

Rural Water Services: Emerging Approaches to Achieve Sustainability at Scale

Volume2 –Implementation Guidelines

February 2013

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The Professionalized Rural Service Areas (PRSA) approaches presented in this report build on the conceptualization of what was previously referred to as the FRUGAL model (Forming Rural Utility Groups and Leases) for improved service provision and management of rural water supplies.

1. Introduction

Context: the Professionalized Rural Service Areas (PRSA) approach

These guidelines accompany the report entitled “Improving Rural Water Services: Emerging Approaches to Achieve Sustainability at Scale. Volume 1 – Conceptual Overview”.

Volume 1 presents the Professionalized Rural Service Areas (PRSA) approach, provides evidence of proof of concept and outlines the main characteristics of the key components underlying the approach, i.e.:

- Aggregation (or grouping) of service areas;
- Participation of the domestic private sector;
- Medium to long-term service provision contracts; and
- Operation, maintenance, and new construction activities under a single contract.

These elements have been successful in attracting financing, professionalizing service management, augmenting customer choice, and increasing cost recovery. Although numerous experiences around the world incorporate one or several of these elements, Volume 1 suggests that combining all these elements together could deliver maximum benefits for the rural population.

Objective of the Guidelines

The introduction of all these elements in a coordinated manner has not yet been tested, and **Volume 2** (these present guidelines) provides direction as to how needed reforms can be introduced and applied under a variety of national contexts and local conditions.

This document provides a process and supporting tools to:

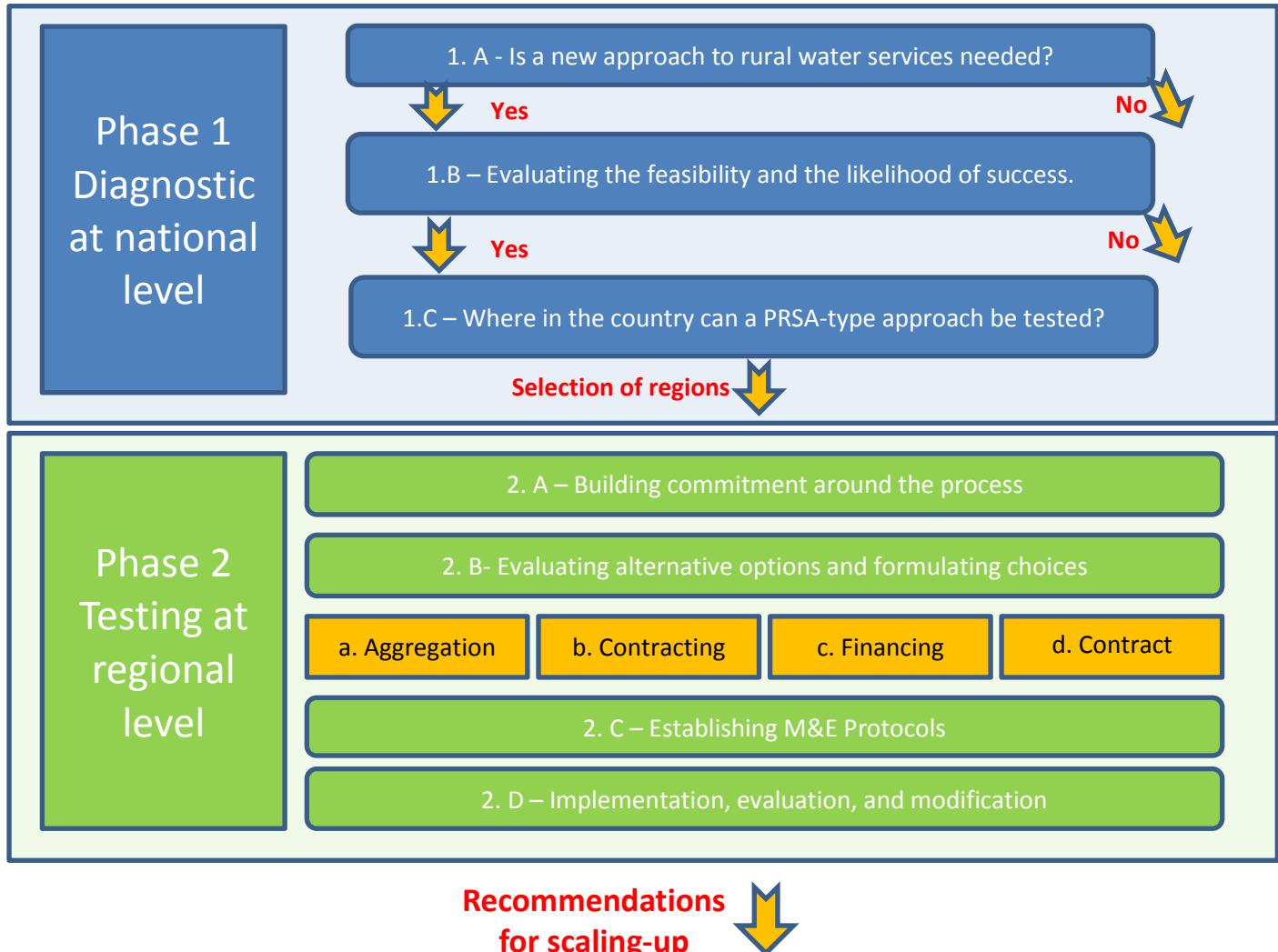
- Determine the feasibility of employing the PRSA approach for improving rural water services in a given country, and identify regions where implementation can be carried out (**Phase 1**);
- Design and implement a PRSA approach at the regional or national level. (**Phase 2**)

The steps of the process are visualized in Figure 1 below.

Section 2 sets out in more detail how each step of the process can be conducted, in order to test the applicability of PRSA type approaches both at the national and regional levels.

Section 3 (the “Toolbox”) contains a set of tools and technical modules that can be used in order to assist with formulating choices at each step of the process, including checklists, planning frameworks, Terms of Reference for supporting advisers and more detailed technical guidance on specific choices (such as aggregation or contracting). These are numbered in Figure 1 for ease of reference.

Figure 1 – Overview of the PRSA testing process and supporting tools



This document is aimed at policy-makers and their advisers (including donors and consultants) who have identified the need to improve the sustainable delivery of rural water services in their country and want to do so by involving the domestic private sector in an organized and comprehensive manner.

It is envisaged that the testing process would be supported by consultants to the Government (either at the national or at the regional level), which is why specific guidance is provided on hiring consultants, with some of the tools designed as Terms of Reference (TORs) for external consultants. The same TORs could be used for internal staff should the Government choose to carry out the evaluation internally.



It would be preferable to let separate contracts for each phase of work so as to ensure that consultants are not incentivized to recommend the application of PRSA approaches where these are not suitable.

2. Testing PRSA approaches: overview of the process

This section contains a narrative of the process that could be adopted by Governments and other stakeholders to test the applicability of PRSA approaches in their specific contexts.¹ It refers to the tools that can be used at each step of the process, which are contained in Section 3.

Phase 1 – Diagnostic at national level

1.A – Is an improved approach to rural water services needed?

Countries may be more or less ready for the implementation of PRSA-type approaches.

A pre-condition for implementation would be that an improved approach to rural water supply (RWS) is needed. This would be based on the observation that existing services are not adequate, which could be grounded on any of the following:

- MDG or national targets for rural water access are unlikely to be met and recent trends do not indicate a sufficiently rapid increase in coverage in order to eventually bridge the access gap;
- Existing services are not sustainable (with a high rate of failure of existing investments);
- Service levels are very low or have been stagnant for many years and/or households express high or increasing dissatisfaction with their current level of service and/or service quality;
- Past attempts at improving the management and delivery of rural water services have failed.

The need for reform can be established based on a rapid diagnostic evaluating these key parameters. As described in Volume 1, a PRSA-type arrangement might be expected to have a positive impact on all of these issues. Nonetheless, due to local conditions and histories, PRSA approaches would most likely be appropriate for addressing some parameters and not others. It is therefore critical to evaluate in greater detail whether the problems limiting the sustainable delivery of water services in rural areas can be addressed by implementing PRSA approaches or not.

In order to guide policy-makers and technicians through this critical initial stage, two support tools are presented in Section 3. Tool 1.A.1 aims to provide policy makers with a simple but highly concise method to quickly identify whether or not an improved approach to RWS is currently called for. Additionally, the tool attempts to make a preliminary judgment as to whether or not a PRSA approach could be of value. Tool 1.A.2 was designed to guide a more in-depth sub-sector assessment in order to estimate whether or not a PRSA approach might be appropriate and effective.

¹ The approach outlined here is “top-down”, although it includes recommendations for involving all stakeholders at regional and local levels. Elements of a PRSA approach can be introduced in a “bottom-up” manner, i.e. with some rural areas deciding to aggregate service areas in order to attract domestic private sector participation.. However, a key distinguishing element of the proposed approach for initial testing and implementation is that it is planned and systematically organized at the national or regional level in order to ensure the development of a robust policy environment, and benefit from close scrutiny by as large a number of stakeholders as possible.

For practical guidance, refer to the following tools in Section 3



- 1.A.1. Broad indicators of the need for reform in rural water supply – a flowchart
- 1.A.2. Rural water sub-sector assessment – a checklist

1.B – Evaluating the feasibility and the likelihood of success for the implementation of PRSA approaches

Based upon the broad initial assessment that suggests rural water services are deficient to some degree and that PRSA approaches may be useful for solving chronic sub-sector failings, national policy-makers (and their consultants) should then analyze whether or not PRSA approaches will be suitable given the specific country's and/or region's situation. Described below are several tools that have been developed to assist in answering that question.

Is PRSA feasible, and if so what are its chances for success?

There are multiple dimensions against which we would like to evaluate any approach or methodology in order to determine not only whether or not it will result in positive changes, but whether or not it will be worthwhile to even make the attempt.

Tool 1.B.1 examines the feasibility of applying PRSA based upon the country context. If a sufficient number of criteria are met, PRSA is judged to be feasible. The tool also provides a second set of more stringent criteria expected to estimate the likelihood of PRSA success, again within the individual country context. While completely optimal conditions are rarely encountered for any reforms, it should also be remembered that with strong political will, a set of favorable conditions can be assembled in short order.

Identification and evaluation of deal-breakers

Perhaps of greater importance is the identification of potential “deal-breakers”, i.e. factors that could make the implementation of a PRSA approach impossible (see Tool 1.B.2.). Despite having most or even all the favorable conditions for PRSA, a country may not be able to implement it due to specific considerations. It is up to each country to carefully analyze their own circumstances before making any policy decisions of this magnitude.

Examples of such “deal-breakers” include:

- Public-private partnerships having no current legal or political support;
- Local government units in rural areas having on average very small population bases, and a long history of political autonomy;
- Rural populations historically being granted free access to improved sources, or government units and/or NGOs historically providing fully subsidized O&M and repair services; and,
- Plentiful, high quality, no-cost alternative water sources available for most or all of the year over wide areas of the potential service area.

One way to identify or verify possible deal-breakers is to explore the PRSA approach with local governments, communities, and potential local private-sector firms in a workshop setting designed to uncover attitudes, knowledge, capabilities, and concerns that might not be obvious to policy-makers and technicians, but could facilitate or hinder the implementation of a PRSA-type approach.

Evaluating potential risks and developing risk-mitigation strategies

Any comprehensive approach implies risks of one kind or another. Early recognition of these risks and attention towards reducing them will greatly assist in the likelihood of long-term success for PRSA approaches. A list of potential risks is provided as Tool 1.B.3. While some proposed risk mitigation strategies are suggested, it should be mentioned that most risk factors and their mitigation must be addressed at the national or sub-national levels. Additional risks are likely to be dependent on local conditions, and such risks should be evaluated in the early stages of testing the PRSA approach.

At the end of this phase of the analysis, it should be possible to conclude: (i) whether the PRSA approach appears feasible; (ii) the estimated chances of success of implementing the approach; and, (iii) what the most probable risks are to the PRSA implementation process and how these risks may be reduced. If the result is positive on all three of these measures, the Government can then move on to identifying sub-regions that may be suitable for testing the approach.

For practical guidance, refer to the following tools in Section 3

	<ul style="list-style-type: none">• 1.B.1. Feasibility and the likelihood of success for the implementation of PRSA approaches• 1.B.2. Identification of potential deal breakers• 1.B.3. Risk evaluation checklist and possible risk mitigation strategies
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1.C – Where in the country can a PRSA-type approach be tested?

If testing the PRSA approach appears to be attractive and feasible as viewed from the national level, it will then be necessary to identify regions where initial testing can be conducted. Based on the results of such testing, countries could later consider rolling out the approach at national level. Rwanda, for example, tested private-sector operations of rural systems in a smaller region before rolling it out nationally.

As part of this identification process, a rapid rural subsector assessment should be conducted for all major regions in the country (or, alternatively, only for the regions that the Government has already identified as potentially suitable). This assessment can either be conducted by a specially appointed team within the Government or by selected consultants. Tool 1.C.1 in Section 3 contains a questionnaire that can be used to gather essential data for the purpose of this assessment.



National governments can follow two basic strategies when selecting a region for testing: they can either select regions that appear most conducive for introducing the PRSA approach, i.e. the “low-hanging fruits”, or those that appear the most challenging, in order to confirm that PRSA can work even in difficult conditions, as long

as risks are adequately mitigated.

The results of such an assessment would be helpful for:

- Compiling the most recent data available on costs (recurrent and investment), but also giving some initial thought to the magnitude of the transaction costs that will be generated in order to undertake a PRSA-type approach in each region;
- Identifying critical information gaps, bottlenecks, subsector challenges, and highlighting other key issues of concern to all major stakeholders;
- Preparing tender documentation so that participating firms can better gauge their level of interest and assemble realistic bids;
- Informing project implementers, especially local governments and civil society organizations, about key aspects of the subsector from a national and regional perspective; and,
- Identifying sources of data and information, information flow patterns, and other locally-available resources for the eventual design of a monitoring and evaluation framework for PRSA implementation in the targeted regions.

