Guidelines for User Fees and Cost Recovery

For Rural Water and Sanitation

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This document was prepared by the Water Partnership Program (WPP) of the African Development Bank under the supervision of the Bank's Operations Policy and Compliance Department with inputs from an international consultative stakeholder workshop for Bank staff and external stakeholders.

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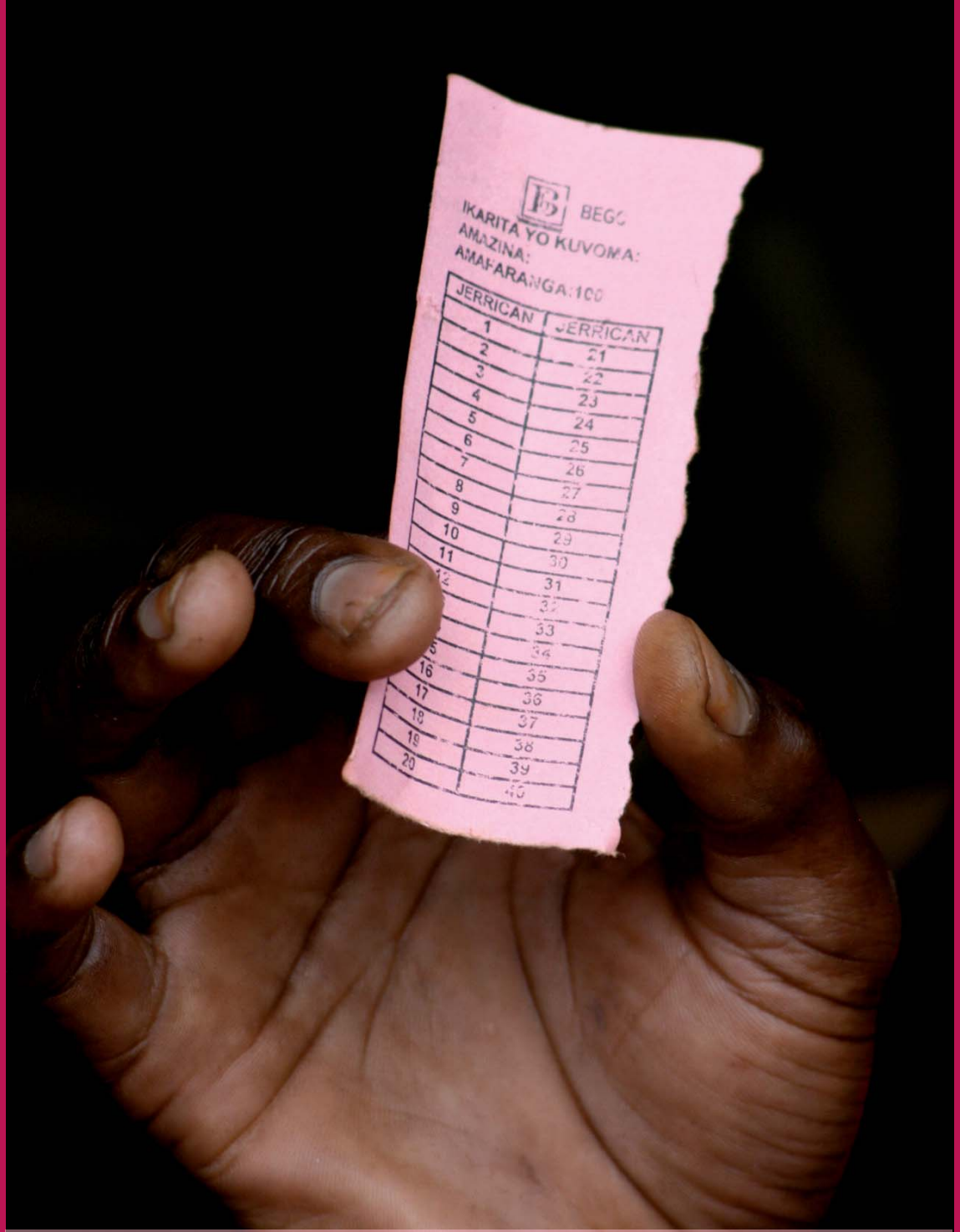

This card is used in rural Rwanda for the sale of water.
A box is ticked for the sale of each jerrican.

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List of abbreviations

AFDB	African Development Bank
CGP	Country Governance Profile
CPIA	Country Policy and Institutional Assessment
GDI	Gross Domestic Income
GDP	Gross Domestic Product
IWRM	Integrated Water Resources Management
MDGs	Millennium Development Goals
NGO	Non Governmental Organization
O&M	Operation & Maintenance
PPP	Polluter Pays Principle
RMC	Regional Member Country
RWSSI	Rural Water Supply and Sanitation Initiative
WPP	Water Partnership Program
WTP	Willingness To Pay

Foreword

The Guidelines presented here touch upon a very critical issue for all rural water sector investments: how to build rural water and sanitation infrastructure that is, first and foremost, financially sustainable, in addition to being environmentally and socially sustainable?

The Guidelines attempt to address the middle path where user contributions are more than token, and less than full capital cost. The authors of these Guidelines emphasize the importance of establishing acceptable tariffs, regular collections and ensuring that enough resources are put aside for major periodic servicing.

The Guidelines were developed through the support of the Water Partnership Program and were extensively reviewed by the Bank.

This publication will provide important and useful guidance for task managers within the Bank Group as well as among stakeholders working with the critical issue of financial sustainability for rural water sector investments.

