodology and modelling used to develop the sector analysis must be credible and fully endorsed by all major stakeholders, including the MOF. This implies an appropriate level of sophistication, the choice of hard data, and a continuous balancing of expenditure needs with available financing. Within these constraints, the process, and any tool used, should be as accessible and transparent as possible, since the public is reluctant to accept the results from a process that they do not understand.

There is a choice to be made between methods and tools with differing degrees of complexity, sophistication and cost. Trade-offs may be necessary. In some cases it will be easier to tailor the SFP to the specific country concerned rather than attempting a generic tool or approach, though this may also involve higher costs. On the other hand, there are many cases where generic tools have produced useful and reliable results, effectively supporting a policy dialogue process.

One issue to clarify is how the boundaries of the WSS sector will be set for the purpose of the exercise. The SFP can be confined to a single coherent sub-sector such as urban or rural WSS or it could be widened to include all geographical areas, solid waste management, domestic hygiene, water resources management, and industrial and commercial use. In some cases it is appropriate to start within a single coherent sub-sector that is ready for a SFP and then broaden it to include other elements later.

Various generic tools are available to underpin SFP. These include FEASIBLE, which has been developed by the OECD with Danish cooperation. This is a user-friendly and well-designed tool with a sound methodology and clear user interface. It has been applied in a number of countries in EECCA and Africa. SWIFT, which was developed by the WSP, is another available tool, although it is no longer actively used.

Both the abovementioned tools link long-term targets to annual budgetary requirements and specify measures to be adopted. Alternatively, tailor-made tools can be developed and used. The best a tool can do, whether it is off-the-shelf or tailor-made, is to support decision making – it cannot substitute for it. Tools are best for developing scenarios, which can serve as the basis of an iterative and collaborative process of setting priorities and taking decisions.

To provide the analysis that is needed to support policy dialogue on WSS financing, both generic and tailor-made

tools can be used. General tools applicable in different countries with different WSS characteristics do exist and have proved useful and reliable but may not fit all possible situations. Purpose-built tools drawing on highly specific generic tools may overcome this problem, but their application and development is usually more expensive.

Whether the tool is generic or tailor-made, the key point is that it should be a decision *support* tool. It fulfils its function when the methodology is endorsed by all stakeholders and when it is able to have an input to policy. In practical experience this requires that the tool is clearly rooted in a description of the existing situation, the level of detail is 'right', its cost functions are generally accepted, and its results can be presented in a non-technical manner.

Checklist 4: Choice of analytical framework

1. The method should be sufficiently sophisticated, rigorous and realistic to carry credibility with key stakeholders, especially the MOF.
2. A basic choice is between using a generic tool, and one tailor-made for the situation in question. Using a generic tool can produce valid results, but in other situations the cost and time involved in adapting the generic tool to local circumstances may justify creating a tailor-made tool from scratch.
3. The tool should be used as a decision-support tool, rather than an end in itself. It should be realistic, with an appropriate level of detail and accurate cost functions, and its results should be communicated in an intelligible manner.

5.5. Data collection and analysis

Essential data on the status of WSS are often lacking, insufficient and unreliable, thereby hindering credible sector planning. One of the positive by-products of a SFP may be the creation of a baseline dataset on the current status of this sector. Reliable data on the performance of WSS is often absent. One of the most useful outputs of an SFP is a coherent reckoning of financial flows into the WSS.

The level of disaggregation possible in SFP will depend on how much detailed information is available. It is possible in some countries to analyse financial balances regionally, which can produce revealing data about institutional and service variations. In Ethiopia, for instance, data could be aggregated by Region, in Mozambique by Province, and in Kenya by Water Service Board.[24] If sufficient data are not available, planning on a crude per capita basis is preferable to using a project or town basis since the former is less data-intensive.

Where the institutional context is clear it may be possible to build up an investment plan based on short- to medium-term plans that are already available. For example, the Kenyan FS used the rolling 3–5-year corporate plans of water boards, while in Malawi it is planned to use district expenditure. In both these cases, the plans concerned are obligatory and available, and SFP is an opportunity to improve them. Future years beyond the horizon of these plans can be dealt with in less detail.