Significant resources need not be dedicated to this effort which is envisioned as being primarily a desk study combined with interviews with key informants.

Results of this assessment should then be debated in a national workshop involving representatives from the regions in order to identify geographic areas that show an interest in taking part in the process. Ultimately, it would be preferable that regions volunteer rather than be designated by the national government, as this would increase the chances of success for the overall testing process. The signing of an MoU between the national and regional governments would provide an essential outline for moving the process forward and outlining how the process is going to be implemented.

For practical guidance, refer to the following tools in Section 3

	<ul style="list-style-type: none">• 1.C.1. Data collection checklist• 1.C.2. Modified Gantt Chart detailing an overall implementation plan and estimated range of end dates
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Phase 2 – Testing at regional level

Once a region or regions have been identified for potential implementation, the national government, in concert with other key stakeholders, will need to establish a process to test the approach in the designated area.

2.A – Building commitment around the process

Key to the success of this initiative is that the process be owned locally, either at regional level or sub-regional level or at both jointly. In each region, it is recommended that the process be initiated by holding a workshop at regional level, with all major regional players involved, in order to outline the approach and to develop the proposed implementation process. This will pave the way for a team of Phase 2 consultants (under the guidance of a stakeholder task team) to conduct the necessary analysis and formulate recommendations.

It will be necessary to build a small group that can pilot the process. Such a team should include officials at the national and regional level as well as representatives of the localities involved, both at the administrative level and at the level of consumers. This group would then provide support for the tender and supervision of the consulting contract that would carry out the analysis required and formulate recommendations.

Before implementing a PRSA project it will usually be necessary to undertake a detailed legal and institutional analysis to determine such issues as:

- Which entity or entities are currently legally responsible for providing the water services in the proposed service area?
- Which entities have the right to grant private sector contracts to provide water services?
- Who owns the assets that will be operated and maintained by the private operator?

For practical guidance, refer to the following tools in Section 3

	<ul style="list-style-type: none">• 2.A.1. Terms of Reference for consultants for the design and testing of the PRSA approach
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2.B – Evaluating alternative options and formulating choices

The heart of the testing process at the regional level will consist of evaluating alternative options and formulating choices in a number of key areas, including:²

- a) The potential for, and forms of, functional aggregation³;
- b) Appropriate contractual forms for hiring a private operator;
- c) Financing arrangements;
- d) The definition of a monitoring/regulatory framework.

Additional guidance for each of these areas is provided in a series of Technical Modules in Section 3 (the Toolbox). The order in which each of these decisions can be taken will depend on local circumstances. For example, the entity that lets out a private sector contract should ideally be the aggregated structure which, once formed, would let a private sector contract with the operator.

For practical guidance, refer to the following Technical Modules in Section 3

	<ul style="list-style-type: none">• 2.B.(a). Identifying the need for and alternative options for aggregation• 2.B.(b). Identifying appropriate contractual forms for hiring a private operator• 2.B.(c). Defining financing arrangements• 2.B.(d). Establishing monitoring/contract management arrangements
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2.C – Establishing M&E Protocols

When testing an alternative approach, it is critical to be able to judge whether or not the approach turns out to be more efficient or more effective than previous approaches. In addition, the alternative approach should demonstrate a good degree of cost-effectiveness and reproducibility, as well as be accepted by those who will be responsible for future implementation.

These general characteristics of “success” are not always easy to measure, and it can prove extremely difficult to compare the benefits of an improved approach with a previous approach, especially if the primary indicators of success take time to manifest themselves – for example, sustainability of a water supply. For this reason, a robust monitoring and evaluation protocol needs to be designed and implemented.

In the case of a demonstration activity or pilot program, the M&E arrangements must respond not only to the measurement of the results of the interventions, but to the process of implementation itself. For this reason, the M&E protocol for the PRSA approach testing is expected to be composed

² Key options under each of these areas were presented in Volume 1, Section 4. The present volume provides more detailed and practical advice on how these decisions can be formulated at regional level.

³ The approach outlined here is “top-down”, although it includes recommendations for involving all stakeholders at regional and local levels. Elements of a PRSA approach can be introduced in a “bottom-up” manner, i.e. with some rural areas deciding to aggregate service areas in order to attract domestic private sector participation.. However, a key distinguishing element of the proposed approach for initial testing and implementation is that it is planned and systematically organized at the national or regional level in order to ensure the development of a robust policy environment, and benefit from close scrutiny by as large a number of stakeholders as possible.

of four primary dimensions: (i) Process monitoring; (ii) Performance monitoring; (iii) Comparative analysis; and (iv) Evaluation. Tool 2.B.1 in Section 3 provides an in-depth description of the framework.

For actual implementation, data collection requirements change -- a more detailed profile for each service area will be required. This will include, amongst other things, the list of communities served, their populations, the number of persons served per community, technical descriptions of the services provided, and other basic information as described in Tool 2.B.2.

The information collected for each service area will provide a basis for defining the exact type of PRSA approach that can be employed in each region, i.e. whether or not grouping of several communities may be required in order to generate sufficient revenues to attract private sector participation, design shared facilities that would allow generating economies of scale or making cross-subsidies between sub-regions feasible. Additional detail on selecting the most appropriate form of grouping is provided in Step 2.B. In addition, this information will assist in identifying whether or not private sector participation can be introduced in the management of the services and if so, under which contractual form.

Data collected during this exercise should be fed into a simple financial model that should work as a supporting tool for decision-making. Such a financial model would preferably be developed for each country and applied at a regional level, as many components are likely to vary from one country to the next and a generic model would not necessarily be applicable.

Finally, PRSA test implementation provides an opportunity to introduce measures of longer-term impact, if these have not already been prepared by the sub-sector in some form. Samples can be found in the table below. The measures are presented as questions as opposed to indicators, but can easily be adapted into robust indicators. The final evaluation should contemplate an assessment of these kinds of impacts and others as desired at the country level.

For practical guidance, check out the following tools in Section 3

	<ul style="list-style-type: none">• 2.C.1. M&E framework considerations• 2.C.2. Data to be collected in regions where PRSA approaches are considered for introduction• 2.C.3. Possible measures of impact
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3. Implementing PRSA approaches: A Toolbox

This Toolbox contains two main types of tools:

- **Decision-making tools** that can assist with making decisions alongside the process of testing the applicability of the PRSA approach at national level and then piloting its implementation at regional level. These tools have been numbered so as to correspond to the main steps of the process, from 1.A. to 1.C. for the national level analysis and from 2.A. to 2.E. for the regional analysis.
- **Technical modules**, which provide more detailed guidance on formulating choices with respect to the four main underlying pillars of a PRSA-type approach, including with respect to aggregation, contracting, financing and regulation.

The complete list of tools included in this toolbox is summarized in the table below.

Step	Tool
Phase 1 – Diagnostic at national Level	
1.A	Is an improved approach to rural water services needed? 1.A.1 Broad indicators of the need for reform in rural water supply – a flowchart 1.A.2 Rural water sub-sector assessment – a checklist
1.B	Evaluating the feasibility and the likelihood of success for the implementation of PRSA approaches 1.B.1 Feasibility and the likelihood of success for the implementation of PRSA approaches 1.B.2 Identification of potential deal-breakers 1.B.3 Risk evaluation checklist and possible risk mitigation strategies
1.C	Where in the country can a PRSA-type approach be tested? 1.C.1 Data collection checklist for the identification of testing areas 1.C.2 Modified Gantt chart detailing the overall implementation plan and estimated range of end dates
Phase 2 – Testing at regional level	
2.A	Identifying stakeholders and building commitment around the process 2.A.1 Terms of Reference for consultants for the design and testing of the PRSA approach
2.B.(a)	Identifying the need for and alternative options for aggregation (Technical Module) 2.B.(a).1 Identifying drivers for aggregation, potential risks and risk mitigation strategies 2.B.(a).2 Key issues for consideration when establishing an aggregated structure 2.B.(a).3 Areas to be considered within the “articles of association” of a grouped structure
2.B.(b)	Identifying appropriate contractual forms for hiring a private operator (Technical Module) 2.B.(b).1 Typical heads of terms for an Operations and Maintenance Contract for water services 2.B.(b).2 Performance standards in a PPP-type contract

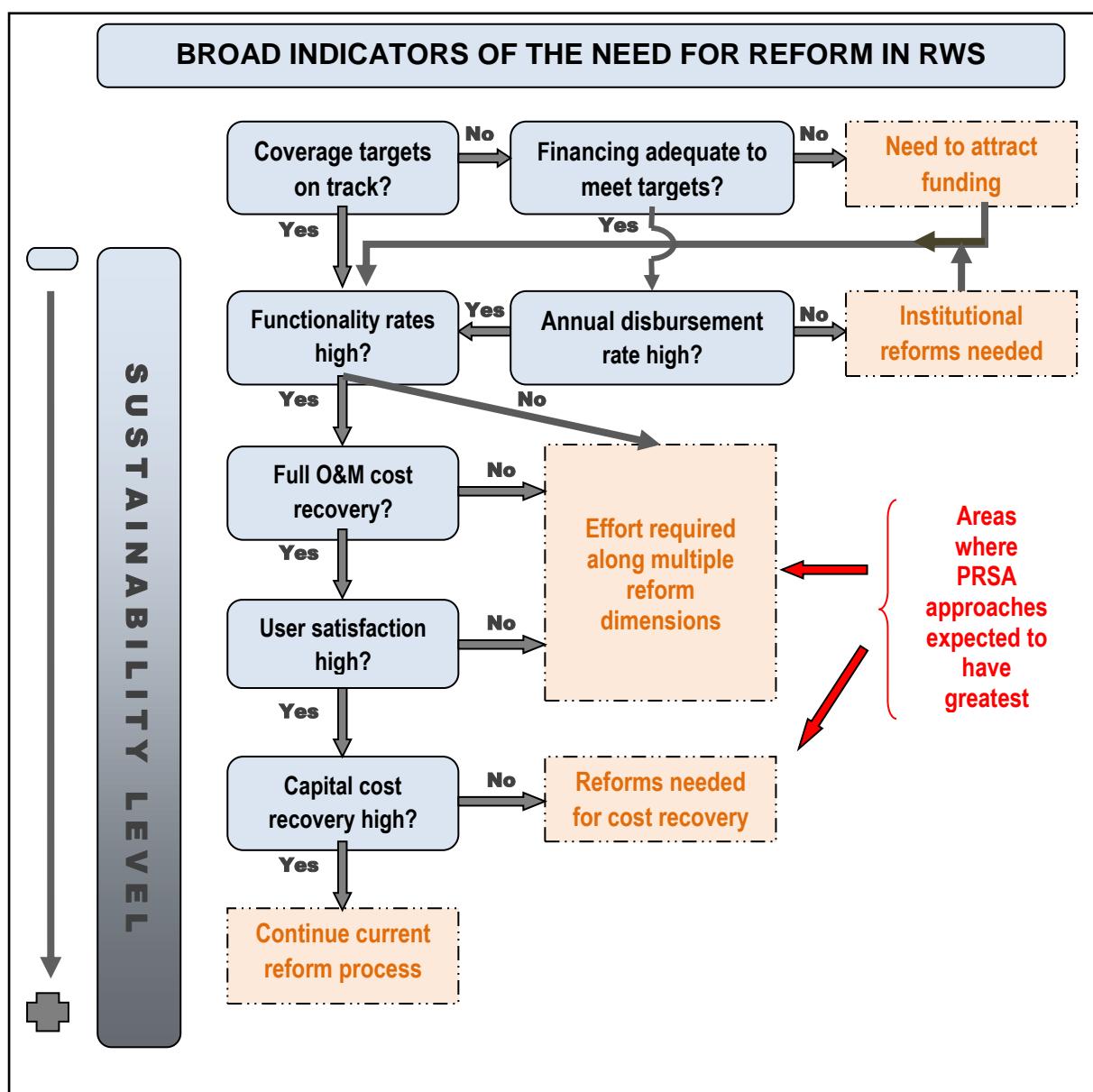
Phase 2 – Testing at regional level

Phase 2 – Testing at regional level	
2.B.(d)	Establishing contract management arrangements (no specific tools)
2.C	Establishing M&E protocols <p>2.C.1 M&E framework considerations</p> <p>2.C.2 Data to be collected in regions where PRSA approaches are considered for introduction</p> <p>2.C.3 Possible measures of impact</p>
2.D	Implementation, evaluation, and recalibration (no specific tools)

Phase 1 – Diagnostic at national Level	
1.A	Identify whether a new approach to rural services is needed
	<p>1.A.1. Broad indicators of the need for reform in rural water supply – a flowchart</p> <p>1.A.2. Rural water sub-sector assessment – a checklist</p>

Tool 1.A.1: Broad indicators of the need for reform in rural water supply – a flowchart

How to use the tool	This flowchart can be utilized to provide policy makers with a broad picture of the reforms that might be needed to improve rural water service delivery. Flow chart results that end in the boxes indicated by the red arrows suggest that PRSA-type interventions are likely to improve outcomes, including sustainable service delivery.
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Tool 1.A.2: Rural water sub-sector assessment – a checklist