Ali Kies, Director OWAS / AWF

Executive summary

i The Africa Water Vision and the Millennium Development Goal (MDGs) targets relating to water and sanitation services are to halve by 2015 the proportion of people who do not have access to safe drinking water and basic sanitation. Sector experience strongly suggests that sustainability is critical to the achievement of the MDGs for water, sanitation and irrigation projects. There are three key dimensions to sustainability: environmental, social and financial. This set of guidelines focuses on the financial dimension, while taking into account the social and environmental dimensions. A robust cost recovery system is necessary to achieve financial sustainability of water sector projects and programmes.

ii Cost recovery through the levying and collection of user fees serves two principal functions:

- Strengthening internal generation of sufficient revenue to support continuing delivery of services to users over the long-term, including extension of service coverage to all including low-income households, and improved service quality; and

- Promoting better use of scarce water resources and management of wastewater disposal to preserve the natural environment by signaling to consumers the cost to the economy of the resources used by the services.

iii The Bank Group's Integrated Water Resources Management (IWRM) policy considers water as an economic, social and environmental good. In a context of growing water scarcity exacerbated by rapid population growth and urbanization, climate change and environmental degradation, mismanagement of water resources, and misallocation of budgetary resources, the Bank Group and its Regional Member Countries (RMCs) have to adopt a new approach to water resources management anchored on sustainability in all its dimensions.

iv The recovery of financial costs (operating and maintenance (O&M) expenditure, investment capital including interest on debt finance, indirect sector support costs including environmental and economic regulation and resource opportunity costs) is necessary in the context of integrated water resources management (IWRM). In particular, economic and financial pricing of water serves to guide consumers collectively towards an allocation pattern of water resources among the various

competing uses that maximizes public welfare. Sustainability also requires adequate wastewater management and implementation of the Polluter Pays Principle (PPP).

v However, the point of departure varies by country, sector, and sub-sector: in some cases, cost recovery is extensive, well established and effectively implemented. In other cases, it is minimal – either through lack of policy commitment to the objective or poor implementation of policy or, equally relevant, due to a policy commitment to deliver services to the poorest by minimizing charges.

vi In sum, these factors create a continuum of contexts and opportunities for cost recovery interventions, which in turn influences what is feasible and desirable, and the timescale that may be required to meet specified policy objectives. These Guidelines, through a step-by-step approach, are intended to facilitate that progress. The key point is that failure to attain financial sustainability of water and sanitation projects is highly likely to hinder scaling-up and therefore delay achievement of the MDGs for the water sector.

vii These Guidelines, one of three covering the water sector (urban, rural and irrigation), focus upon rural water supply and sanitation. The guidelines apply to rural areas (including urban and/or peri-urban areas, rural townships, villages and hamlets) not served by networked water and/or sanitation services. It is recognized that much of peri-urban water supply, as well as urban on-site sanitation, is also non-networked and therefore often follows the household and community management approach. In such situations, the term “user fees” is not the most appropriate term because costs are recovered mainly by a combination of subsidies to capital investments and community and / or household irregular contributions in cash, labour and / or in kind. The term “community / household contributions” is therefore more frequently used rather than “user fees”.

viii **Five key steps** are proposed to be followed in developing, setting and implementing user fees and cost recovery systems for rural (and non-networked) water supply and sanitation projects:

- **Step One** : Determine the economic, policy, and institutional context in the country, with respect to water and sanitation services. An understanding of the country’s economic conditions, including the institutional and social environment is necessary to facilitate promotion of cost recovery through user fees.

- **Step Two** : Set cost recovery and service objectives. Stakeholders (especially users) should be engaged in the selection of service levels (and technology), as these have significant impact on costs of services and cost recovery. Cost recovery and service objectives are best negotiated with stakeholders. Issues of affordability, willingness to pay and willingness to charge should be considered, and these should inform the setting of cost recovery and service objectives.

- **Step Three** : Undertake investment planning, costing and appraisal of the services (selected in Step Two), to determine the costs to be recovered and the overall revenue requirements. An understanding of the total revenue requirements is important to identify how much is necessary to cover expenditure, and to determine the source of those funds. The source of funds may include subsidies, but these should be well targeted, taking into account the objectives set.

- **Step Four** : Determine the basis for levying user fees. Total revenue requirements are dependent on service levels, which need to be decided in an inter-active process with stakeholders. Different sources of funds are often required to cover different costs incurred. A demand-responsive approach should be used, to balance service levels with affordability and willingness to pay. A service and price differentiation approach should be used to provide users with service levels and technologies that they can afford and are willing to pay for, to ensure sustainability. After determining total revenue requirements, it may be necessary to reconsider service and cost recovery objectives (Step Two).

- **Step Five**: Implement the user fees and cost recovery system. Although the community management model has proved effective at implementing new rural water and sanitation systems, there have been significant failures in maintaining those systems in the long-term using the community management model. As many rural communities and some municipalities lack financial management skills to organize, implement and efficiently control a revenue collection and cost recovery system, external support from a water supply entity should be considered to ensure that cost recovery strategies are effectively implemented to enhance overall sustainability of rural water and sanitation services.

Details of each of these five steps are explained in the Guidelines, and a summary is presented in Table 1.

ix It should be recognized that non-networked water and sanitation services are often a community or household responsibility where, because of the technology used (such as hand pumps, on-site sanitation), the need for "user fees" for operations and minor maintenance may not be apparent due to the lack of regular cash requirements to "operate" the facilities. Communities and/or households are responsible for ensuring that facilities are kept in good working order. The community should have some form of revenue collection to ensure that there are funds to meet the occasional operation and maintenance costs and capital maintenance (replacement) costs.

x Servicing of any capital investment finance (over and above community construction contributions in labour and in kind), which often necessitates regular cash payments from consumers, is not always required in rural areas (where financing has been done through grants or free donations).

The Bank's Rural Water Supply & Sanitation Initiative requires a 5% contribution from beneficiaries. In order to avoid the common failure to invest in capital maintenance, and consequent failure of the service, it is necessary to achieve cost recovery through different types of ongoing levies and/or taxes which can be held by some trusted entity or through occasional charges as the direct costs arise. Regular intervention by a trusted entity (such as local government or autonomous water and sanitation agency) is necessary to promote and facilitate occasional cash collection to meet the periodic maintenance needs, and thus ensure sustainability of services.