It is essential for the SFP to be kept up to date if it is linked to the MTEF and to the national budgeting and financial reporting systems. An updated strategy will save time and work for officials involved in planning and budgeting. In Malawi, the strategy is linked to the Results Based Framework, a means of measuring the performance of line ministries. Linking a SFP to the standard procedures for public financial management and performance measurement is a strong motive for stakeholders to use the strategy and update it as necessary. Also in Malawi, district level WSS officers are linked by computer to the national financial tool, and are able to input data directly to it.

Data needing regular updating should be clearly identified and the SFP should contain the necessary guidance, and

[24] Virjee (2007).

explanatory notes if a tool is used. Data requirements should be kept to a minimum; where frequent updating is needed this should be done wherever possible using established surveys, such as those for household information, health status or water utility performance reports.

Checklist 5: Data Collection and Analysis

1. The level of disaggregation used will depend on the availability of reliable data at the relevant administrative levels and geographical scales.
2. Existing investment plans (e.g. SIPs) are possible sources of data.
3. Data used in the SFP should be regularly updated to maintain its credibility and to feed into regular planning, budgeting and investment planning processes; however, updating should so far as possible use established regular surveys.

5.6. Baseline and Development Scenarios

The production of a Baseline (sometimes called 'business as usual') Scenario is normally the first major output of an SFP modelling process. This describes the essential features of the present WSS infrastructure and services, and projects what will happen (with costs and financing requirements) over the scenario period without major changes in policy. It is intended to establish the 'without project' yardstick, to which various development scenarios can be compared. It is not the same as 'do nothing', since even maintaining the state of existing infrastructure and services will require spending on O&M, essential repairs, and dealing with emergencies and service 'hot spots' (e.g. localities posing acute health risks). It has often been found that there are major financing gaps even in the Baseline Scenario, which need to be rectified before major new outlays can be contemplated.

In practice, the distinction between Baseline and Development Scenarios may become blurred. As noted in Chapter 4, maintaining the existing proportion of service coverage in the face of rapidly rising populations will entail major investment outlays: some studies (e.g. Egypt) have included these in the Baseline. However, increasing the extent of coverage is normally regarded as part of the Development Scenario. There is also a rather arbitrary line between 'reinvestment' to prevent a deterioration in services (in the Kyrgyz Republic this was kept in the Baseline) and 'renovation' including an extension of services (in the Kyrgyz Republic treated as part of the Development Scenario). Over a 20–25-year scenario period, the Baseline is liable to drift; there is no alternative to pragmatism and common sense

Box 9. Development Scenarios for WSS in the Kyrgyz Republic

1. 'Basic Improvements': provide all villages with access to piped water from street-post connections (*kolonkas*); and provide basic sanitation (latrine blocks connected to serviceable storage tanks) for all schools.
2. Meeting the MDGs: for water supply, the target is interpreted as access to piped water from a centralised supply network; for sanitation it is a connection to either centralised sewerage or to improved hygienic latrines.
3. 'Maximum Coverage': universal access to piped water supplies in urban and rural areas; in urban areas, 100% of households supplied through in-house connections; in rural areas 50% of households with in-house water connections; 100% of urban population connected to centralised sewerage, with treatment to at least basic mechanical standard; in the two largest cities wastewater treatment upgraded to advanced biological levels; in rural areas 100% access to improved hygienic latrines.

No. 2 above was retained as the Preferred Development Scenario.

in defining this, provided the concept is applied clearly and consistently.

The Development Scenarios express the consensus views of stakeholders about desirable future states of WSS. Sometimes these are taken from official plans. Or else they express a commitment to the MDGs – though national definitions of key terms like 'service coverage', 'access' or 'household connection' may vary from those used by the UN. The three alternative Development Scenarios used in the Kyrgyz exercise may be regarded as typical (Box 9).

In countries with deteriorating infrastructure, the Development Scenario could include major investment to modernise and reconfigure existing assets. A number of SFP exercises in Eastern Europe and Central Asia revealed that the cost of merely maintaining the existing infrastructure would more than exhaust the total WSS revenues. In Moldova and Armenia, just maintaining the existing service level would call for a large increase in revenue. In such cases, decommissioning parts of the infrastructure in order to provide an adequate overall service has to be considered.