How to use the tool	This checklist can help analysts and consultants to organize the content of their sub-sector studies to assess rural water services and ensure completeness.
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Dimensions	Aspects to examine
Policy Environment	<ul style="list-style-type: none"> Existing policy framework Technical and management approaches promoted, in particular for attaining sustainability Public-Private Partnership history in the water sector, outcomes, and trends
Institutional Issues	<ul style="list-style-type: none"> Stakeholders: their roles and capacities, trends, and current situations (with special emphasis on the domestic private sector) Decentralization: trends and status Programmatic approaches in and out of the water sector; common funds Spare parts situational analysis
Legal Framework	<ul style="list-style-type: none"> Asset ownership Roles and responsibilities of the private sector Community structures (both water-related and non-water related) Local government structures and roles Relationships among key stakeholders Pertinent contract law Pertinent administrative rules
Technical Aspects	<ul style="list-style-type: none"> Access definitions Service levels provided Technologies in use and their characterization
Social Concerns	<ul style="list-style-type: none"> Ability and willingness to pay studies Community management structures Community management results to date Poverty level patterns and trends Internal migration patterns and trends (e.g. urban-rural, inter-regional, intra-regional, etc.) Information on nomadic populations, transhumance, and other non-permanent settlement issues Level of humanitarian assistance as opposed to developmental actions in rural water supply
Financial Aspects	<ul style="list-style-type: none"> Unit costs, where available Cost recovery history and trends (recurrent and investment) Investment sources, trends, and instruments Role and relevance of international assistance (current and historic) Fund flows (current and historic) Investment horizons, strategies, approaches, levels, and patterns Procurement rules, tender regulations, financial regulations, and financial reporting instruments
Human Resource Issues	<ul style="list-style-type: none"> Human resource development programs (national to local) Human resource development situational analysis and trends in the public, for-profit, non-profit, and user community segments Training institutes, universities, technical schools, and other learning opportunities and venues Twinning arrangements, inter-agency staff swaps, internship programs, and other non-conventional HR opportunities
Environmental Aspects	<ul style="list-style-type: none"> Water quality, quantity, and regime characterization (national and regional) Climate patterns, variation, and concerns (effects on water resources, agricultural production, incomes, etc.) Climate change potential impact Emergency requirements and trends
Data / MIS Framework	<ul style="list-style-type: none"> Current MIS framework Data availability Annual planning and reporting processes at all levels Targets, indicators, and definitions



- Distinguish between official policy directives and the degree of practical application of those policies
- Describe outcomes where possible
- Summarize current policy debates
- Describe any sub-regional differences or unique characteristics
- Identify recent trends and significant changes in recent years
- Identify key information gaps, bottlenecks, and subsector challenges
- List up to ten of the most useful sector and sub-sector references or guidance documents
- Limit the full assessment to approximately 30 pages including annexes
- The use of maps and other data visualization tools should be emphasized

Phase 1 – Diagnostic at national Level	
1.B	<p>Identify which problems need to be fixed and whether PRSA approaches appear suitable to fix them</p> <ul style="list-style-type: none"> • 1.B.1. Evaluating the feasibility and the likelihood of success for the implementation of PRSA approaches • 1.B.2. Identification of potential deal breakers • 1.B.3. Risk evaluation checklist and possible risk mitigation strategies
	

Tool 1.B.1: Evaluating the feasibility and the likelihood of success for the implementation of PRSA approaches				
How to use the tool	If the majority of the conditions shown in column two are met, a PRSA approach is most likely feasible. If a fair number of the optimal conditions in column four are met, there is a high probability that a PRSA approach can be successfully implemented. Optimal conditions can quickly be created if political will is present, whereas minimum conditions are likely to be difficult to put in place.			
Dimension	Minimum Condition Met? (Test of Feasibility)	✓ if yes	Optimal Condition Met? (Test of Likelihood of Success)	✓ if Yes
Policy and Reform	Domestic Private Sector Participation (DPSP) for construction and post-construction activities allowed or encouraged		National and local governments have experience with DPSP in rural water supply in construction and post-construction activities	
	User choice allowed to some degree for service levels or technologies		User choice practiced for both service levels and management options	
Legal	Infrastructure ownership legally and clearly defined		Approved and published options exist for DPSP in rural water supply operations, maintenance, and/or management	
Financial	Policies approved and published which prescribe full O&M cost recovery and partial capital cost recovery		Both full O&M costs and partial capital costs recovered for a majority of rural water systems	
	Typical service provision costs not widely exceeding the regional average, and/or household incomes not exceptionally less than the regional average		Typical service provision costs less than the regional average, and/or household incomes are above the regional average	
	Typical service delivery costs well understood for the most part		Typical service delivery costs can be estimated with a high degree of certainty	
Technical	A significant proportion of rural water systems not functioning or not functioning optimally		Most improved water sources can accommodate significant increases in water production	
Institutional	Spare parts and needed technical support not readily available for RWS systems		Spare parts and technical support generally unavailable at the lowest level of government (normally district level)	
Social	Rural households demanding higher levels of water service		The majority of community-managed water supplies have deficient management arrangements leading to household dissatisfaction with the water service	
Human resources	At least one small enterprise active in the water supply business in most districts		At least three local private sector firms or individuals pre-qualify for RWS construction and social work tenders in the majority of all local government units (district level)	
Environmental	Most rural households with limited access to no-cost, alternative water sources for at least part of the year		Most rural households have limited access to no-cost, alternative water sources for most of the year	
	Degree of water stress not widely exceeding the regional average		Raw water quality generally in line with neighboring countries and requiring little to no treatment to meet national standards	
	Rural populations not excessively separated geographically, and population density at or above the regional average		Rural population density well above the regional average, with villages located in close proximity to one another	

Tool 1.B.2: Identification of potential deal breakers		
How to use the tool	This tool includes a checklist for identifying potential “deal breakers”, i.e. factors or conditions that could make the implementation of a PRSA approach impossible even if only one of the proposed measures described in column two is true.	
Expected Deal-Breaker	Proposed Measures	Comments
1) PPPs have no current legal or political support	<ul style="list-style-type: none"> No PPPs of any kind taken to scale, in any sector PPPs not legally permitted or not yet regimented 	
2) Local governments small, with a long history of autonomy	<ul style="list-style-type: none"> Most rural, local government units with total populations well below the regional average, <u>and</u> The majority of local, rural governments have existed under their current political structure and geographic extent for more than two decades 	The rural local government taken into account is the lowest level having an autonomous budget. This generally includes municipalities, districts, <i>communes</i> , <i>woredas</i> , etc.
3) Low population densities and high poverty rates,	<ul style="list-style-type: none"> Rural population density well below the regional average Rural poverty rate well above the regional average, <u>and</u> household incomes or expenditure growing at rates well below the regional average over the previous decade 	Local entrepreneurs can oftentimes gauge these factors based upon the functioning of existing commercial networks and relationships. Higher subsidies may be required in order to succeed in very low-income and low-density areas.
4) Free access policy, or highly subsidized O&M and repair costs	<ul style="list-style-type: none"> Existing government policy calls for no user contributions for capital costs and/or recurrent costs In practice, a wide majority of rural households with access pays no user fees 	Ability and willingness to pay studies may provide useful information while attempting to evaluate this deal-breaker
5) Plentiful and reliable alternative water sources	<ul style="list-style-type: none"> The majority of rural households can access high quality, no-cost, alternative water sources year-round within a reasonable distance of their homes 	Professional judgment may be required to estimate this parameter since data of this kind are rarely available.

Note: These proposed deal-breakers should be accompanied by a thorough analysis and/or discussion. It may be that one or more of these deal-breakers may be less relevant under certain circumstances in individual countries. They should, nonetheless, be taken seriously. It is important not to ignore a deal-breaker by optimistically predicting that conditions will change. A 30-year history of non-payment of O&M costs by users is not likely going to be changed by implementing a PRSA-type arrangement.

Tool 1.B.3: Risk evaluation checklist and possible risk mitigation strategies	
How to use the tool	This tool allows identifying potential risks with the application of the PRSA approach and possible risk mitigation strategies.
Potential Risks	
Extremely low-population-density areas (or areas of extreme poverty) may fail to produce the expected results	
Local governments may not look favorably upon aggregation, especially if it includes cross-jurisdictional service area formation	
Corrupt practices or poor contract management may interfere with efficient operations over large areas	
Natural disasters may have severe consequences on short to medium-term operations over wide areas	
Long-term public funding guarantees may not be respected, especially after major political changes	
Unfair commercial advantages may accrue to long-term operators, especially if they bundle several services	
The use of alternative water sources in order to avoid tariff payments may negatively affect revenue streams, and undermine service quality	
Domestic private sector deficiencies do not lead to expected benefits	
Private sector rent-seeking behaviors may lead to service improvements for some at the expense of others	
Poor initial estimates of commercial risk may lead to deficient operations	
Tariff setting may become contentious if operational costs vary widely within a single service area	
Political determinations of the use of investment funds may represent poor commercial and or operational choices	
Obligations of private operators are more onerous or stringent than those placed on community-operated services, leading to abandonment of the PRSA model by user groups due to apparent cost savings	

Phase 1 – Diagnostic at national level	
1.C	Identify region(s) suitable for testing the approach
	<ul style="list-style-type: none"> 1.C.1. Data collection checklist

Tool 1.C.1: Data collection checklist	
How to use the tool	This data collection checklist can be used by the national level consultants in order to obtain data to evaluate the feasibility and applicability of PRSA approaches.

Data to be collected	
Administrative	<ul style="list-style-type: none"> Region name Number of local governments for the region rural area Name of the regional umbrella organization for the local governments (if exists) Branch of the Ministry of water present in the region? Branch of the regulating agency (is exists) present in the region? Branch of the local government umbrella organization (if exists) present in the region? System and handpump operation, maintenance, and management arrangements
Population	<ul style="list-style-type: none"> Total rural population Name and date of the most recent region wide household survey, including nationwide surveys (MICS, DHS, Census etc.) Mean person per household in the region rural area Total rural population served by piped systems Total rural population served by handpumps
Technical	<ul style="list-style-type: none"> Total number of piped systems Type of energy sources amongst the systems (fuel/grid/solar/other) Mean unavailability rate on all the systems (downtimes) Total number of systems with an ongoing delegated management contract Total number of standpipes Total number of private connections Estimated total water abstraction from systems ($m^3/year$) [1] Min-Mean-Max depth of water tables tapped by the systems (m) Mean unaccounted-for-water (% of production) [2] Total number of handpumps Mean unavailability rate on all the handpumps (non-functioning rates, and mean down time) Total number of active handpump mechanics Mean age of handpumps Availability of spares and consumables for generators, pumps <p>[1] Example: $365/1000 * Total\ population\ served\ by\ schemes * Mean\ consumption\ per\ capital\ (l/day/pers)$</p> <p>[2] From available surveys or monitoring data</p>

Tool 1.C.1: Data collection questionnaire	
How to use the tool	This data collection checklist can be used by the national level consultants in order to obtain data to evaluate the feasibility and applicability of PRSA approaches.
Financial	<ul style="list-style-type: none"> • Mean tariff at standpipes (per m³) • Mean tariff on private connections (per m³) • Mean savings per m³ in bank accounts for replacement/depreciation [3] • Tariffs of electricity • Min-Max price of diesel fuel over the region • List of banks, microfinance institutions with branches in the region <p>[3] From available surveys or monitoring data: = savings / m³ abstracted per year</p>
Geographic	<ul style="list-style-type: none"> • GIS layer: villages and small towns (population, with/without power grid) • GIS layer: administrative boundaries • GIS layer: underground aquifers • GIS layer: permanent surface water resources • GIS layer: rural water systems • GIS layer: handpumps • GIS layer: medium voltage grid and high voltage grid • GIS layer: mobile phone coverage • GIS layer: internet coverage • GIS layer: fuel stations, spares distribution points, area mechanics

Note: The above data can be processed and used to benchmark the regions on various criteria such as:

- The degree of institutional maturity of the regions and their ability to take part in the process;
- The feasibility and compared benefits of regional professionalized maintenance and repair services in order to increase the availability rate of rural schemes;
- The feasibility and compared benefits of delegating bulk water production and sales to one regional operator along with a investment plan to rationalize the equipment (connection to grid, use of solar energy) in order to reduce the overall pumping cost and increase service reliability;
- The feasibility and compared benefits of implementing support services to the handpump repair craftsmen in order to strengthen their business;
- The feasibility and compared benefits of implementing monitoring and audit services on the rural schemes in order to verify performances and enable regulation by local bodies (e.g. STEFI in Mali).

Tool 1.C.2: Modified Gantt Chart detailing an overall implementation plan and estimated range of end dates.

How to use the tool: See notes within chart.

Phase 2 – Testing at regional level	
2.A	Identify stakeholders, build commitment around the process
	<ul style="list-style-type: none"> • 2.A.1. Terms of Reference for consultants for the design and testing of the PRSA approach

Novel approaches oftentimes require significant investments in communications and promotional efforts. Rural water supply is uniquely decentralized both as a service, but also in regards to the number of interested stakeholders, some of which will have historically had limited contacts with national sub-sector agencies and policies. It is recommended that a communications strategy, including a stakeholder analysis, be incorporated into the test design process.

Since any change is likely to produce perceived winners and losers, it is incumbent upon the implementing sponsors to ensure active participation among as wide a range of stakeholders as possible. The table below suggests possible stakeholders, forums, and tools by phase. A primary task of the consultants selected to assist in the development of a PRSA approach is to identify and build the commitment of all stakeholders, while pursuing consensus on major design issues (see Tool 2.A.1.)

Phase	Stakeholder Group	Possible Individual Stakeholders	Forums and Tools
Diagnostic	National Government	<ul style="list-style-type: none"> • Host ministry • Related ministries (Health, Environment, Rural Affairs, Finance, Planning, Commerce, etc.) • Statistical and training institutes; universities • Political participation as needed 	<ul style="list-style-type: none"> • Inter-ministerial groups • Water and sanitation advisory groups • Sector databases • Household surveys • Sector review and research reports • Sector communications tools and networks (electronic and hard) • Use of unrelated events and meetings • Speakers, study tours, special events • Task forces, working groups
	Regional Government	<ul style="list-style-type: none"> • Decentralized ministry offices • Regional government agencies • Regional planning commissions and researchers 	
	Local Government	<ul style="list-style-type: none"> • Local government associations • Progressive local government leaders 	
	Non-governmental	<ul style="list-style-type: none"> • Bilateral and multilateral organizations • NGOs (local and international) • Private finance institutions • Professional groups • Small business or construction firm associations 	
	Community	Not likely at this stage	
Design and Implementation	National Government	Same as above, adding others as per the design process	Same as above, including similar forums and tools available at the regional and local levels (as discovered during the diagnostic phase)
	Regional Government	Same as above, adding others as per the design process	
	Local Government	Same as above, plus participating local government departments and political participation as needed	
	Non-governmental	Same as above, plus local firms/ entrepreneurs, local finance organizations, and commercial groups	
	Community	Water user groups and associations, progressive community leaders, experienced operators	

Tool 2.A.1. Draft Terms of Reference for consultants for the design and testing of the PRSA approach	
How to use the tool	These draft ToR may be used as the basis for a tender for consulting services in the design and development of a PRSA approach.