Introduction

Background to the cost recovery guidelines

Cost recovery plays an important role in meeting social, economic and environmental policy objectives. At a minimum cost, recovery provides the basis for financial sustainability: failure to provide for adequate funding leads to the degradation of systems, deteriorating performance and services, and unwillingness to pay – a commonly observed vicious circle.

In 2000, the Bank produced an Integrated Water Resources Management (IWRM) Policy stat ment. The policy stated that getting the prices right is at the very core of improving water resources management. These Guidelines have been developed to assist in the implementation of the Bank Group's water policy, particularly with regard to financial sustainability.

The Guidelines for user fees and cost recovery for rural water and sanitation projects apply to rural areas, including rural townships, villages and hamlets not served by in-house piped water and sewerage networks. Such areas rely largely on communal or individual wells and/or water piped to collective water points. As for sanitation, each household or groups of households would have access to stand-alone onsite disposal facilities. The Guidelines also apply to urban and peri-urban areas where water and/or sanitation services are not networked.

The main objective of these Guidelines is to provide guidance to Bank Group Task Managers and other stakeholders as well as to enhance the design and implementation of financially sustainable irrigation and drainage projects. The ultimate goal of the Guidelines is to improve water and sanitation service provision, in order to accelerate growth in economic development as well as improving the health of all households, particularly the poor. The Guidelines recognize the economic and institutional environment in which Regional Member Countries are operating.

A key objective of these guidelines is to enable service promoters and providers to deliver better services to all, within the context of a protected environment, through accessing enhanced revenue and finance flows whilst acknowledging that direct full cost recovery may not be achievable in all rural areas in the near term. In this context, it is recognized that part of the process of moving towards direct cost recovery has to be through ensuring that appropriate service levels and technologies are chosen so that users obtain the services they desire and for which they are willing to pay.

The Bank has committed through its Rural Water Supply and Sanitation Initiative to cover approximately 80 percent of the overall investment requirements through international funding, with the remaining 15 percent financed from government resources and 5 percent from beneficiaries. However, in order to ensure

sustainability of the water and sanitation services, the beneficiaries should contribute (user fees) towards maintenance of the facilities.

User fees are normally derived from sharing among consumers the total costs of operations and minor maintenance, longer-term capital maintenance, and the cost of capital. In general, non-networked rural water and sanitation services require minimal operations and minor maintenance financial expenditure (except for point-source fuel-powered pumps), significant but occasional and time-delayed capital maintenance expenditure and, where the 5 per cent beneficiary contribution has been through labor contributions for example, zero capital recovery cost.

There is therefore a very significant challenge in collecting acceptable (to the users/ consumers) regular user fees for capital maintenance charges which will not need to be spent for some years into an unknown future when the perception of users is that they themselves are undertaking all the present work, for example hand-pumping water and cleaning/ maintaining sanitation facilities. The external capital contribution limits understanding of the value of the services being accessed and non-cash operating costs further reduce that value. The consequent capital maintenance charges are very significant (massive) relative to earlier community contributions and do not in any way match consumer perceptions of apparent costs.

The danger, however, of failing to establish a capital maintenance fund based upon user charges is that when the need for repair and replacement arises, usually made apparent by service failure, it can be more convenient/acceptable for communities to escape from the challenge of raising significant funds immediately by foregoing that service altogether. It is not the intention of the MDGs to place communities in the situation of, by default, reverting to distant and polluted water sources when the new improved source requires capital maintenance. This is one reason why some form of user fees should be paid by all beneficiaries.

The role of user fees outlined earlier has, therefore, to be adapted in the case of non-networked rural water and sanitation where the capital costs have been provided from external sources. It is not anticipated that user fees will be required to ensure sufficient revenue to support improved service quality or service coverage expansion. Similarly, using user fees to signal the value of water in the context of IWRM are not possible, if all capital costs are deemed to have been paid by others, whilst also being irrelevant in the context of such small-scale abstractions. There remains the critical task of ensuring sufficient funds to ensure adequate long-term capital maintenance.

The guidelines stress the iterative nature of reflecting anticipated user fees and/or local government budgetary support against proposed service levels and the need to reconsider service levels when subsequent

willingness and ability to pay indications are that such services would not be able to recover costs.

Agreements for financing water and sanitation projects with RMCs must establish an agreed approach to user fees as well as the basis on which financial sustainability is to be ensured. Any such agreement assumes the existence of an appropriate entity to facilitate service provision which has an efficient accounting system capable of ensuring the timely availability of reliable data, clear policy and appropriate legal support to proposed user fees and adequate enforcement procedures.

The Bank's Guidelines for Financial Governance and Financial Analysis of Projects provide detailed information on standards and procedures for financial accounting that are comprehensive in scope and fully adequate to guide financial accounting aspects of ensuring overall revenue sufficiency, once the scope of a cost recovery approach has been identified.

The main steps of the guidelines

There are five key steps to be followed in developing, setting and implementing user fees and cost recovery systems for rural and/or non-networked water and sanitation projects/programmes:

1. Determining the economic, policy and institutional context in the country with respect to water and sanitation services;
2. Setting cost recovery and service objectives;
3. Undertaking investment planning, costing and appraisal, to determine costs to be recovered and overall revenue requirements;
4. Determining the basis for charging user fees; and
5. Implementation of user fees and cost recovery system.

The five steps are summarized in Table 1 in the annex, and each of the five steps is described in the following sections.

1. Step one

1.1 The economic, policy & institutional environment

1.1.1 Promoting cost recovery through user fees requires an understanding of the country's economic conditions, including the institutional and social environment. Useful economic indicators include average household wealth and

Gross Domestic Income per capita. The level of economic wealth is already recognized in AFDB's classification of RMCs and is an important predictor of possible levels of cost recovery.