The targets set in Development Scenarios need to be challenging, but still realistic. Nationally set targets often do not correspond to targets or priorities set locally, which can lead to national targets and plans being ignored by local authorities. Striving for unrealistic targets can waste money but, conversely, proposing credible but more modest targets could be politically and socially unacceptable. Accepting low targets, even if more realistic, could be viewed as perpetuating and condoning hardship. It is one of the key purposes of SFP to address these dilemmas.

The tools and methodology used should include tools to assist policy makers to come to terms with such dilemmas. For instance, scenario analysis shows how alternative policy targets, financing sources and assumptions about other crucial variables (such as service levels and technical options) interact in order to illustrate feasible compromises.

Checklist 6: Baseline and Development Scenarios

1. Is there consensus on the Baseline? Does it indicate a financing gap?
2. Are there any ambiguities in the definition of Baseline (e.g. cost of maintaining the present coverage level or essential modernisation). Have these problems been resolved?
3. Do the Development Scenarios represent the main strategic options for WSS?
4. Are the targets both realistic (attainable) and challenging?

5.7. The Financing Strategy

The most tangible outcome of the SFP is a Financing Strategy, which should be regularly updated. The aim of the FS is to recommend adequate funding for the preferred Development Scenario, after all attempts have been made to reconcile targets with sources of funding.

Include all costs

The SFP needs to consider the full life cycle of assets and take into account O&M costs and the costs of replacement after the design life expires. Other costs to be reckoned include feasibility studies, design, supervision, community participation, awareness raising, capacity building, hygiene promotion and education, and research. Without consideration of these costs, any investment plan or SFP is seriously incomplete and investment plans then risk becoming mere wish lists.

Sources of revenue and funding

A typical scenario period for a SFP is 20–25 years. A great deal can change over such a period, including the growth of household incomes and affordability, the growth of government revenues from unexpected sources, and the growth of national financial and capital markets. Both the sources of basic revenues for WSS and local repayable

sources may prove more dynamic than foreseen at the start of the planning period. Some SFP exercises and the modelling used have taken a blinkered view of future affordability and the financing options likely to be available.

The prime focus of a SFP should be on consolidating the basic revenues accruing to WSS. However, these revenues should be used where possible to attract other forms of funding such as loans, bonds, equity and the many hybrid forms now available. The governments of many countries in which SFP is happening are locked into a 'public finance' mentality in which financing options beyond national budgets and ODA are not seriously explored. The SFP should challenge this mindset by considering all options for developing both basic revenues and repayable funding sources.

It is also important to consider expenditure and revenues (tariffs, taxes and transfers) interactively and recognise that not all funding sources are full substitutes for each other. Certain revenue sources (for example tariffs) can be used to finance all types of expenditure; whereas other sources are effectively ring-fenced (e.g. donors typically prefer to fund investment). Another factor complicating the SFP is that certain revenue sources may not be easily transferable from one region (or utility) to another (for example tariff revenues) while other sources may be allocated more freely – donor funds are typically more geographically flexible.

One funding source often overlooked and underestimated is self-supply, by people who improve and construct their own systems using their own finance to contract local workers or use their own labour. The investments of householders themselves, in cash and kind, should feature in the SFP. Migrant remittances are also an important potential source of funds for WSS, given the right channels. The development of savings outlets, microfinance and other innovative financial partnerships involving communities, users, NGOs, banks, the private sector, donor agencies and local governments can help to tap into self-help and self-supply resources, including users' own funds.[25]

Efficiency and capacity building

Institutions responsible for WSS need to have a basic understanding of finance so they can present an effective case based on solid data to the MOF for their proper share of budgetary allocations. Pleading that water is a special case is unlikely to be sufficient. The funding case for WSS should set out concrete measures for the attainment of long-term targets and include these in the case for annual budgetary allocations. However, finance ministers are prone to view WSS as a financial 'black hole'. Their instinctive approach is likely to be to seek to minimise subsidies, to press for improved performance of the sector institutions, and to aim at obtaining 'more water for the same money'. To satisfy finance ministers, a SFP needs to address *where the money is going to* as well as *where it is coming from*. Finance ministers, and their donor partners, will be more attracted to a SFP which promises to improve the efficiency of the sector, and provides data and benchmarks for monitoring its performance. The development of M&E systems for WSS was a clear positive outcome of the Ethiopian SFP exercise.