Draft TERMS OF REFERENCE

The Professionalized Rural Service Areas approach (PRSA) for Delivering Improved Rural Water Services: Determining the Suitability of the Approach and Designing and Extracting Lessons Learned from the Testing Phase

Background

Worldwide, approximately 85% of the unserved for improved water supplies live in rural areas. There are many reasons why rural inhabitants are nearly six times less likely than urban dwellers to have access to an improved water service. One of the primary reasons is the application of a rural water supply service model that limits the achievement of scale, makes significant cost recovery difficult, and places the administrative and oftentimes technical burden of sustainable service provision fully on the users. In addition, current approaches to rural service provision have been found to result in deficiencies along several measures including service reliability, continuity, and the satisfaction of user demand.

The development of improved approaches to achieving sustainable rural water coverage at the pace required for meeting the WSS MDGs is urgently required. An approach is needed that allows for:

- Ensuring predictable investment flows over time;
- elevating the rate of increase of access to water in rural households;
- achieving economies of scale and reducing or slowing the growth in marginal unit costs of investment and operations;
- improving channels for community demand, including responsiveness to demands for higher, more costly (or even lower, more economic) service levels;
- facilitating full cost recovery for operations and maintenance as well as significant capital cost recovery from users;
- improving service quality and user satisfaction;
- providing regular and responsive support to small communities or user groups to help ensure a sustainable water supply.

The need for improved approaches to rural water service delivery also responds to the substantial changes taking place today in rural areas around the world, where incomes are rising, transport, communications, and commercial networks are expanding, and rural people are demanding access to quality services that they are becoming more willing and able to pay for.

In cities and small towns, domestic private firms and individuals have received contracts to build, operate, and maintain local water supplies as an alternative to day-to-day management by local government or user organizations. The African Development Bank and the Water and Sanitation Program of the World Bank have begun to investigate whether similar Public-Private Partnerships (PPP) involving the domestic private sector could provide an effective approach for improving water supply services in smaller rural settlements.

This approach is based upon recent successes in diverse world regions where rural water service provision has benefitted from any one of the following: (i) domestic private sector involvement; (ii) long-term operations contracts; (iii) service area agglomeration; and (iv) contracts that include both construction and O&M responsibilities. The combination of these four elements is being referred to as Professionalized Rural Service Areas approach, or PRSA.

The participation of the domestic private sector in rural water supply projects has been growing rapidly over the past decade, especially in Asia, with recent examples increasingly coming from Latin America and Africa. The domestic private sector in fact holds a significant advantage over international firms as the scale of operations decreases to the level of small towns and more disperse rural areas.

Within the past five years, several authors have completed reviews of private operators managing rural water supplies and other public services. Consensus is found among these reviews on the following points:

- Markets likely exist for high quality services that cater to rural customers' lifestyles and preferences;
- Financing and subsidies will almost surely be necessary in the short to medium-term. Contracts incorporating Output-Based Aid⁴ are an effective way to deliver subsidies in some contexts. Also, financing from users paying for their connections is a good way to raise capital for expansion;
- Policy change in support of private operator models can follow from successful pilot projects, especially if they have a donor or other champion. However, at the outset there should at least be a legal basis for contracting a private operator to supply water services, and performance standards should be flexible rather than nationally uniform;
- Contracts using local government and communities to monitor compliance are a more feasible approach to regulation in the rural context.

As a first step toward further developing the PRSA concept, WSP-Africa surveyed projects and other initiatives that used the private sector to operate water supply and other services in rural settlements with populations under 2,000 persons. This review identified a diversity of approaches for employing the private sector in rural water supply ranging from operation, maintenance, and management, to the classic "design and build" roles widely assigned to the private sector. A few initiatives underway conform to the PRSA concept quite closely, particularly the private operator model being developed in Burkina Faso.⁵

The agglomeration of service areas acts as a vehicle for gaining economies of scale and of scope in the rural context. In addition, it serves to attract the interest of competent domestic private sector firms to opportunities in rural areas, and stimulates the demand for increased levels of service, while improving overall quality. New financing regimens and contract classes can also be introduced, such as private sector financing of yard taps, or the use of Design-Build mechanisms.

Objective

This consultancy is split into three distinct phases (the third phase is optional, and may be let as a separate contract when the time comes):

- The objective of **Phase 1** is to determine the feasibility of pursuing a PRSA approach for Rural Water Supply (RWS), including an analysis of the likelihood of success of such an approach, and the selection of potential test areas;
- the objective of **Phase 2** is to develop the architecture of the approach and a workplan for testing the approach in the selected test areas;
- the objective of **Phase 3** is to closely monitor the implementation phase and extract lessons learned in order to recommend improved implementation tools, approaches, and methodologies for subsequent roll-out, or conversely recommend that efforts to implement be suspended or that the approach not be replicated.

Separate consultants should be selected to deliver each phase of the work, as a way of avoiding potential conflicts of interest.

⁴ Output-based aid (OBA) is an approach used to promote the effective use of public funds for the delivery of infrastructure services. Governments normally delegate service delivery to a private sector firm under contracts that tie the disbursement of public funds to actual service delivery to targeted groups. This performance-based subsidy is generally applied where service affordability is a critical issue requiring public funding to complement or replace user fees.

⁵ A copy of the literature review results will be made available to the consultants selected to deliver the products expected under this TOR.

Scope of the Services

Phase 1

The terms of reference for Phase 1 covers the tasks of: (i) disseminating the concept of the PRSA approach to key stakeholders both within and outside the sector and sub-sector; (ii) determining the feasibility of pursuing a PRSA approach; (iii) analyzing and characterizing the likelihood of success of the approach under the existing national context, including the identification of potential “deal-breakers”; and (iv) proposing a shortlist of potential test areas each with their respective set of justifications, advantages, and disadvantages.

The consultants are free to propose their own methodology for completing these objectives, nonetheless they should be mindful that the process for successfully completing Phase 1 needs to be a participatory one given the fact that the PRSA approach may not be well understood by key stakeholders, may contain controversial components, and will require some measure of consensus among stakeholders to either accept or reject the approach, and accept or reject the proposed test areas (if any). The consultant will not be responsible for ensuring that final decisions are actually adopted, however, they will be required to lead a process which could reasonably be expected to result in decisions being reached within the time constraints afforded under this consultancy.

**The consultants are strongly encouraged to incorporate the concepts and methodologies described in:
“Improving Rural Water Services: Emerging Approaches to Achieving Sustainability at Scale (Overview of the Approach and Implementation Guidelines, 2 Volumes), produced by the AfDB and WSP.**

Likely activities during Phase 1 include:

- Investigating whether or not any PRSA-like approaches are already being executed or tested in country, and characterizing the objectives, approaches, strategies, processes, scale, implementation mode, products, and results to date;
- Collecting information and data relative to rural water supply in terms of relevant laws, regulations, policies, strategies, plans, programs, pilot activities, reports, assessments, reviews, evaluations, reform processes, and initiatives, relating to sub-sector finance, technical matters, institutional arrangements and issues, social aspects, environmental concerns, capacity building and human resource issues, information systems, etc., especially as they may relate to a PRSA approach;
- Analysis of the collected information, and a written summary of findings and conclusions regarding the need for, feasibility, likelihood of success, potential risks and rewards associated with testing the PRSA approach, along with the identification of any potential “deal-breakers”;
- Contacting water supply and policy experts in a variety of venues in order to analyze in-depth the situation of the sub-sector and discuss the PRSA concept and its implications;
- Examining examples and results of relevant PPP experiences in country in the rural setting both within and outside the water and sanitation sector;
- Looking at other arrangements where the private sector, government, and local civil society have worked together to provide improved rural services;
- Eliciting opinions and reactions from practitioners in rural water supply who have experience in the dispersed village context regarding the strengths and limitations of community management;
- Compiling a list of challenges, unanswered questions, stakeholder concerns, and other unresolved but important issues to address with reference to PRSA;
- Identifying two or three regions or sub-regions having potential for testing PRSA, that meet the desired scale and scope of activities as determined by major stakeholders;
- Organizing and facilitating workshops and meetings during the preparation of analyses and reports, the delivery of results, and attempts to shape consensus around key aspects of a PRSA testing approach, including the scope and scale of possible testing and the proposal of geographical locations for testing;
- Preparing a list of key stakeholders and their contacts, along with major reports, documents, and data sources being used during Phase 1, which may be made available to any consultants involved in subsequent phases of this work.

The consultants should make use of the PRSA documentation and tools developed jointly by the African Development Bank and the Water and Sanitation Program of the World Bank, and adapt these as needed.

PRSA can take on a variety of forms and levels of complexity. One of the specific challenges for design and implementation is determining an appropriate entry point. For example, will PRSA be introduced through short-term operation and maintenance contracts for a small number of water systems/points? Or will larger, longer-term contracts be pursued that include build-operate options? The situation analyses in Phases 1 and 2 will help to answer these questions. It should be remembered that the level of complexity of PRSA is likely to evolve over time, with some regions able to reach higher levels of complexity sooner than others.

Outputs

Specifically, the consultants will be responsible for the following products:

- Within 10 days of contract signing, the consultants will prepare a brief inception report that includes a Phase 1 workplan based upon the initial proposal and discussions with the contract manager;
- a final report that estimates the feasibility of pursuing a PRSA approach, and that analyzes and characterizes the likelihood of success of the approach under the existing national context. If the approach is deemed to be not feasible, the report will suggest a list of actions that need to be taken in order to attain feasibility. Likewise, if the likelihood of success is deemed to be low, or if any deal-breakers have been identified, the report should suggest actions that would need to be taken to improve the likelihood of success;
- a shortlist of potential test areas each with their respective set of justifications, advantages, and disadvantages, including the consultant team's own recommendations;
- a list of key stakeholders and their contact information, along with a list of key references used during the analysis and reporting under Phase 1. In addition, a list of challenges, unanswered questions, stakeholder concerns, and other unresolved but important issues to address with reference to PRSA will also be prepared for use by the Phase 2 consultants and contract manager. These lists will form part of the final report.

Phase 2

The terms of reference for Phase 2 covers the tasks of: (i) further disseminating the concept of the PRSA approach and building commitment for implementation among key stakeholders both within and outside the sector and sub-sector; (ii) leading the implementation design process; (iii) and preparing an implementation plan for testing a PRSA approach.

The consultants are free to propose their own methodology for completing these objectives, nonetheless they should be mindful that the process for successfully completing Phase 2 needs to be a participatory one given the fact that the PRSA approach may not be well understood by key stakeholders, and will require some measure of consensus among stakeholders to make modifications to the approach as implementation proceeds. The consultant will not be responsible for ensuring that final decisions are actually adopted, however, they will be required to lead a process which could reasonably be expected to result in decisions being reached within the time constraints afforded under this consultancy.

Likely activities during Phase 2 include:

- Reviewing the complete set of findings, recommendations, and decisions from Phase 1 activities;
- visiting the proposed intervention areas, and opening a dialogue with perspective stakeholders to deepen understanding of the PRSA approach, respond to local concerns and recommendations, and discuss alternative options as described in the previous bullet point;
- liaising with designated working groups at the national and sub-national levels, and developing the content for and participating in any required workshops, meetings, study tours and other forums, as planned in order to reach consensus on the implementation plan for testing the PRSA approach;

- generating, evaluating, and recommending alternative options for: (i) functional aggregation of service areas (including scale and scope); (ii) appropriate contractual forms for assembling a Public-Private Partnership, including contract management arrangements; (iii) financing arrangements and financial viability of services; and, (iv) development of a monitoring and contract management framework for PRSA implementation;
- analysis of all data, information, and discussion points, and the production of a written summary of findings and conclusions culminating in the development of a comprehensive and consensual implementation plan for testing the PRSA approach.

Outputs

Specifically, the consultant will be responsible for the following products:

- Within 10 days of contract signing, the consultants will prepare a brief inception report that includes a Phase 2 workplan based upon the initial proposal and discussions with the contract manager or contract management team;
- an in-depth assessment of the local private sector in the selected test areas, as well as of the responsible local government(s) involved, and the possible target communities
- a set of draft contract documents, in agreement with the scale and scope of the interventions proposed;
- an economic viability study that estimates, in agreement with the scale and scope of the interventions being proposed: (i) local willingness to pay for a variety of likely service options; (ii) the probable cost structure for service delivery under the PRSA approach; (iii) an outlook for tariffs and fees under specific cost recovery scenarios; (iv) financial risk profiles for primary partners; and (v) financing costs and approaches for primary partners under expected scenarios of subsidies, service levels, funding modalities;
- a communications strategy and a stakeholder analysis as part of the design process;
- a PRSA testing protocol based upon the above-mentioned reports and studies, with detailed descriptions and execution plans of the approach (but not of any works to be constructed), including timelines, budgets, and monitoring arrangements for the elected testing areas;
- a list of key stakeholders and their contact information, along with a list of key references used during the analysis and reporting under Phase 2. In addition, a list of challenges, unanswered questions, stakeholder concerns, and other unresolved but important issues to address with reference to PRSA will also be prepared for use during Phase 3;
- additional progress reports as determined by the contract manager.

Phase 3

The terms of reference for Phase 3 covers the tasks of: (i) continuing disseminating of the concept of the PRSA approach and the further building of commitment for implementation among key stakeholders both within and outside the sector and sub-sector; (ii) providing continuous monitoring of the PRSA implementation process; and (iii) extracting lessons learned from the data and information generated during the implementation process, and collected under the test-specific monitoring protocols.

The consultants are free to propose their own methodology for completing these objectives, nonetheless they should be mindful that the process for successfully completing Phase 3 needs to be a participatory one given the fact that the PRSA approach may not be well understood by key stakeholders, and will require some measure of consensus among stakeholders to make modifications to the approach as implementation proceeds. The consultant will not be responsible for ensuring that final decisions are actually adopted, however, they will be required to lead a process which could reasonably be expected to result in decisions being reached within the time constraints afforded under this consultancy.