1.1.2 Another useful indicator is the tax-to-GDI (or GDP) ratio that not only illustrates the potential for supporting water and sanitation services through direct taxation (through budgetary support to the water and sanitation provider) but most importantly the likelihood of the sustainability of this source of finance. Some countries have achieved good water and sanitation services through a tax-based system with only limited user fees. However, such successes are unusual, particularly in low-income countries and this approach does not assist in the IWRM goal of appropriate sharing of scarce resources based upon the principle of "water as an economic good."

1.1.3 Analysis of the institutional framework gives an indication of any institutional weaknesses that need to be addressed to ensure viable organizations and the necessary supporting framework for service delivery and cost recovery. Useful indicators can be obtained from the Country Governance Profile (CGP), which identifies the strengths and weaknesses of governance arrangements in a country. The Country Policy and Institutional Assessment (CPIA) should also be considered as it gives an indication of the governance potential to deliver sufficient institutional autonomy to support a cost-recovery sustainability policy (or alternatively efficient delivery of a tax-based system). There is a particular need for institutional support to deliver sanitation services and promote hygiene.

2. Step two

2.1 Setting cost recovery & service objectives

2.1.1 Rural and/or non-networked areas in Sub-Saharan Africa face a significant challenge in achieving cost recovery from community/household contributions. Since communities in many poor countries, and poor regions within countries, are unable to finance the operation and minor maintenance expenditure of sophisticated water and sanitation systems, the selection of technology, and hence service levels, is crucial.

2.1.2 Within a district or programme area, the first step of the iterative process to decide on levels of user contributions is to consider and determine the service objectives. The process to set service objectives starts from investigating existing levels of service and resulting costs and revenue, and the required levels and impact on coverage and infant morbidity (as a key health indicator) to be achieved within the program time-frame. Setting service objectives should, therefore, ensure that health and convenience benefits are achieved by all, particularly women and the poorest, in a financially sustainable manner.

2.1.3 Basic indicators such as infant morbidity, existing service coverage and the average distance to a water source of low-income households, provide some indication of the urgency of planning for increased coverage, indicating the required costs and explaining the need for additional funding sources. The percentage of population with access to alternative (non-safe) sources and the indicators on average water-user fees, provides a first indication of the ability and willingness to pay, and the possibility for cross-subsidies.

2.1.4 Concerning sanitation coverage, open-defecation affects more than the people in one household. It can affect the whole neighborhood or community. Therefore, for a health impact, a high proportion of the people living in an area must consistently use latrines. This implies that intensive interventions are needed with the community or neighborhood as the primary unit of change, not only the individual or household. In slum areas, where most housing is rented, a high percentage of pit latrines being unsafely emptied manually will endanger previous efforts to decrease the health risk. The need for public or private incentives/subsidies will have to be computed when considering the costs of the service.

2.1.5 The iterative process of setting service objectives necessarily deals with technology choices, service levels and other demands from communities matched against available resources and willingness/ability to pay before considering what levels of subsidies and which alternative sources of funds will be required.

2.1.6 Poverty is both an economic and human condition. This broader definition of poverty cannot be easily measured in monetary terms. Consequently, in addition to income-based measures of poverty, other quality-of-life indicators should also be used.

Communities in rural areas are not homogeneous and differences within communities need to be looked at closely. Within communities, several social groups are particularly vulnerable socially, economically and culturally. These groups may be composed of women (such as single-parent family heads), the elderly, handicapped, children and indigenous groups. In many rural communities where income levels are not available, wealth indicators can also be used as yardsticks.

2.1.7 Willingness to pay (WTP) is an expression of demand for a service and is a prerequisite for cost recovery because it is a measure of user satisfaction of a service, and of the desire of users to contribute to the functioning of the service. Willingness and ability to pay are regularly confused. It is often stated that people are not able to pay the required contributions because they are too poor.

Evidence shows that, while this may perhaps be true in a few individual cases, in many cases people are able to pay but not willing to prioritize spending on improved water supplies or sanitation facilities. It is, therefore, not an issue of ability to pay, but a case of prioritizing water and sanitation services in the allocation of household resources.

2.1.8 There are several methodologies available for measuring willingness to pay (for instance: actual behaviour studies, hypothetical behaviour studies, contingent valuation, etc.).

While many of these studies will send a clear message that there is willingness to pay for improved services, it is only on very rare occasions that policy changes as a result. In many countries, there is considerable willingness to pay for water and sanitation services, but unwillingness to charge by policy makers.

For rural areas, these guidelines suggest limiting willingness to pay studies to survey and focus group discussions at community level and ensuring that the views of women as main water users are investigated and recorded separately. This approach will also incorporate the possible provision by community members of voluntary labor for tasks such as trench excavation, transport, pipe laying, or the supply of local materials such as gravel and sand.

2.1.9 On-site sanitation is mostly a household responsibility and similar to many non-networked water services, there are no regular "user fees". However, provision should be made for recovery of costs of pit digging, construction of the latrine slab, pit latrine/septic tanks emptying fee, and rebuilding latrines where this is not done by households.

2.1.10 Overall, in order to limit the possibility of a mismatch between services and affordability where capital investment is significantly subsidized, a demand-responsive approach is recommended. This allows users to signal their willingness to pay for long-term sustainability, though it may lengthen the implementation period. In the sanitation sector, this approach has led to a reduction in the level of capital subsidies which, in turn, has led to a more efficient and effective choice of technologies, therefore delivering enhanced sustainability.

2.1.11 In an attempt to match cost recovery objectives/possibilities with social and economic goals in low-income economies, self-provisioning is suggested for the poorest households and communities with external support in the form of cement for a hand-dug well, pre-cast latrine slabs etc.