It must not be assumed that WSS can easily absorb the greater levels of funding implied by the FS. The 'absorptive capacity' of WSS for financial resources needs to grow; this is often limited due to weak project preparation and poor capacity for implementation. It will be enhanced by greater predictability and timeliness of funds, but there may well be a need for specific capacity building in key parts of the sector. In this context, the SFP is a potential entry point for sector dialogues over such matters as the commercialisation of WSS services and the role of the private sector.

[25] Refer to Virjee (2007), Mehta and Knapp (2004) in Annex 1, amongst many others.

Checklist 7: The Financing Strategy

1. Have the full life-cycle costs of WSS assets and all future O&M costs been included in expenditure projects?
2. What assumptions have been made about the growth of household and public affordability? Have in-kind sources of finance been considered?
3. Have all possible options for repayable sources of funds been considered?
4. To satisfy the likely concerns of the MOF, does the FS include measures for improved efficiency?
5. Is WSS likely to be able to absorb the projected future levels of funding? What measures are proposed to remove operational and financial bottlenecks, e.g. by capacity building?

6. Summary and conclusions

1. WSS in Africa has been under-funded for many years, resulting in deteriorating infrastructure, declining levels of service, and the lack of resources to finance the future needs of water security, including the expansion of services called for by the MDGs. The recently updated version of the African Water Vision projects an annual need of US$12 billion for WSS, whereas the current level of finance would only cover half of this.

2. SFP aims to overcome these problems by putting the future finances of WSS onto a sustainable basis. SFP matches national water policy to local resources, capacity and available finance. A key part of SFP is the production of a national consensus on what WSS services the country can or should afford in the long term, and how these will be paid for.

3. SFP helps those involved in WSS to engage with other relevant parts of government, especially the MOF – a crucial aspect of getting 'Out of the Box'. The process of creating and sustaining an SFP produces greater understanding across the sector of financing issues, and confronts all concerned with a 'reality check'. Although SFPs are data-intensive, the initial data assembly and analysis should pay off in future through the creation of a more informative and functional body of information.

4. SFP proceeds by building a consensus around:

- Agreement on the baseline situation for WSS;
- Estimation of the projected financing gap implied by current plans and ambitions;
- Identification of policy options that could help to close the financing gap;
- Development of alternative future WSS scenarios;
- Production of a Financing Strategy that is realistic and affordable.

5. There is a growing body of experience in using SFP. Its main outcomes have been:

- A shared understanding of issues;
- Consensus on realistic WSS infrastructure targets;
- More objective discussion of tariff policy;
- More reflection on the realism of social and environmental objectives;
- An opportunity for dialogue with the MOF, and incorporation of results into the national MTEF.

6. Some of the recent SFP processes have involved the use of the FEASIBLE tool. The FEASIBLE tool is a rigorous decision-making tool for estimating costs and closing possible financing gaps through an iterative process involving key stakeholders. It can be applied to the water and wastewater sectors of entire countries, regions and large cities. The heart of the tool consists of generic cost functions, which can be adjusted to mirror the local situation.

7. This paper reviews the experience of using FEASIBLE in Lesotho, Egypt and the Kyrgyz Republic. In Lesotho, the process of modelling and data collection proved difficult and time-consuming, and the consultants decided to work with a tailor-made national tool feeding into the generic

FEASIBLE structure. However, the process had positive results for the governance of the national WSS. The Egyptian case focused on Greater Cairo, a relatively homogenous urban population, for modelling purposes, with two clear policy variables – tariffs and subsidies – and a preferred scenario involving the continuation of the latter. The Kyrgyz Republic offered a complex geographical situation, entailing modelling difficulties, but produced a policy and financing scenario acceptable to the main stakeholders in the national dialogue.

8. The FEASIBLE tool provides an excellent overall structure and approach to SFP for WSS. The elements it uses are essential to any serious SFP. Whether the actual tool is used, with the elaborate data collection that it entails, rather than a less technical country-specific process, is a matter for local judgement. The evidence reviewed in this paper shows that the technical problems of using the tool, and the effort of data assembly, are not to be underestimated. However, the process can produce vital information previously lacking, and generate enthusiasm and consensus amongst key stakeholders involved in the future provision of WSS.