Likely activities during Phase 3 include:

- Reviewing the complete set of findings, recommendations, and decisions from Phases 1 and 2 activities;
- visiting the intervention areas, and maintaining a dialogue with participating stakeholders to deepen understanding of the PRSA approach, and to monitor and discuss progress and results;

- liaising with designated working groups at the national and sub-national levels, and developing the content for and participating in any required workshops, meetings, study tours and other forums, as planned in order to discuss progress and results of the implementation phase of the PRSA approach;
- participating in the process of testing monitoring tools and protocols, and modifying these as needed based upon the initial test results;
- reviewing and confirming of data and information collected and presented by executing partners, as per the established monitoring protocols;
- analysis of all data, information, and discussion points, and the production of a quarterly written summary of findings, conclusions, and lessons learned to be used during regularly scheduled discussions on PRSA implementation, as per the approved monitoring plan;
- executing additional relevant reports or studies as determined by the contract manager.

Outputs

Specifically, the consultant will be responsible for the following products:

- Within 10 days of contract signing, the consultants will prepare a brief inception report that includes a Phase 3 workplan based upon the initial proposal and discussions with the contract manager or contract management team. The workplan will be adjusted annually or sooner if the situation merits a more immediate response;
- trip reports for all field visits, quarterly and annual progress reports, monitoring databases, meeting minutes, workshop and training course reports, and other reports as relevant;
- modification of monitoring tools and protocols based upon initial testing supervised by the consultants;
- training and training follow-up for implementing partners in the use of the monitoring protocols;
- an annual monitoring workshop.

Implementation generated data are to be collected by the implementing partners, not by the consultants, nonetheless, the consultants are responsible for ensuring that the implementing partners fully understand the data collection instruments, definitions, reporting formats and are otherwise able to follow the monitoring and reporting protocols. Deficient monitoring efforts must be identified and a recommended course of action proposed by the consultants.

Consultant Qualifications

The consultants must demonstrate extensive experience and/or knowledge of: (i) domestic private sector involvement in infrastructure programs and projects; (ii) rural water supply service delivery; (iii) public-private partnerships and contracting arrangements; (iv) key legal issues relating to PPPs, local government, public finance, and procurement; (v) performance monitoring and evaluation; (vi) event planning and execution; (vii) extensive experience in leading processes that end in consensual decision-making; (viii) database management and data analysis; and (ix) demonstrate a history of on-time, high-quality product delivery. Team members must demonstrate fluency or competency in the national language. Specific team member skills should match the qualifications shown above. This suggests the need for some of the following consultant profiles: social science, engineering, finance (public and private), governance, private sector development, data management and statistics, and public-private partnerships. *Other qualifications may be added as per specific country or testing requirements.*

Expected Levels of Effort

Phase	Anticipated Implementation Period	Estimated Person-Days Effort
1	8 to 14 months	300
2	10 to 16 months	350
3	36 to 60 months	360 to 550

All additional clauses and sections dealing with consultant contract management will be added as required for each locality, in line with local laws, regulations, procedures, and practices.

Phase 2 – Testing at regional level - Technical Module	
2.B.(a)	Identifying the need for and alternative options for aggregation
	<ul style="list-style-type: none"> • 2. B.(a).1. Identifying drivers for aggregation, potential risks and risk mitigation strategies • 2.B.(a).2. Key issues for consideration when establishing a grouped structure • 2.B.(a).3. Areas to be considered within the articles of association of a grouped structure

The aggregation of water systems and point sources has been defined in the companion Volume 1, together with potential advantages and pitfalls (see Section 4.3. of Volume 1). The present Technical Module provides more detailed guidance about formulating these choices.

Initiating the aggregation process: making the case

Although grouping may be beneficial over the long term (because of a number of potential benefits, referred to as “drivers”), the process of forming a grouped structure may be complicated by a number of constraints. Some villages or towns may fear losing out from aggregation (in terms of control over water resources, autonomous authority, or finances) and may therefore resist the process. This would be particularly problematic if the villages and towns that are resisting are essential to the working of the grouping (because they control a key water resource or can cross-subsidize the rest).

If the case for aggregation is very clear and all are on board (for example, if there are no other alternative than to build a shared water source or treatment plant), the interested villages and towns can form a group to drive the aggregation process and initiate the aggregation process straight away.

If the case for aggregation is unclear, a detailed evaluation will need to be carried out so that villages and towns hesitating to join can confirm their interest or lack of interest. Tool 2.B.(a).1. provides some guidance for identifying the drivers for aggregation, the potential constraints, and methods of alleviation.

Tool 2.B.(a).1: Identifying drivers for aggregation, potential risks, and risk mitigation strategies		
How to use the tool	This checklist should be applied to each village / town being considered for the aggregated structure to understand their motivations (drivers and constraints for aggregation) and help formulate choices on the shape of the overall structure.	
Potential drivers for aggregation	Potential constraints	Methods of alleviation
Management of water resources		
Unequal access between towns and villages: some have abundant water resources, others do not	<ul style="list-style-type: none"> A water-rich village/town may refuse to share, unless it can charge for the water or obtain other benefits 	<ul style="list-style-type: none"> Consider financial compensation for accessing the water, through payment or differentiated tariff Mandate aggregation
Need for a large-scale, shared water resource scheme	<ul style="list-style-type: none"> Costs and complexities of planning and implementing a shared project 	<ul style="list-style-type: none"> Give powers to the aggregated structure to manage and operate the joint project Find ways of sharing benefits equitably between villages
Economies of scope		
Cost reductions from sharing overheads (management, administration, commercial functions) across more customers	<ul style="list-style-type: none"> Potential complications with allocating staff over more than one location 	<ul style="list-style-type: none"> Provide incentives to staff who cover a broader area
Economies of scale		
Reductions in investment and operating costs if investing in a larger scheme	<ul style="list-style-type: none"> Existing installations may limit the potential for building a larger, more efficient scheme 	<ul style="list-style-type: none"> Conduct a thorough and transparent assessment of costs of existing facilities vs potential shared ones Organize a consultation around findings to create momentum
Access to professional management		
Operating over a larger scale makes it easier to attract skilled workers and managers	<ul style="list-style-type: none"> Distance between villages can make sharing staff difficult Risk of high attrition rate for better skilled workers 	<ul style="list-style-type: none"> Develop local private sector capabilities Offer incentives to staff covering wide areas
Access to finance		
Government may provide financial incentives for aggregation or require it to offer loans of a minimum size	<ul style="list-style-type: none"> If villages/towns join up to access loan finance, this creates joint liabilities that may be risky to manage 	<ul style="list-style-type: none"> Villages/towns need to agree how loans are going to be repaid; solidarity mechanisms can be used in case of default Higher level of government/donor can provide guarantees
Access to private sector participation (PSP)		
PSP can be combined with aggregation to improve efficiency of operations, and provide access to professional support and financing	<ul style="list-style-type: none"> PSP can generate political resistance The definition of the service area for the aggregated structure should make sense in itself, independently of PSP 	<ul style="list-style-type: none"> Try, if possible, to conduct the reforms sequentially: aggregating first, then introducing PSP Seek to attract local private sector operators (and build their capacity up-stream)
Ability to cross-subsidize		
Aggregation can make cross-subsidies between areas possible, without the need for external	<ul style="list-style-type: none"> Resistance of communities with lower costs to cross-subsidize those with higher 	<ul style="list-style-type: none"> Higher-level government can mandate aggregation if it is in the public interest

Tool 2.B.(a).1: Identifying drivers for aggregation, potential risks, and risk mitigation strategies		
How to use the tool	This checklist should be applied to each village / town being considered for the aggregated structure to understand their motivations (drivers and constraints for aggregation) and help formulate choices on the shape of the overall structure.	
Potential drivers for aggregation	Potential constraints	Methods of alleviation
subsidies	costs	<ul style="list-style-type: none"> • Highlight solidarity principles • Provide temporary external subsidies
Legal factors		
Aggregation may be mandated by the legislative framework, either for water services or beyond	<ul style="list-style-type: none"> • There may be conflicts between decentralization and aggregation legislation • Missing secondary legislation may leave a lot of unresolved issues • Inadequate capacity at the local level to implement 	<ul style="list-style-type: none"> • Monitor legislation from outside the water sector that may have an impact on what can be done • Provide assistance to villages / towns for implementing the aggregation process

Evaluating potential options for aggregation

It will then be necessary to identify and evaluate potential options for aggregation. Such evaluation would be highly location-specific: for example, the ability to make savings on hiring professional staff would depend on the local geography and population distribution as well as on the type of aggregation selected. This would influence the type of area that a single operator could cover by himself without generating very high (off-setting) mobilization costs, for example.

The objective of such analysis would be to determine whether or not, in any given situation, aggregation would be beneficial and, if so, what form of aggregation would bring the greatest benefits. The analysis should examine aggregating at different geographical scales, for different services and types of functions. For example, towns may choose to aggregate only water production, but not water distribution, or they may choose to group together for certain specialist services (such as accounting), but not for anything else (see Tool 2.B.(a).2. for potential options for aggregation). Such analysis would also help identify the most appropriate scale for the aggregated structure and the type of incentive mechanisms needed to encourage reluctant villages or towns to join.

Tool 2.B.(a).2: Key issues for consideration when establishing an aggregated structure		
How to use the tool	The options are listed in order of increasing strength/ integration of aggregated structures.	
Key decision	Possible options	Criteria for selection
Scale of aggregation		
<i>What can be the scale of the aggregated structure?</i>	<ul style="list-style-type: none"> • A few neighboring villages and towns • Numerous towns and villages, neighboring or distant • All villages and towns in a pre-defined area / region 	Depends on the critical size required for achieving economies of scope and attracting professional management
Scope of aggregation		
<i>What services can be aggregated?</i>	<ul style="list-style-type: none"> • Individual functions (e.g. handpump maintenance) • Water production (bulk water sales) • Full water supply services, including operations and maintenance of distribution network 	Depends on an analysis of the potential benefits from aggregation (economies of scale & scope, access to professional management, ability to cross-subsidize across functions, etc)
<i>What operational functions can be aggregated?</i>	<ul style="list-style-type: none"> • Operations and maintenance • Management • Procurement • Investment finance • All functions, with merging of assets and staff 	Depends on an analysis of the potential benefits from aggregation (economies of scale & scope, access to professional management, ability to cross-subsidize across functions, etc)
Process for aggregation		
<i>What process can be followed?</i>	<ul style="list-style-type: none"> • Voluntary: villages/towns are free to associate • Voluntary with incentives (financial, political, etc.): villages/towns are free to associate but receive a bonus for doing so • Mandated by the central government 	Depends on the state of decentralization reforms, the willingness of villages/towns to aggregate by themselves (based on the analysis of drivers and constraints for aggregation discussed in Tool a.1)
Institutional form of aggregation		
<i>Should the aggregated structure be temporary or permanent?</i>	<ul style="list-style-type: none"> • Temporary loose association, for a specific objective such as investment or access to private sector participation • Permanent structure, with practical limits on exit 	Depends on the state of decentralization reforms, the willingness of villages/towns to aggregate by themselves and on the legal environment
<i>Should oversight functions be aggregated as well?</i>	<ul style="list-style-type: none"> • Each village/ town remains responsible for monitoring performance in their area • An aggregated oversight body is created at the same level to monitor performance; villages and towns transfer their authority to that new body • A higher level of government is in charge of monitoring performance (e.g. a national regulator) 	Depends on existing monitoring capabilities at local level, the state of decentralization reforms, the legal environment for aggregation, institutional arrangements for the water sector (e.g. whether a national regulator exists or not)

Tool 2.B.(a).2: (Continued) Key issues for consideration when establishing an aggregated structure

Key decision	Possible options	Criteria for selection
Governance of aggregated structures		
<i>Methods for allocating voting rights within aggregated structure</i>	<ul style="list-style-type: none"> • According to the population in each village/town • According to the number of existing customers • One village/town = one seat • Specific powers for the dominating entity, if there is one (e.g. a large town) • A mix of solutions 	Depends on the type of grouping considered, on the relative size of the entities forming the grouping and on internal bargaining
<i>Transfer of asset ownership to aggregated structure</i>	<ul style="list-style-type: none"> • No asset transfer: each village/town is the owner and allows the aggregated structure to use them • Ownership of new infrastructure developed by aggregated structure is shared, rest remains owned by villages/towns • Ownership of all assets (existing and new) is transferred to aggregated structure (which becomes an asset-holding company) • Ownership of all assets transferred to a regional/national asset-holding company 	Depends on whether there are pre-existing assets, what their ownership is (e.g. whether they are currently owned at national level, local level, or village-level); also may depend on rules for asset ownership or how the assets were initially financed
<i>Tariff harmonization</i>	<ul style="list-style-type: none"> • Tariffs are different from one village/town to the next, to reflect differences in costs • Tariffs are uniform across the service area of the aggregated structure 	Depends on differences in costs and affordability constraints, willingness to cross-subsidize within the aggregated structure and bargaining powers
<i>Service level harmonization</i>	<ul style="list-style-type: none"> • Service levels are different from one village/town to the next, to reflect differences in local preferences, physical conditions, and affordability • Service levels are harmonized across the service area of the aggregated structure 	Depends on existing differences in service levels, household demand, affordability constraints, and willingness to cross-subsidize within the aggregated structure and bargaining powers

The option analysis should examine different scenarios, “with” or “without” aggregation. It should also seek to cover different boundaries for the benefit assessment: there will be winners and losers within a specific area but if looking at a larger area, there may be a net benefit for the grouping as a whole. Such analysis could consist of two parts: first, a qualitative analysis of costs and benefits, followed by a more detailed quantitative analysis.

Qualitative analysis. Some factors can be assessed subjectively using a negative/positive points system for each of the various aggregation options and the “without” scenario, in order to rank those different options. The qualitative assessment may be used to reduce the number of options for which the more complex, quantitative analysis would be undertaken.