2.1.12 For the slightly better-off low-income households and communities, the recommended approach is to encourage self-provisioning by facilitating external component provision. This requires support to the supply chain of borehole drillers or hand-pump spare part providers or training of masons who can build locally acceptable latrines.

2.1.13 In the lower middle-income areas, conventional user fees are generally more feasible for more conventional, utility-type supported services. However, it should be emphasized that whatever objectives are set

for whichever income group, these cannot be achieved and sustained without a clear cost recovery system.

3. Step three

3.1 Determining revenue requirements

3.1.1 Understanding total revenue requirements is important to identify how much is necessary to cover expenditure and to determine the source of those funds. Initial capital investment is the most obvious cost perceived and understood by rural households but experience has demonstrated to households that governments and/or donors are prepared to pay for capital costs apart from some notional labor contribution to construction. The nature of an often highly dispersed population with low access to cash, high collection costs and limited banking and accounting capacity has meant that it has not been possible to replicate the urban utility model, of recovering capital costs through user fees in most rural areas.

3.1.2 However, there remain three types of recurrent expenditure in the provision of water supply and sanitation services in rural areas:

- Operating and minor maintenance expenditure (including management and administration);
- Capital maintenance expenditure (for maintaining the infrastructure in good condition); and
- The costs of servicing capital (in some projects, a loan has to be paid in installments).

3.1.3 There is a difference in approach between rural and urban cost recovery for capital investments. Urban customers are presumed to pay for capital investment through user fees that contribute to the cost of capital and also maintaining the level of that service through capital maintenance payments (depreciation). This results in relatively small additions to the monthly bill and is a major aid to affordability. Generally, poorer rural communities and households are required to pay some capital contribution in advance, which can be a barrier to access for cash-limited communities. Apart from cash contributions, communities are, therefore, often encouraged to contribute in kind (such as labor). The requirement for contributions is imposed in order to increase ownership of the installed system among the community, recognizing that any additional regular payments may not be made. However, this again reduces the understanding of the cash requirements for maintenance.

3.1.4 In rural &/or non-networked systems, the capital investment costs and some direct support costs are therefore usually paid by

government or donors since, without conventional recovery of capital charges over a long period, investment costs are often unaffordable. Normal lending procedures are not effective where there is no regular income. More attention should be focused on how operating and capital maintenance costs can be recovered from communities and households when discussing service levels and technology options with the communities. Often, these costs are considered "small" and the communities are left to determine on their own how to collect the required amounts. This is particularly difficult in local economies with relatively few cash transactions. The result is the all too often lack of capital maintenance leads to disrepair and users cannot access the desired benefits until the cycle begins again with the provision of a new or rehabilitated facility.

3.1.5 Societal contributions towards the water and sanitation sector need to be based on the answers to three fundamental questions :

- What is the objective of providing the subsidy ?
- What source of funds will be used to finance such measures ?
- How will these funds reach the target population ?

3.1.6 Within a sustainable development framework, the need for subsidies to be geared towards the provision of subsidized services to the poor is understood and widely accepted. It is generally agreed that, in some poor areas of middle and low-income countries, subsidies may be necessary to cover basic amounts of water for the poorest. Environmental and public health externalities make it socially beneficial to increase access to improved water and sanitation services.

3.1.7 There are essentially two sources of funds for subsidies.

- From general taxation (national or international), or
- Other service users (cross-subsidization).

In rural and/or non-networked areas. the scope for cross-subsidization is reduced as a result of the imbalance between the fast growing low-income population and the stagnating or declining larger consumers' group (often as a result of poor cost recovery strategies). Some countries have adopted the transfer of a surplus fund on water from urban to rural areas.

3.1.8 Most public utilities do not have the surplus required and many public/private utilities are increasingly financially autonomous, reducing the possibility for such transfers. Furthermore, in a non-networked system, the poorest are often not a part of the network in the first place and most benefits from existing subsidies (mainly through tariff design) accrue to those who are already connected to the network, and who are often the wealthier consumers.

3.1.9 As far as possible, subsidies should be targeted to promote access to basic water and sanitation services rather than providing support for consumption. As a rule, subsidies, if any, should be directed at extending access to services and consumption should never be subsidized because it cannot be sustainable in the long term.

3.1.10 The most common practice is to utilize societal contributions through tax revenues and reallocation through government budgets and international taxation (donor funds). However, many countries have already either a large fiscal deficit or inefficient taxation and transfer mechanisms, which prevent them from improving access to those that cannot afford it.

3.1.11 When the objective of providing the subsidy has been fully costed and the source of funding agreed, it remains to select the instrument by which the funds are to reach the target population. For rural populations these may, for example, include subsidies for investment costs, setting up support teams to ensure capital maintenance and promote hygiene practices, setting up revolving funds at district level, setting up guarantees which allow local entrepreneurs (drillers, latrine diggers, latrine slab builders, suction truck companies for pit latrine emptying, etc.) to access specific bank loans at lower interest rates and extended payment periods, output-based aid, etc.

3.1.12 If available subsidies cannot cover the difference between the costs of service and the expenditure recovered from user contributions, service levels and coverage targets may need to be lowered in order to reduce costs. Reaching the appropriate mix of service levels, coverage targets, user contributions and subsidies is an iterative process.

4. Step four

4.1 The basis for charging user fees

4.1.1 Total revenue requirements will be dependent on service levels which need to be decided in an interactive process with the communities involved. Different sources of funds will be required to cover the different costs incurred. More attention should be focused on how long-term operations and capital maintenance costs can be recovered when discussing service levels and technology options with the communities. Decisions need to be made on the sources of funds to pay for the direct and indirect costs which are key to sustaining the services.

4.1.2 Discussions on service levels (using a menu of service options) and price differentiation should take place using participatory approaches. The participation of communities, both men and women, in the design and implementation of improved services constitutes a great commitment by communities to take responsibility for the service since they will have to manage, operate and maintain it, as well as pay for its functioning.