9. The final section of the paper deals in greater detail with the main elements of SFP, offering some lessons of experience and guidance for practitioners under the following headings:

- Objectives and expected outcomes;
- The process: consultation and national dialogue;
- Embedding SFP in regular planning, budgeting and financing procedures;
- The choice of analytical framework;
- Data collection and analysis;
- Baseline and Development Scenarios;
- The Financing Strategy.

Annex 1. Bibliography of Key References

Atkins Planning/PKF: *Final Report of "National policy dialogue on Financing Strategy for urban and rural water supply and sanitation in the Kyrgyz Republic"*. 2009.

COWI: *Developing financing strategies in water supply and sanitation*. Note produced for the EUWI Finance Working Group, July 2007.

COWI: *FEASIBLE – User Guide*. Undated, (http://www.cowi.com/menu/projects/nature/environmentalpolicyandregulation/Pages/downloaduserguidance.aspx)

COWI A/S: *Final Report of "Development of a Financing Strategy for the water supply and sanitation sector in Egypt"*. May 2009.

EAP Task Force: *Financing Strategy for the urban water supply and sanitation sector in Georgia*. OECD, undated.

EUWI-FWG: *Financing Strategy for the water supply and sanitation sector in Ethiopia: Draft 2.0*. Oct 2006.

EUWI-FWG: *Strengthening capacity in Strategic financial planning for the water supply and sanitation sector in Lesotho.* Reference: 9 ACP RPR 109-2 TD2 Lesotho, Report number 05, Strategic Financial Planning report. February 2010.

Foster, V and Briceno-Garmendia, C (eds.): *Africa's infrastructure: a time for transformation*. AFD/World Bank, 2010.

GWP: *Towards Water Security: A Framework for Action*. GWP, 2000.

Hutton, G and Bartram, J: *Regional and global costs of attaining the water supply and sanitation target (Target 10) of the MDGs*. WHO, 2008.

Institute for Applied Environmental Economics (TME): *National Policy Dialogue on Financing Strategy for rural water supply and sanitation in Armenia*. In collaboration with EAP Task Force, EUWI and OECD, April 2008.

Jacobs: *Facilitating policy dialogue and developing a National Financing Strategy for urban and rural water supply and sanitation in Moldova. Presentation Report*. In collaboration with EAP Task Force, EUWI and DFID. OECD, 2008.

Kauffmann, C and Perard, E: *Stocktaking of the water and sanitation sector and private sector involvement in selected African countries*. OECD, 2007.

Mehta M, and Knapp, A: *The Challenge of Financing Sanitation for Meeting the Millennium Development Goals*. Nairobi, Kenya: The Water and Sanitation Program, 2004.

Ministry of Water Resources Ethiopia, *Final Sector Review Report of Water Supply, Sanitation and Hygiene, Ethiopia*. Ethiopia, September 2006. p. 18.

OECD: *Managing water for all: an OECD perspective on pricing and financing*. OECD, 2009a.

OECD: *Strategic Financial Planning for water supply and sanitation*. OECD, 2009b.

OECD/DAC: *Creditor reporting system: aid activities in support of water supply and sanitation, 2001–6. 2008–9*.

PEM Consult/Tsoelopele Consultants/Contractors Pty Ltd: *Progress Reports 11 & 12, and Capacity Development and Integration Report, for the project, "Strengthening capacity in Strategic Financial Planning for the water supply and sanitation sector in Lesotho.* Dec 2009 and Jan 2010.

State Committee of Water Economy and Ministry of Finance and Economy of the Republic of Armenia in cooperation with the EAP Task Force: *Financing Strategy for urban wastewater collection and treatment infrastructure in Armenia: Final Report.* OECD, 2004.

Tremolet, S and Scatasta, M: *Innovative financing mechanisms for the water sector: an OECD perspective.* OECD, 2009. p. 35–38.

Van Ginneken, M and Kingdom, W: *Key topics in public water utility reform*. World Bank-Netherlands Water Partnership, Washington, 2008.

Virjee, K: *Financing strategies for water sectors in Africa.* Water and Sanitation Program, 2007 (seen in draft).

WaterAid: *Getting to boiling point.* 2004.

WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation. *Progress on Sanitation and Drinking-water: 2010 Update*. WHO/UNICEF, 2010.

Winpenny, J. (ed): *Financing Water for All.* Report of the Camdessus Panel, GWP/WWC, 2003.