Quantitative analysis. A quantitative assessment of costs and benefits might consider aspects such as:

On the benefit side: improved income from higher tariffs due to raised service delivery and improved billing and collection efficiency, potential for economies of scale (shared premises, management, administration and operational facilities such as warehousing, spares), ability to attract better trained staff and to spread their cost over a wider customer base, etc.

On the cost side: legal and financial costs of aggregation, costs inherent in the disruption associated with change, costs of staff training schemes, costs relating to better-qualified staff.

These associated benefits and costs may impact the various stakeholder groups differently. It will therefore be important to tabulate the benefits and costs for each locality involved.

Establishing a grouped structure

It will then be necessary to decide on key parameters for the establishment of the aggregated structure, on aspects such as the definition of service levels, tariff setting, and governance arrangements. Guidance on how to formulate such decisions is provided in Tools 2.B.(a).2. and 2.B.(a).3.

Such decisions should be taken by a group of villages and towns set up to drive the aggregation process, which may form an embryonic structure for the future aggregated structure.

This so-called “driver group” should be composed of representatives of the principal entities that will be affected by the aggregation process. One of the first tasks of the driver group should be to identify all potential aggregation candidates and the stakeholder groups and organizations that could be affected. Experience has shown that it is of fundamental importance to a successful aggregation process that the communities or entities considering or undergoing aggregation be convinced of the benefits of working together.

On the basis of the estimation of the costs and benefits from alternative aggregation models, the driver group will need to choose the model most appropriate to the circumstances of the group and the general form of the aggregated entity, by answering the following key questions:

- Should the aggregated structure be temporary or permanent?
- Which functions should be transferred to the aggregated structure?
- Should asset ownership and staff be transferred to the aggregated structure?
- How can voting rights be allocated to the joining entities within the aggregated structure?

- Should tariffs be set at a uniform level or remain different?

Tool 2.B.(a).2. provides additional options and guidance in order to choose amongst these options.

On the basis of these decisions, the driver group can then formally establish the grouped structure. This would generally become a separate entity, with its own “articles of association” (see Tool 2.B.(a).3 for guidance as to what such articles of association would need to cover).

<i>Tool 2.B.(a).3. Areas to be considered within the “articles of association” of a grouped structure</i>	
How to use the tool	These are the main headings (i.e. the main areas) to be covered in the “articles of association”, i.e. the legal document for creating a grouped structure which establishes the terms of engagement for localities joining the aggregated structure. Guidance provided below is particularly suited to permanent structures. Key choices made using Tool 2.B.(a).2. above would need to be reflected here.
Area	Guidance
The perimeter of the aggregated structure	Include a list of villages and towns to be included, preferably with associated maps showing population clusters and locations of available water resources (boreholes, streams, etc.)
Functions being transferred	Clearly indicate who is responsible for doing what, including: water resource management, construction of new installations, rehabilitation, maintenance, operations, new connections, commercial management, billing, reporting, etc. These functions may be transferred to the grouped structure or remain in the responsibility of an entity at village / town level.
Rules of governance and decision-making processes	Allocate voting rights to the members of the aggregated structure (see possible options in Tool 2.B.(b.), specify how voting rights allocation may be changed (seek to limit the possibilities to reduce political interference). Define the minimum quorum for different decisions according to the type of decisions (higher quorum for more fundamental policies).
Rules setting out the main policies of the aggregated structure	Define rules regarding depreciation, accounting, tariff policy, service quality, service extension policy so that these important issues could not be the object of overt political interference. The stability of these rules is vital to ensure long-term service improvement: it would be preferable if changes can only be introduced with a strong majority (e.g. two thirds of the voting rights and two thirds of the local governments involved).
Clauses related to the transfer of asset ownership (including water rights) if applicable	Define the list of assets and water rights (if they are well defined, if not the ability to draw from various water resources) that are transferred to the aggregated structure. If there is resistance to such a transfer, specify compensation policies (including payments for assets or rules about ownership returning to their initial owners).
Clauses related to staff transfer	Define the list of staff that are to be transferred from existing services to the aggregated structure. This applies if there was an existing service prior to aggregation, with existing staff.
Clauses related to the harmonization of service levels and tariffs	Specify the tariffs applied to sales of water from the aggregated structure and the tariff levels. As mentioned in Tool 2.B.(b.), tariffs and service levels may either be harmonized (i.e. the same throughout the perimeter) or allowed to vary.
Entry and exit conditions	Indicate how villages/towns can enter or exit the aggregated structure, including, what the impact on tariffs and service levels would be for the new entities and for the other members within the aggregated structure.

Phase 2 – Testing at regional level – Technical Module	
2.B.(b)	Identifying appropriate contractual forms for hiring a private operator
	<ul style="list-style-type: none"> • 2.B.(b).1. Typical heads of terms for an Operations and Maintenance Contract for water services • 2.B.(b).2. Performance standards in a PPP-type contract

Letting a private sector contract lies at the core of the PRSA approach, as it enables bringing in professionalized management, thereby increasing the sustainability and efficiency of the service. Bringing in the private sector is a process in and of itself, which requires specialist knowledge, including the ability to draft contracts and organize a bidding process.

Contracting the private sector: who should be in charge?

If a grouped structure has been formed up-stream, it would generally be the responsibility of the grouped structure (or of the “driver group”, if that structure is still being formed) to let the private sector contract. Alternatively, it would be the responsibility of the asset owner if that entity is different from the grouped structure. These entities should be supported by the consultant assisting with testing the approach at regional level, which can advise on the key steps of the process as outlined below.

Detailed guidance on letting private sector contracts for water services can be found in a variety of documents, such as “Approaches to private participation in water services – A toolkit” published by the World Bank in 2006.⁶ The objective of this module is not to examine in great detail how this needs to be done but to highlight the specificities of contracting a private operator for rural water supply.

Choosing the optimal form of private sector contract

The first step consists of selecting the optimal private sector contract given the local circumstances. Volume 1 outlined the potential benefits from contracting private operators and the alternative contractual forms that may be employed in a rural setting, including outsourcing contracts, management contracts, leases, design build lease (DBL) contracts and design build operate (DBO) contracts. There may also be variations around these main contractual forms, i.e. hybrids combining elements of each of these contractual forms.

At a theoretical level, the choice of private sector contract should reflect the optimal allocation of risks between the parties, based on the fundamental principle that risk should be allocated to the party that is best able to manage it. Table 7 in Volume 1 provided an overview of how risks are allocated to the private sector under each of the main contractual forms presented in volume 1.

In addition, the choice of the type of private sector contract will depend on a number of factors:

- **Legal factors:** the forms of private sector contracts that are legally allowed in the country;
- **Technical factors:** the type of services that are to be operated, their current status and needs for improvement and the size of investments needed;

⁶ See: <http://rru.worldbank.org/Toolkits/WaterSanitation/>

- **Market readiness and interest:** the level of private sector interest in bidding for and undertaking the services; the technical and managerial capacity available in the private sector both locally and regionally; the capacity of the private sector to take on and manage a range of risks;
- **Financial factors:** the ability of private operators to mobilize financing (including for investments) and the potential for providing cross-subsidies or external subsidies so as to cover the costs of areas that are not generating sufficient revenues to attract private operators (see Technical Module 2.B.(c) on financing arrangements and the potential for introducing external subsidies);
- **Political factors:** the policy environment, the degree of political commitment, and the acceptability of private sector participation at the local level
- **Institutional factors:** the capacity to monitor and supervise private operators at the local and national levels.

The choice of private sector contract will have implications for the residual responsibilities of the public entity in charge of letting the contract. For example, in a lease, the contracting entity will remain responsible for financing and sometimes carrying out the main investments, whilst the private operator will be responsible for operating and maintaining the assets.

Preparing the contract

Once the decision on the most appropriate form of PPP has been taken, it will be necessary to conduct the process of recruiting the private operator. This will start with the preparation of a Request for Proposal (RfP) package, including a draft contract and bidding rules (including a statement of which criteria will be used to select the operator). Tool 2.B.(b).1 include typical heads of terms for the type of contracts that would be let under a PRSA approach (focusing on management contracts and leases), and Tool 2.B.(b).2. includes a more detailed set of performance standards that could be included in an Annex to the contract. “Heads of terms” effectively show the main areas that would need to be covered in such a contract.

Letting the contract

The contract will then be incorporated in a Request for Proposal (RfP) circulated to interested bidders. Identifying which enterprises may be interested in applying may prove initially challenging, as few companies might have the necessary experience of operating rural water services. As a result, the contracting process should be widely advertised to a range of potential operators (including existing rural water service operators in the area itself or neighboring areas, operators of other public services such as electricity or telecommunications, construction companies, electro-mechanics, former employees of the urban water supply companies, etc). Advertising the contract should be accompanied by an information campaign to explain the responsibilities and risks transferred by the contract and to ensure that prospective operators have a good understanding of local challenges.

The bidding process should then be organized in two-stages, with a pre-qualification followed by a selection based on technical and financial bids. The selection criteria could include the proposed volumetric tariff, the level of public subsidy required or the number of connections to be installed, depending on the type of service and type of information currently available. It is understood that domestic firms are most likely to pre-qualify and to put together reasonable bids..

Tool 2.B.(b).1: Typical heads of terms for an Operations and Maintenance Contract for water services			
How to use the tool	These Heads of Terms show the type of issues that would need to be considered when drafting an Operations and Maintenance contract for water services. The table below shows how these terms may differ depending on the type of contract being entered into: the types of contracts that are most likely to be encountered under PRSA are lease and management contracts.		
Component	Contents	Typical Scope in a Management Contract	Typical scope in a Lease contract
Form of Contract	Introductory Clauses	<ul style="list-style-type: none"> Parties to the contract Recitals (context and purpose of the contract) Definition of the Contract Documents Signatures 	<ul style="list-style-type: none"> Similar provisions to a Management contract
General Conditions of Contract	Definitions And Interpretation	<p>This section should include, amongst other things:</p> <ul style="list-style-type: none"> Definitions Rules for interpretation of the contract Procedures for amendment of the contract The Operator's shareholder composition and approvals required for ownership changes Joint and Several Liability rules Authorized Representatives Lessor Review and Approval 	<ul style="list-style-type: none"> Similar provisions to a Management contract
	Duration Of The Contract	<ul style="list-style-type: none"> Date of the effectiveness of the Contract and commencement of the services The duration of the contract (typically 3-5 years) Renewal of the contract (typically for periods up to five years) 	<ul style="list-style-type: none"> Date of Contract effectiveness and commencement of the services Mobilization period The duration of the contract (typically 8-15 years) Renewal of the contract (typically for periods up to five years)
	Obligations Of The Operator	<ul style="list-style-type: none"> Law governing the services Rules for resolving conflicts of interest Anti-corruption Lessor's access to facilities Operator's costs and taxes Obligations to provide a performance security and conditions under which the Lessor may call on the security. Operator's obligations to maintain records Auditing of Operator's records and accounts Confidentiality 	<ul style="list-style-type: none"> Similar provisions to a Management contract
	Operator's Indemnification, Limits On Liability And Insurance	<ul style="list-style-type: none"> Indemnification Limitation Of Liability Insurance 	<ul style="list-style-type: none"> Similar provisions to a Management contract
	Lessor's Obligations	<ul style="list-style-type: none"> Exclusive Right Of Service Any assistance to be provided by the Lessor 	<ul style="list-style-type: none"> Transfer and return of assets Exclusive Right Of Service Any assistance to be provided by the Lessor
	Payment arrangements	<p>Basis of the Operators remuneration including:</p> <ul style="list-style-type: none"> Revenues from management fees (Appendix 6) and from Incentive Fees (Appendix 7) Employer's right to withhold payment of management fees 	<p>Basis of the Operators remuneration including:</p> <ul style="list-style-type: none"> Revenues from customers (Appendix 6) Revenues from Incentives (Appendix 7)

Tool 2.B.(b).1: Typical heads of terms for an Operations and Maintenance Contract for water services			
How to use the tool	These Heads of Terms show the type of issues that would need to be considered when drafting an Operations and Maintenance contract for water services. The table below shows how these terms may differ depending on the type of contract being entered into: the types of contracts that are most likely to be encountered under PRSA are lease and management contracts.		
Component	Contents	Typical Scope in a Management Contract	Typical scope in a Lease contract
General Conditions (continued)	Periodic Review	<ul style="list-style-type: none"> Price adjustment mechanisms (other than annual indexation) are not normally required in a management contract because of their lower risk and shorter time period. 	<p>This section should set out the Periodic Review process through which the Operator's remuneration can be adjusted during the course of the contract. The section should include:</p> <ul style="list-style-type: none"> Frequency of periodic reviews (usually every 3 to 5 years) Methodology for the periodic reviews Setting of/adjustment of Performance standards The use of an independent assessor Procedures for appeal
	Seizure, Suspension And Termination	<ul style="list-style-type: none"> Conditions for termination by the Lessor Conditions for termination by The Operator Notice periods Disputes About Events Of Termination Payment Upon Termination 	<ul style="list-style-type: none"> Provisions for seizure and suspension by the Lessor Conditions for termination by the Lessor Conditions for termination by The Operator Notice periods Disputes About Events Of Termination Payment Upon Termination
	Force Majeure	<ul style="list-style-type: none"> Definition of Force Majeure No breach of contract in event of Force Majeure Measures to be taken in the event of Force Majeure Extension of time and payments 	<ul style="list-style-type: none"> Similar terms to a Management contract
	Transitional arrangements upon expiry and early termination	<ul style="list-style-type: none"> Not normally required in a management contract. 	<p>This section sets out arrangements at the end of the contract for:</p> <ul style="list-style-type: none"> Transfer of assets owned by the Operator Transfer of staff Transfer of customer deposits Final condition survey
	Settlement of Disputes	<ul style="list-style-type: none"> General principles and amicable settlement Arbitration 	<ul style="list-style-type: none"> General principles and amicable settlement Arbitration
	The role of the Regulator	The regulator is less likely to have a role in the supervision of a management contract	If applicable, this section should set out the powers and responsibilities of the regulator under the contract.
	Appendix 1	<ul style="list-style-type: none"> Map of service area and list of key facilities 	<ul style="list-style-type: none"> Map of service area and list of key facilities
Appendix 2	Description of the Services	<p>Services provided by the Operator may include:</p> <ul style="list-style-type: none"> Operations services Repair and maintenance services Network rehabilitation services Customer billing and collection services New connections Small network extensions Capital investment planning services Preparation of reports and plans (e.g a Strategic Business Plan) Routine progress reporting 	<ul style="list-style-type: none"> Similar services to a Management contract