4.1.3 Gender considerations are especially relevant for cost recovery in rural areas because men and women have unequal access to, and control over water and other resources including land, time and credit. It is also important because women do more domestic work than men, including handling and paying for water. Finally, it is important because men and women have different productive uses of water.

4.1.4 The demand-responsive approach aims to ensure that the service level chosen is affordable because communities and households should only choose the level of service that they know they can afford. There is tremendous opportunity for service and price differentiation in the rural areas. For water supply and non-networked sanitation in the rural areas, there is a 'ladder' of potential technologies and service levels (such as wells with or without pumping mechanisms, boreholes with hand-powered or powered pumps, springs with or without pipe distribution, gravity flow systems with varying degrees of sophistication, rainwater catchment tanks, etc) which can be accessed according to willingness to pay and local conditions.

4.1.5 Discussions should identify the most sustainable technology and consider all technical (operational) and financial implications and commitment to long-term management. There should be clarification on any necessary adjustments to the existing operation and maintenance system, defining the responsibilities of the various actors in the development of the project/programme. The choice of technology for service provision has a definite impact on the level of future operating & minor maintenance expenditure. If a community actively chooses a technology at a known price and agrees to manage the system, it also tends to invest in both maintaining and improving performance.

4.1.6 Although it is desirable for rural communities to pay all operation & minor maintenance-related costs, in some communities user contributions alone may not suffice to cover all of them (refer to step 2). Likewise, beneficiary communities are required to make up-front contributions of at least 5% (five percent) to capital investments (either in cash or labor). These contributions are made to enhance ownership and hence encourage sustainability of water and sanitation services. Many communities find it easier to contribute in labor for investment costs, and it can be difficult when payments are required in cash, as spare parts dealers and mechanics will require cash payments in exchange for spares. Depending on the level of service, and from a cost recovery perspective, a proportion of the total costs in rural and/or non-networked services may need to be covered by other sources (donors, government budget) and investment costs sourced externally.

4.1.7 In non–networked and/or rural water and sanitation services, there are many ways to collect user contributions. Attempts should be

made to recover some form of fixed charge based upon access to a facility (a hand-pump for example) or based upon a fixed level of consumption, such as a container of water taken from a powered ground water source. However, the reality of dispersed point sources or services means that user charges in rural and/or non-networked services more often become household payments or community contributions when the need for funds becomes most urgent.

4.1.8 Cost recovery for sustainability where funds are available for timely capital maintenance, is dependent upon regular user contributions through some form of levies or user fees. Programmes and projects need to consider the best approach in any specific location that will be accepted by the community as a means of raising, and most importantly safely banking, user contributions for ongoing commitments.

4.1.9 Considerable attention is focused on user contributions for capital investment costs when a bigger problem lies with payments and other contributions to both minor operations and maintenance costs and capital maintenance costs. Attention should be paid to communities' access to sources of funds and it is proposed that support agencies facilitate/organize access by assessing their availability, reliability, sustainability and, where they are non-existent, the possibility of developing them. Possible financial sources include:

- Existing community sources (voluntary funds, general community revenues, payment in kind);
- Private financing (private capital, cooperative funds, user associations);
- Grants;
- Credit–loan mechanisms (micro-finance through banks, associations, individuals); and
- Specific funds (social and development funds, village or other local funds).

4.1.10 Voluntary funds are built up by voluntary contributions from local leaders or community groups through public meetings, bazaars, lotteries, festivals and similar social activities. These are common methods to finance construction and major repairs in communities that have a tradition of fund raising and seasonal income. People contribute to finance a particular project or activity. The success of this option depends on a certain social cohesion that ensures that users contribute according to their ability and commitment to the project.

4.1.11 Communities can develop communal productive activities, such as cash crops or a village shop, and pay water bills with their profits. Disputes may arise over the priorities to give to the use of these resources, especially when users do not have equal access to water supply and sanitation services.

4.1.12 Households should be given the opportunity to pay part of their contribution to the construction of their water supply or sanitation facilities in kind by providing voluntary labour for necessary project activities such as trench excavation, transport, sand pipe laying, or by providing local materials, such as gravel and sand. Payment of part of the construction costs in labour instead of money makes the system more affordable to a larger number of households than when all the payments have to be made in cash.

4.1.13 Private capital can be channeled into the construction of a water supply or sanitation project, or to meet replacement, extension or recurrent costs. However, those who provide the capital may look for high rates of return to justify their investment, often through future contracts or ownership. Depending on the level of service and /or technology used, it can be difficult to apply this option in some rural and low-income urban areas where users are not able to pay a full-cost recovery tariff that would include repaying investment costs and providing the required rate of return.

4.1.14 Cooperative funds result from an initiative by a group of users or individuals who get together to finance productive activities, not necessarily related to water supply and sanitation. Cooperatives can be for agricultural produce, for livestock, fishing, etc depending on the type of economic activities in the area. The initial capital comes from contributions in cash or in kind from the members of the cooperative, which may be from payments for produce. Once the group has sufficient revenue, members may decide to use part of their funds to finance water and sanitation services. Where financially and organizationally sound cooperative societies exist, this is a good way to finance and administer water and sanitation services.

4.1.15 Non-governmental organizations (NGOs) and donors often use grants as a type of financing mechanism for the construction of water supply and sanitation systems. Donations can also come through former inhabitants of a village who live in a city locally or abroad. However, grants rarely pay for recurrent costs, so arrangements should be made to finance recurrent costs to achieve sustainability of services.

4.1.16 Microfinance is a method of financing through lending mechanisms, similar to loans given by banks, except for their nature and size. Micro-finance is generally small in volume and responds directly to the specific needs of rural or low-income urban communities. It is possible to distinguish three types of microfinance:

- Micro-credit through a bank
- An association
- Through individuals.