World Bank: *Africa's infrastructure: Time for transformation*. World Bank, 2009.

WSP/PPIAF: *How can reforming African water utilities tap local financial markets?* Revised, 2009.

Annex 2. Outline of a Five-day Training Course in SFP

Target group for the course:

- Officials from African water, finance and other government departments dealing with WSS;
- Professionals working in the WSS sector;
- Local employees of donor agencies and NGOs with operational responsibilities for WSS.

Resource persons for the course:

- Experienced officials and professionals from national governments, utilities and other agencies operating in WSS;
- Local and external consultants with experience of SFP, including application of FEASIBLE.

General aims of the course:

- Provide familiarity with the general aims, content and procedures of SFP;
- Convey the experiences of countries that have recently undertaken SFP;
- Introduce FEASIBLE: how it works, what it needs, what it can achieve;
- Provide practical guidance and advice for national partners interested in undertaking SFP.

Background reading material:
EUWI/FWG/GWP "Introductory Guide for Practitioners" paper on SFP
OECD: *Strategic Financial Planning for water supply and sanitation* (2009)
COWI: "FEASIBLE – User Guide" (downloadable from www.cowi.com)

OUTLINE OF COURSE

Day 1: Preliminaries and scene-setting

Get participants to introduce themselves and sketch out the situation in their own countries (5 min max)

Context
Status of WSS in selected African countries: current situation; achievements, key problems, WSS policy; and drivers of change.
Finances of WSS: current financing sources and estimate of flows; and future requirements.
Institutions for WSS: responsibilities for planning, investment, operation and financing.

Stakeholders
Who are they? Identify all the main potential parties in SFP; what are their diverse interests; what can they contribute to the process; how can their reservations or hostility be overcome; what should their specific tasks be? Is there an obvious champion?
Organising a stakeholder forum/consultation/national dialogue. The options (draw on reports/minutes of actual meetings). Assessment of strengths and weaknesses of recent actual processes.

Objectives of SFP
In actual country circumstances, what are the main objectives of SFP? What outcomes are expected? From recent experience, has SFP been successful in meeting hopes and delivering outcomes?

Planning SFP
What are the main steps and their sequence? Where to start?

Reality check
Review of recent SFPs, introduced by practitioners (Ethiopia, Lesotho, Uganda, others?).

Day 2: Baseline and Development Scenarios

Creating the Baseline Scenario: understanding the WSS *status quo*
What is the key information required for SFP? Where is it available? What tends to be missing? Is there a need for *ad hoc* surveys?

Building the Development Scenarios
The elements entering into future scenarios – policies, ambitions, political and social pressures, and the relevance of international commitments. How to prioritise.
Review of Development Scenarios as used in recent SFPs.
Role-play for participants: allocate roles to members (e.g. MOF, NGOs, health workers and environmentalists) in an exercise to produce alternative Development Scenarios.

Day 3: Tools

The analytical tool
The options – FEASIBLE or something less formal. Hybrid versions. Generic versus tailor-made tools. What factors should govern the choices made?
Introduction to FEASIBLE by a consultant/practitioner. An actual recent country tool should be up and running on a computer, to give participants a good feel for what this involves.
Demonstration of iterations, using variations supplied by participants. Discussion of results.

Day 4: Revenue and financial sources

Basic revenue streams

I. Tariffs and Affordability. How household affordability is assessed. Validity of standard ratios. Willingness-to-pay evidence. Dealing with the poorer deciles. Tariff structures and cross-subsidy.
II. Government budgets and subsidies. The modalities of subsidies. What should central governments pay for? How can budget transfers be predictable and transparent? Targeting subsidies.
III. ODA. Maximising the value of external grants. Aid modalities and channels. Recent experience.

Repayable sources
The long-term potential of commercial sources – loans, bonds and equity. Leveraging through facilities and hybrids.

Day 5: Financing Strategies

Options for closing the financial gap in SFP
Varying the Development Scenarios: standards, priorities, technology and scheduling.
Changing the size and balance of the basic revenue flows.
Iterations. Review of experience from recent exercises.

Embedding the SFP into regular planning and budgetary processes
Recent experiences: successes and failures.

Final pointers: open discussion
Ask each participant to sum up what he/she will take away, and how they intend to progress with SFP in their own countries.


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