Tool 2.B.(b).1: Typical heads of terms for an Operations and Maintenance Contract for water services			
How to use the tool	These Heads of Terms show the type of issues that would need to be considered when drafting an Operations and Maintenance contract for water services. The table below shows how these terms may differ depending on the type of contract being entered into: the types of contracts that are most likely to be encountered under PRSA are lease and management contracts.		
Component	Contents	Typical Scope in a Management Contract	Typical scope in a Lease contract
Appendix 3	Performance Standards	<ul style="list-style-type: none"> List the Performance standards to be achieved over the full duration of the contract (if possible) 	<ul style="list-style-type: none"> List the Performance standards to be achieved over the next five years (i.e. until the next Review) – See Tool 2.D.2.
Appendix 4	Assets	<ul style="list-style-type: none"> Detailed asset definitions and lists not required 	<ul style="list-style-type: none"> Definition and list of assets owned by the Lessor (for instance vehicles, office equipment etc) Definition and list of assets owned by the Operator
Appendix 5	Staffing	<ul style="list-style-type: none"> Schedule of expertise to be provided by the Operator Schedule of full time and short term management staff to be provided by the Operator (from the Operator's proposal). Rules for replacement / substitution of key staff 	<ul style="list-style-type: none"> Arrangements for transferring or secondment of existing operations staff to the Operator Any limitations on the Operator's ability to retrench staff Terms of Conditions of service for staff Transitional arrangements for staff at the expiry or termination of the contract
Appendix 6	Compensation and Indexation	<ul style="list-style-type: none"> Schedule of management fees to be paid 	<ul style="list-style-type: none"> Calculation methodology for Operator's remuneration Calculation method for lease payments to the Lessor Procedures for indexation of the Operator's remuneration
Appendix 7	Incentive Appendix	<p>Most management contracts include incentives linked to the Operator's performance. This Appendix should include:</p> <ul style="list-style-type: none"> A methodology for calculating the amount of incentive payments to be made to the Operator. (if applicable) The maximum amount of incentive payments to be paid in any one year. 	<ul style="list-style-type: none"> If funding can be found to set up an incentive fund, incentive payments can be used to encourage performance in areas where the intrinsic incentives of the contract may be weak, for instance in relation to training and development of staff, or in providing services to low income areas. Incentive arrangements are unfortunately rare in lease contracts.
Appendix 8	Liquidated Damages	<ul style="list-style-type: none"> Not normally required in a management contract. 	<ul style="list-style-type: none"> A schedule of Liquidated Damages to be paid by the Operator in the event of poor performance. <p>The maximum amount of Liquidated Damages to be paid following which termination may be triggered.</p>
Appendix 9	Financial Securities	<ul style="list-style-type: none"> The Performance Security provided by a reputable bank is included here. 	<ul style="list-style-type: none"> The Performance Security provided by a reputable bank is included here.

Tool 2.B.(b).2: Performance standards in a PPP-type contract	
How to use the tool	Performance standards can be used as part of the PPP contracts and incorporated into an Annex (see Annex 3 in the heads of terms outlined in Tool 2.B.[b].1.). They can form the basis for tracking performance and conducting regular audits.

Principles for selecting suitable performance standards

It will be important to define a set of performance standards in the contract which follow commonly-used “SMART” principles, that is, the standards should be:

- Specific (i.e. well defined)
- Measureable
- Achievable (given the resources available to the Operator)
- Relevant, and
- Time-Bound.

In regions where PRSA approaches are contemplated, it is unrealistic to expect a domestic operator to be able to collect and process reliable data on all aspects of operations and customer service delivery. It is suggested that the number of performance standards should be limited, at least initially, to between four and seven key indicators.

There is a natural tendency amongst clients and transaction advisors to set over-ambitious or unachievable targets for private operators. The effects of the Operator’s subsequent failure to meet the standards can be serious; for instance, the Client may assess the Operator’s performance unfairly and the Operator may find itself paying penalties or liquidated damages despite the fact that it may have genuinely used its best endeavors. As a result the relationship between the parties can be damaged. A further difficulty arises because of the absence of reliable baseline performance when the contracts are drafted. To overcome these problems, some PPP contracts provide for adjustment of the baseline and associated targets during the course of the contract as better information becomes available. Independent auditors can be used to validate data and ensure an equitable adjustment of the standards.

Typical performance standards

The tables below set out suggestions for contract performance standards.

Operations Performance Standards

Indicator	Definition	Discussion
Water distribution efficiency (%)	Water consumed by customers/ Water produced * 100. Alternatively measured as Non Revenue Water as percentage of supply = 100 – water distribution efficiency	Measurement of distribution efficiency requires reliable and comprehensive bulk meters (to measure water production) and customer meters (to measure consumption). Water losses comprise technical losses (e.g. leakage) and administrative losses (e.g theft, billing losses). Not all losses can be attributable to the operator under a lease.
Water quality compliance (%)	Percentage of water tests meeting the statutory or contractual standards	The frequency and type of tests will either be set down in national standards or should be specified in the PPP contract.
Functionality rate (%)	Percentage of days that water sources/systems (e.g. boreholes etc) are functioning (aggregated for all water sources.)	The challenge will be to establish recording systems which reliably record the amount of downtime of each water source and system. Community monitoring may be the solution.
Metering ratio (%)	% of customers with working meters	In most situations it will be necessary to measure water use in order to manage the supply demand balance.

Human resource performance standards

Indicator	Definition	Discussion
Staff per 1000 connections	(Total staff * 1000)/total water connections	This is a widely used measure of staff productivity, though may require modification in the rural setting to 1000 households served.
Number of training days per employee	Total training days/ full time employees	This indicator may be used to determine the amount of operator investment in staff training.

Financial performance standards⁷

Indicator	Definition	Discussion
Collection ratio (%)	The ratio of cash collected /amount billed.	Collection ratio is an imperfect indicator because collections in a given period may be in respect of bills issued in a previous period. So, for instance, the figures for collection ratio may be distorted by the collection of historic arrears or by increases in tariffs. Nonetheless the indicator is commonly used in management contracts as it is simple to understand and easy to measure.
Debtor's ratio (%)	Accounts receivable / annual water revenues	The debtor's ratio can be expressed as a ratio, or in "days".
Operating cost coverage ratio (%)	Annual water revenues / annual running costs	The operating costs coverage ratio is a basic, but important, measure of financial sustainability. Operating costs include day to day operating and maintenance costs, including provisions for bad and doubtful debts, but excluding depreciation and financing costs.

Customer Service performance standards

Indicator	Definition	Discussion
Complaints	Total complaints as a percentage of total customers.	This indicator can be subdivided if required: <ul style="list-style-type: none">• Billing complaints• Complaints of poor water quality• Complaints of no supply• Complaints of low pressure

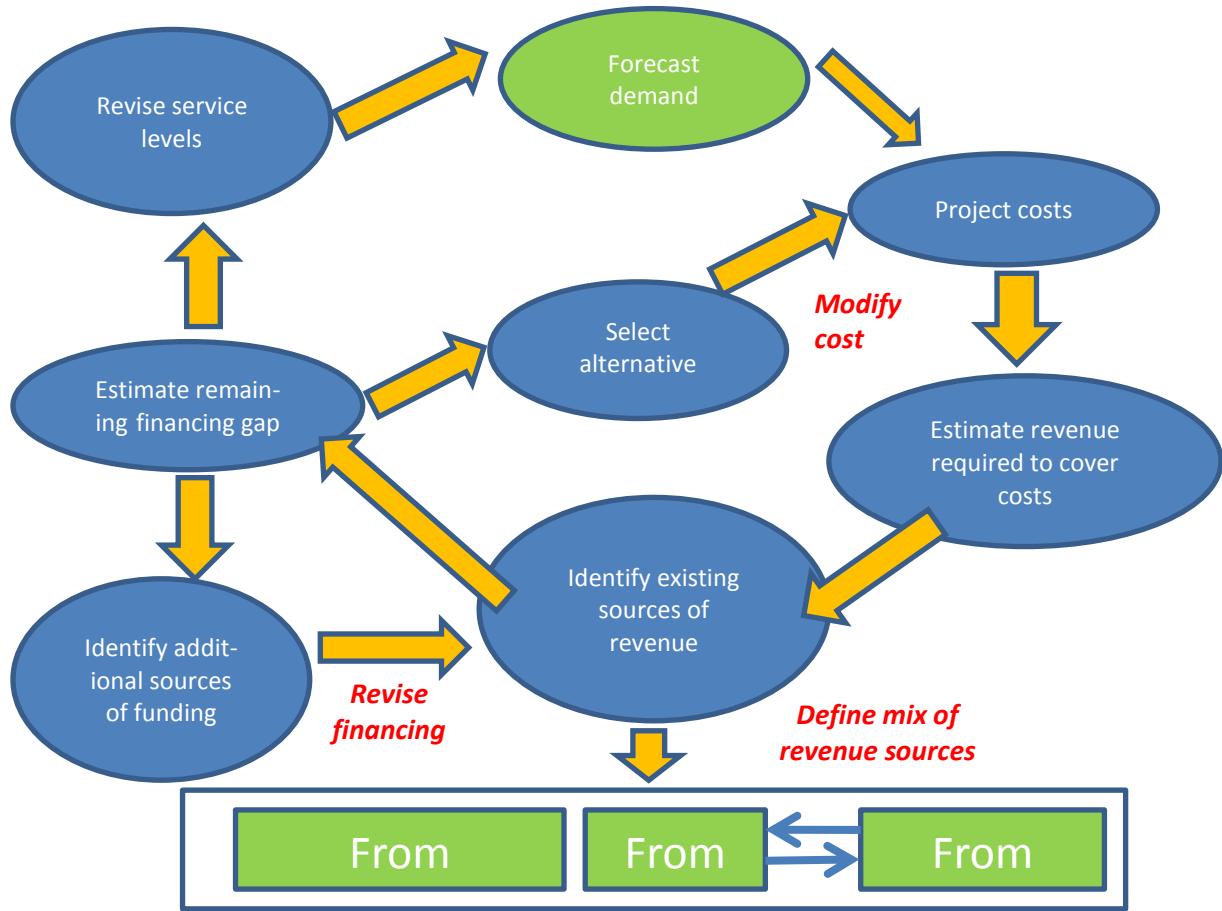
⁷ Generally applicable to Management Contracts only, since lease contracts include inherent incentives to improve financial performance.

Phase 2 – Testing at regional level – Technical Module	
2.B.(c)	Defining financing arrangements
	<ul style="list-style-type: none"> • 2.B.(c).1. Estimating costs • 2.B.(c).2. Designing an OBA (Output Based Aid) scheme

In parallel with the selection of options for aggregation and contracting arrangements, it will be essential to define what financing arrangements can be put in place in order to make service provision financially viable in the chosen service area. Financing arrangements refer to the way in which services can be financed, i.e. whether revenues should come from user contributions (either direct investments or user fees), external subsidies (either from government sources or via Official Development Assistance) or repayable financing (from private operators bringing in their own capital or loans from commercial banks or microfinance institutions).

The process of defining financing arrangements will need to be iterative so as to inform the choice of options with respect to service levels, grouping structure, form of private sector contract (including procurement methods) and charging arrangements. Figure 2 below shows the cycle of actions that need to be gone through to define the underlying financing arrangements for introducing the PRSA approach.

Figure 2. The iterative cycle for establishing financing arrangements



Forecasting demand. The first step consists of forecasting demand for water services in the service area (if the boundaries of the aggregated structure have not yet been fixed, this can be done for a number of alternative service areas) over the medium-term horizon (between 5 and 15 years depending on what is locally feasible and appropriate, and partly on the type of private sector contract being considered).

Demand forecasts would need to be prepared based on an evaluation of current and future population, current water consumption, the population's willingness-to-pay for alternative service, and tariff levels. As willingness-to-pay figures can be misleading in terms of their ability to predict demand, this should also be checked against ability to pay (i.e. the cost of water services as a percentage of household income) and current consumption patterns. Demand for a new service is also likely to depend significantly on existing services and available water resources: for example, in an area where water resources are abundant and households can get water from a nearby river instead of purchasing it from a service provider, the ability to charge a cost-covering tariff would be limited (this has actually been identified as a situation where the PRSA approach would have a lower likelihood of success). Getting accurate information on future demand would need to be done based on focus group discussions with local population, willingness-to-pay surveys (in more or less detail depending on available funding for preparatory studies), and surveys of existing practices (to understand what people are currently using).

In some cases, demand for the service may be low because the local population is not fully aware of the benefits they can gain from clean water, either through a handpump, a standpipe, or a house connection. In such case, it may be necessary to carry out demand promotion activities, to educate

people about the potential benefits from water services and stimulate demand for those services. This may be done either prior to or after letting a PPP contract. In the latter case, it may be useful to specify that the private operator employ a demand promotion specialist (or team up with an NGO) in order to conduct such activities, as this was done in the framework of the BoTT (Build-Operate-Train-Transfer) contracts in South Africa.

Projecting costs. Demand forecasts can form the basis for planning future investments and projecting associated costs, including operating costs (Opex), capital costs (Capex), capital maintenance costs, and financial costs. Costs will depend on the service level that is recommended for the service area. For example, if the service area is served principally via hand pumps, operating costs are likely to be minimal. Tool 2.B.(c).1. provides an overview of the categories of costs that need to be covered, both in non-networked and in networked systems.