A microfinance system can be used to

- Contribute to investments;
- Purchase materials and equipment for replacement, extension and rehabilitation;

- Finance major unforeseen repairs;
- Cover short-term cash flow problems;
- Develop a stock of spares, parts and tools.

4.1.17 The development of a microfinance system through an association or individuals to finance important capital investments is difficult, due to the small amount of money and the short-term nature of the credit. They have, however, been instrumental in financing small individual devices, such as rooftop water harvesting or a hammer and pulley system for wells. For major investments, communities have had to rely on banks or rural development funds. However, of late there has been considerable interest within micro-finance institutions in Africa to finance water and sanitation services. This remains a potentially effective source of funding.

4.1.18 Funds to purchase materials and equipment for replacement, extension and rehabilitation differ from initial capital investment in that their need can be foreseen. Some projects cover future replacement costs in their user fees. In these cases, this part of the payments can be used as savings or as guarantee for possible credit. Financing unforeseen repairs and damage, together with cash flow problems, are perhaps the most frequent financial needs because of fluctuations in income or because user fees fail to cover costs. It is of utmost importance to ensure alternative financing to meet these contingencies.

4.1.19 Microfinance through associations would be particularly appropriate where the amounts needed are not too large. The development of a stock of spare parts and tools can be critical to sustain a rural water supply system, especially when communities are isolated and geographically remote from major trading centers.

4.1.20 Different types of funds have been established to help the water sector, most of them with a social and development aim. The main points of attraction for these funds are the relatively low interest rates and long repayment periods. Governments can provide credit at lower interest rates than the financial markets, and these funds can be used to promote social development. Credit is allocated to institutions or local governments and it is not always easy for users or community groups to access, unless they are well organized. There is, however, a trend to create funds which more closely match the needs of rural dwellers.

4.1.21 A strong feature of these funds is their ability to tailor themselves to changing circumstances without sacrificing their efficiency and effectiveness. Through their closer contact with communities, the funds have opened new avenues for social action and have increased public awareness of poverty issues.

4.1.22 However, the funds respond mainly to investment needs for new construction or for major overhauls, and are not necessarily

available to finance short-term needs and unforeseen breakdowns. Moreover, past experience has shown that communities still have great difficulty in accessing resources from these funds, while project reports often mention mismanagement as a major obstacle to efficiency. Since access is easier for local authorities and municipalities than for communities, it is important that communities and municipalities work in partnership.

4.1.23 Communities can be encouraged to create a fund at local or village level for the maintenance of their water supply. An initial deposit is put into a bank account, which is replenished through monthly or yearly contributions. The bank account attracts interest on savings, and opens access to credits, deficits, and overdrafts. Account holders can use their savings as a financial guarantee. The fund operates as a savings bank account managed by the bank. The fund can also be managed within a village or area setting, without passing through a bank. Deposits and savings operate as a revolving fund, which works as a micro-credit system through an association, as described above.

4.1.24 Perhaps due to the uncertainty of many of the above techniques to deliver funds for occasional capital maintenance, cost recovery in some rural areas has ended up being dependent upon taxation and goodwill by donors such as NGOs. At present, international taxation is supporting implementation but it is highly unlikely that international taxation can support capital maintenance in a sustainable manner. Providing capital works to provide high levels of service which communities cannot themselves afford, by definition, means that they also cannot afford the capital maintenance of the high levels of service. This is where the principles of service and price differentiation should be strictly applied.

4.1.25 Over time, it is understood that investments in improved water and sanitation will not only improve health but also facilitate economic growth and hence enhanced ability to pay for services. However, in some rural areas, it is likely that such growth may be insufficient to enable communities to pay capital maintenance charges in the near term. The subsequent stage will be for capital maintenance to be supported through national taxation which, where appropriately managed and supported by local sales and/or household income taxes, will deliver a level of user contributions in an efficient manner.

5. Step five

5.1 Implementation

5.1.1 Although the community management model has proved effective at implementing new rural water supply systems, there have been significant failures in maintaining those systems in the long-term using the community management model. A great number of communities and some

municipalities lack the financial management skills to organize, implement and efficiently control a revenue collection and cost recovery system.

External support in this area is crucial if cost recovery strategies are to be effectively implemented. It is likely that some form of water supply entity, a part of local government, an autonomous agency or an extension of an urban utility, will be required to facilitate and deliver both technical and financial support to rural communities.

5.1.2 A financial management system can be said to be effective when managers can :

- Estimate the expenditure that a service will need over defined periods of time;
- Recognize and access the various types of revenue, both budgetary support and user fees;
- Collect an appropriate level of fees from users;
- Keep all necessary financial information and records
- Use indicators to control and monitor the financial performance.

Billing and Collection	Possible Options
When to collect money?	• Each time a service is provided: monthly, post-harvest, beginning of financial year or every sixth months
Who collects the money?	• Caretaker, operator, user group, village water committee, community leaders, staff from an institution or treasurer
Where to keep the money?	• In a safe, in the village account, in a bank account, in a development fund, in the treasurer's house, or in an official account

5.1.3 The aim of organizing financial flows is to ensure that resources arrive in time to guarantee the sustainable functioning of the water and/or sanitation service. For this reason it is useful to think about how and when to present bills to water users, stipulating one or more places where water bills can be paid.

5.1.4 Once funds have been collected and regular expenses met, any surplus should normally be kept in a safe place, such as a bank account. Many communities wonder how to use this surplus, which may lie idle in an account while the community has great financial needs.

There are two possible solutions. Either the surplus is used for water projects only or is used to develop other activities provided this money is reimbursed over time. As a general principle, funds collected for water and sanitation should be used for that purpose alone.

5.1.5 Making the management organization accountable to users is an important factor in sustaining services. This includes transparent financial management and regular reports and accounts to community meetings (more information on transparency is provided in a related annex). Effective control and monitoring is an ongoing necessity as part of financial management. This relies on accurate information, which will mainly be found in the records and books kept by the community.

5.2 Non-payment challenges

5.2.1 Payment default for water and sanitation services is a common challenge in many rural and peri-urban areas. Small utilities and community committees have implemented various measures to control and reduce it. Introducing educational programmes to inform users and make them aware of the need to pay on time is always a good strategy.

5.2.2 However, when educational programmes do not work, other measures have to be implemented. Some of the strategies that may be used against default include:

- External audit agents are hired to audit the books with treasurers, collect loan repayments and accompany the treasurer on home visits to households whose payment is in arrears. Sometimes there are good reasons why a household is not able to pay the due contributions and a realistic payment plan can be prepared;
- Include in the user fee/contribution a safety margin to cover defaulters or encourage advance payments through a small reduction in the fee/contribution. In practice this type of advance payment would be introduced in line with the above-mentioned strategy;
- Use social pressure by announcing debtors' names at general meetings and other places where the community gathers.

Conclusion

Enhancing rural water and sanitation services for convenience, public health and economic reasons should be advanced on the basis of the principle of service and price differentiation. This principle has the effect of balancing households' ability and willingness to pay with service levels, and therefore maximizes the potential for cost recovery and financial sustainability.

For rural (and/or non-networked) water and sanitation services, a demand-responsive approach is recommended, supported by household and community contributions to the greatest extent possible, and backed up by appropriate institutions with budgetary support.

Table 1: Summary of the five steps comprising guidelines for user fees and cost recovery for rural water and sanitation services

Country Programme Assessment	**STEP 1** **The Economic, Policy and Institutional Context**	Economic condition, growth and average income levels (GDP pc and Gini index) Trends in rural growth rates, peri-urban and slum growth with non-networked services Policy and institutional environment, laws and formal statements of cost recovery policy by relevant authorities Country Policy and Institutional Assessment – likelihood of political support for accelerated move towards cost recovery for sustainability; Stakeholder analysis – likelihood of support/opposition to enhanced cost recovery. Possibilities for cooperation and coordination. Is there any system of comparative competition for drillers, small-scale private sector providers &/or supply chain (both water and sanitation) in the country to promote efficiency?
Sector review, Project Identification & Feasibility	**STEP 2** **Setting Cost Recovery and Service Objectives**	Existing RMC & AFDB policy on setting cost recovery targets from user fees What are the primary objectives of service delivery in this context – social, economic, financial, environmental? To what extent should attainment of the desired cost recovery target be time-extended? What are the existing levels of service provision – water and on-site sanitation? Is there a need for social mapping? What is the existing financial situation & efficiency of any direct service providers (community committees, small-scale private sector)? What is the existing level of subsidies to average customers of water? And on-site sanitation? What levels of service are being accessed by the poorest? What quality and quantity of services are desired by users and consumers, both present and potential? Can services be delivered through alternative, differentiated, modes of provision? What is the affordability and willingness to pay for services at various levels of provision?

Project preparation and Appraisal	**STEP 3** **Investment Planning, Costing & Appraisal: Determining Revenue Requirements**	Understanding total revenue requirements What are present operating expenditures, capital maintenance expenditure, costs of capital, if any? What should they be at present service levels? What should they be at proposed service levels? Have these costs incorporated direct support costs? Is the country investing sufficiently in indirect support costs? Is there a justifiable need for extra-sectoral subsidies, particularly related to the time-spread of achieving cost recovery?
	STEP 4 **The Basis for Charging User Fees**	What is the basis for charging user fees/contributions/levies (payment in kind etc,)? To what extent does the cost recovery mechanism reflect the principle of revenue adequacy, social fairness, water conservation and polluter pays, simplicity and enforceability? Are cost sharing agreements clear and implemented between different stakeholders? Is it an appropriate time to re-consider the basis for charging? Is there an appropriate balance in sharing the total revenue burden between different consumer segments? To what extent are faecal sludge management costs being recovered? Are any additional sources of finance required to ensure coverage to the poor? Is there sufficient willingness and ability to pay these contributions? Have women, the poorest and the most disadvantaged been consulted separately? If not, reconsider service objectives and modes of provision Step 2.
Project Design and Implementation	**STEP 5** **Implementation**	Are any additional sources of finance required to ensure coverage for all, especially to the poor? Is there an adequate strategy to communicate to customers the reasons for moving towards full cost recovery? What customer involvement mechanisms are planned? Are there appropriate user payment collection procedures (flexible payment systems) in place? Can lower-income customers pay little and often? Are there appropriate but enabling processes in place/planned for non-payment? Are public institutions paying their water fees? Is there any need for adaptation of local bye-laws to enforce compliance? Is there a system of financial control, monitoring and evaluation of the development of user fees?

The Water Partnership Program and its mission

The Water Partnership Program (WPP) promotes effective water management policies and practices at regional and country levels. It operationalizes the African Development Bank's Integrated Water Resources Management policy in the Bank's regional member countries.

WPP pursues its goal through the generation and dissemination of a range of knowledge products, fostering dialogue on key sector issues and promoting partnerships that enhance knowledge sharing.

The Guidelines presented here touch upon a very critical issue for all rural water sector investments: how to build rural water and sanitation infrastructure that is, first and foremost, financially sustainable, in addition to being environmentally and socially sustainable?

Kingdom of the Netherlands

Canadian International Development Agency
Agence canadienne de développement international

Ministry of Foreign Affairs of Denmark

WPP
Water Partnership Program

Water Partnership Program WPP
The African Development Bank,
Temporary Relocation Agency (TRA),
13 Avenue du Ghana, BP 323,
1002 Tunis Belvédère, Tunisia
Tel. (216) 71 333 511 / 7110 3450
www.afdb.org

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