Estimating revenue required to cover costs. Overall revenues required to cover costs so that the service can be sustainable then need to be estimated before identifying how they may be covered from various revenue sources, including users contributions, public subsidies, and repayable financing. A key element is to allow sufficient revenues to cover projected maintenance costs, which are frequently left out of the estimates particularly when the original infrastructure is donated to the communities in the form of capital subsidies, even though provisioning for such expenses is essential in order to ensure that services are provided in a sustainable manner with minimum risk of service interruption. This is equivalent to the setting aside of a “depreciation charge” to cover the costs of replacing the investments. Tariffs estimated in an urban setting would aim to cover such depreciation costs so as to be in a position to replace the assets when they come to the end of their useful life.

Tool 2.B.(c).1. Categories of costs to be covered via revenues		
How to use the tool	This tool identifies the main categories of costs that need to be covered in order for the service to be operated in a financially sustainable manner both in non-networked and in networked systems.	
Category of costs	Non-Piped services	Piped services
Capital investment costs	<ul style="list-style-type: none"> Investments in water resources facilities, including boreholes, hand-pumps, motorised pumps, well-protection, spring boxes, gravity-flow pipelines, land for protecting water quality Administrative and management costs, including offices, IT systems, vehicles, depots and warehouse 	<ul style="list-style-type: none"> Investment in water resources and water treatment facilities, water transmission and distribution mains, land for protecting water quality Administrative and management costs, including offices, IT systems, vehicles, workshops/depots and warehouses
Operating costs and minor maintenance costs	<ul style="list-style-type: none"> Staff costs Power costs, including fuel Cost of materials, including chemicals Direct support costs (community capacity building, hygiene awareness) Water source protection and conservation Point source water treatment 	<ul style="list-style-type: none"> Staff costs Power, including fuel for vehicles Cost materials including chemicals, materials, vehicles, billing and collection systems, customer support systems, information and communications service Bulk water purchases (if applicable)

Tool 2.B.(c).1. Categories of costs to be covered via revenues		
How to use the tool	This tool identifies the main categories of costs that need to be covered in order for the service to be operated in a financially sustainable manner both in non-networked and in networked systems.	
Capital maintenance costs	<ul style="list-style-type: none"> • Renewal, rehabilitation, and replacement of fixed assets • Replacing pumps and rising mains • Cleaning of spring-boxes and water tanks • Flushing/cleaning of boreholes; catchment protection 	<ul style="list-style-type: none"> • Charges/expenditure on infrastructure renewals (depreciation) • Asset renewal, rehabilitation and replacement costs
Financial costs	<ul style="list-style-type: none"> • Cost of interest repayments on a loan (incl. microfinance) • Dividends for owners' equity (for small scale independent providers) • Loan amortization (if cash accounting) • Bank fees and exchange rate losses 	<ul style="list-style-type: none"> • Cost of interest repayments on a loan (incl. microfinance) • Dividends for owners' equity (for small scale independent providers) • Loan amortization (if cash accounting) • Bank fees and exchange rate losses

Source: adapted from African Development Bank (forthcoming, 2010), "Toolkits for User Fees and Costs Recovery"

Identifying existing sources of revenue. Once overall costs have been projected, it will be necessary to identify sources of revenue to cover these costs. Revenues that cover the costs can basically come from two main sources:

- *From users of the service*, either through direct investments (in cash or kind), voluntary contributions or user fees (paid for volume of water provided, such as by the bucket, or via a fixed charge);
- *From government sources*, i.e. subsidies or grants from domestic sources (national or local governments) or international sources (Official Development Assistance). These subsidies may be provided up-front (such as a capital investment grant) or for a specific output once this output has been delivered (such as in the case of Output-Based Aid, see Tool 2.B.(c).2. for more details).

In addition, due to the difficulties of mobilizing all revenues up front, it may be necessary to access sources of finance that ultimately need to be repaid to their providers, such as:

- *Investments from private operators*, who ultimately would need to get a return on their investment;
- *Loans from lending institutions*, which need to be reimbursed plus interest. These may include loans from development banks (that are provided at concessionary rates, i.e. below market-rates thanks to a partial subsidy), commercial banks and microfinance institutions (which tend to lend at a higher rate than standard rates but which are more accessible and with more flexible lending conditions).

In order to enhance sustainability, it has long been argued, particularly in urban areas, that a majority of revenues should be generated via tariffs (a form of user contributions which consists of a regular payment in exchange of services). For small piped networks, the service provider should seek to recover a substantial portion of its costs via tariffs from users of the service in order to maintain the facilities in good working order and reduce dependency on external subsidies. Tariffs should be set based on the estimation of the revenue required to cover costs (based on demand and cost projections) divided by the projected demand. Tariffs can be distributed between initial contributions, fixed charges or

volumetric charges (such as by the bucket for non-piped supplies or based on measured demand in the case of small-piped networks where fitting a meter is economically justified).

If subsidies are required (either in the form of direct subsidies coming from governmental sources or donors or via cross-subsidies), then it will be essential to define a framework so that such subsidies can be predictable and reliable. Allocating subsidies on the basis of outputs can be a way of increasing the predictability and efficacy of delivering subsidies. Tool 2.B.(c).2. describes how an output-based subsidy scheme can be designed and implemented for rural water supply.

Tool 2.B.(c).2. Designing an OBA schemes for rural water services	
How to use the tool	This tool identifies the main choices that need to be formulated in order to introduce subsidies paid on outputs rather than provided up-front.
Area	Examples of potential options
Output definition	<ul style="list-style-type: none"> • Construction and operation of water point • Number of connections (in a networked system) in service
Method of payment	<ul style="list-style-type: none"> • 100% ex-post based on results • Portion in advance (to cover the costs of large works), portion ex-post (to cover the costs of connections)
Targeting method	<ul style="list-style-type: none"> • All customers in rural areas treated as poor and eligible for subsidy • More detailed targeting methods are applied, for example, with the drawing of lists of eligible households (in the event of household connections being provided)
Type of financing	<ul style="list-style-type: none"> • Grants • Concessionary loans
Method of subsidy allocation to service providers	<ul style="list-style-type: none"> • Least-subsidy: in a bidding process, the operator that requests the lowest subsidy wins • Cost of connection: in a bidding process, the operator that enables setting the lowest cost of connection wins
Performance monitoring	<ul style="list-style-type: none"> • Independent verification agent controls that stated outputs have been delivered • Standard monitoring procedures as for overall performance (least preferred)
Institutional form of subsidy provider	<ul style="list-style-type: none"> • National fund (e.g. national fund for the extension of rural water services) • Dedicated account within the general sector budget

Estimating the remaining financing gap. If available financial resources do not appear sufficient to cover projected costs and there is a remaining financing gap, there are three main ways which can be relied upon in order to reduce the financing gap:

- *Identifying additional sources of funding:* these may include, for example, subsidies that may be mobilized in a different way from international donors or the government itself, including output-based subsidies.
- *Revising service levels in order to generate a different demand response and reduce costs:* revising service levels may allow drastically reducing the financing gap. For example, this might involve providing services via standpipes rather than in-house connections or providing only a restricted number of hours of service. Conversely it might also involve increasing the service level since house connections might generate higher receipts;
- *Choosing alternative options for grouping or management model,* in order to reduce costs (by generating additional efficiency gains and/or scale and scope economies) or increasing the potential for cross-subsidization between groups of customers.

The determination of the financing arrangements can be done in parallel with the definition of the grouped structure and the contracting options. Transferring additional risks to the private operator, for

example, may generate additional efficiency gains (and therefore operating cost savings) although the operator would typically look for a higher remuneration to compensate it for taking on more risks.

Phase 2 – Testing at regional level – Technical Module	
2.B.(d)	Establishing contract management arrangements

In the urban context it is common to institute an independent regulator's office as a way of protecting customers from poor service delivery. In the rural context the number of aggregated service areas might still be too disperse for efficient and cost effective regulation. In lieu of a regulator, it is proposed that rural household be protected by strong contract management efforts undertaken by the asset holder, and backstopped by local governments and community activism.

The M&E framework developed in section 2.C together with the contracting process described under tools 2.B.(a) and 2.B.(b) provide sufficient guidance for producing effective contract management arrangements.

For practical guidance, refer to the following tools in Section 3



- 2.C.1. M&E Framework Considerations
- 2.C.2. Data to be collected in regions where PRSA approaches are considered for introduction
- 2.C.3. Possible measures of impact

As described below in tool 2.C.1, process monitoring refers to the actions taken during the design and implementation of the PRSA approach. For example, a quantitative indicator for process monitoring might be as simple as, ‘the work schedule is within 15% of plan’. A qualitative indicator might attempt to characterize the attitude of local government officials to domestic private sector participation. Each listed sub-component will require a carefully crafted set of indicators, individualized to each test area’s unique conditions or circumstances.

Performance monitoring, on the other hand, refers to the actual results or outputs obtained. Possible indicators might include items such as those shown in the previous section.

Comparative analysis may be the most difficult dimension since data will be required both from areas that are operating under a PRSA arrangement and comparable areas that are not. The science behind making these comparisons will require the services of a competent statistician.

For both process monitoring and performance monitoring a significant effort should be expended to ensure the preparation of concisely-defined indicators that correspond to specific performance targets. For example, ‘number of employees per 1000 households’, may be a generic indicator for an operator, however, no benchmarks for rural service delivery currently exist, therefore, the test implementation will need to propose targets using best professional judgment and national or sub-national data from urban areas, small towns, and disperse rural areas.

It needs to be emphasized that data collection and analysis can grow expensive and cumbersome. For this reason it is recommended that a minimum number of overall indicators be developed, preferably fewer than 30.

The complexities of developing and implementing an M&E framework should not be underestimated. The list below provides a list of some additional topics to address.

Additional factors to consider within the M&E framework design
Integration with existing sector Management Information Systems
Relationship between monitoring and the project cycle
Cost estimates and cost controls for the M&E system itself
Capacity building and training for operating the system
Data collection protocols
Reporting protocols
Database development and information management protocols
Use of GIS / GPS / mapping
Hardware, software, data storage, and data transfer solutions

Tool 2.C.1: M&E Framework Considerations

How to use the tool	This checklist may be used by the consultants to design a robust M&E system for tracking PRSA progress and results.
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Dimensions	Sub-Components	Typical key questions to address
Process Monitoring	<ul style="list-style-type: none"> • Scheduling and budget • PRSA design phase • PRSA implementation process • Contracting and contract management • Agglomeration process • Financial issues (public and private) • Changes in attitudes and practices (major stakeholders) • Secondary effects on stakeholders • Monitoring process 	<ul style="list-style-type: none"> • Is activity on schedule, if not why not? • Are all relevant stakeholder concerns identified and addressed? • Are proposed objectives, strategies, and activities thoroughly vetted and thought to be viable? • Are there political hurdles to overcome? • Does the financial analysis suggest viability? • Are there sufficient resources (human, financial, institutional) available to adequately test the approach?
Performance Monitoring	<ul style="list-style-type: none"> • Operators • Infrastructure • Households and community organizations • Local governments • Funding sources 	<ul style="list-style-type: none"> • Is there agreement on all definitions? • Do the proposed indicators meet basic criteria for robustness? • Are there sufficient resources (human, financial, institutional) to meet the demands of the performance monitoring system? • Does the monitoring system represent a reasonable proportion of the overall activity costs? • Is over-measurement avoided?
Comparative Analysis	<ul style="list-style-type: none"> • PRSA versus current approach • Regional or international comparisons 	<ul style="list-style-type: none"> • Does the new approach represent any real improvement on current practice?
Evaluation	<ul style="list-style-type: none"> • Output and results level 	<ul style="list-style-type: none"> • Do the key criteria and indicators selected serve as honest measures of success, and what do they demonstrate? • Was the entire development process adequate? • What succeeded and what failed? • Should the approach be considered for further roll-out or not? • What improvements can be made?

Tool 2.C.2: Data to be collected in regions where PRSA approaches are considered for introduction

How to use the tool	This data collection checklist can be used by the consultants in order to obtain data to evaluate the most appropriate options under a PRSA approach at the regional level.
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Data for each rural water systems	<ul style="list-style-type: none"> • Name of piped system • GPS coordinates of system, or system identification number • Type of system (partial village / single village / multi-village) • Name and population of village(s) served • Name and status (association/private/NGO etc.) of the system manager • Number of staff working on the system • Is the system operated under a contract? If yes: type of contract (management, lease, concession) starting and ending dates • Type of energy source(s): generator/grid/solar/hybrid/gravity etc. • Age of the energy source(s) (years or preferably hours) • Type of pump(s): submersible/shaft/volumetric/other • Age of pump(s) (years or preferably hours) • Operating yield (m^3/h) of pump • Static and dynamic levels of the water table • Storage capacity (m^3) and storage elevation (m) • Total pipe length (m) • Number of standpipes • Number of private connections (if possible: evolution during last 3 years) • Estimated % population coverage of system • Tariff at standpipes (per m^3) • Tariff on private connections (per m^3) • Downtime duration of the system for the last year • Water produced ($m^3/year$) • Water sales ($m^3/year$) • Unaccounted for water ($m^3/year$) • Repartition of consumption on standpipes/private connections/others (%/%/%) • Actual revenues (per year) • Savings available in the system's bank account • Total number of handpumps in the perimeter served by the system • Mean non-functioning rate on all the handpumps • Distance of the pumping station to the nearest fuel station • Distance of the pumping station to the low voltage / medium voltage grid • Rapid assessment of required rehabilitations/replacement/extensions
Data on each handpump	<ul style="list-style-type: none"> • Name and population of the village(s) served • GPS coordinates and/or identification number • Name and status (association/private/NGO etc.) of the handpump manager • Is the handpump operated under a contract? If yes: type of contract (management, lease, concession) starting and ending dates • Brand/model • Age of the pump (years)

	<ul style="list-style-type: none"> Duration of downtime periods during the last 12 months Type of water resource (borehole, well, etc.) Dynamic level of water table (m) Water produced (m³/year) Tariff at well (per m³) Fencing system (ok / need repair / non-existent) Drainage system (ok / need repair / non-existent) Rapid assessment of required rehabilitations/replacement
Data on each handpump repair craftsman	<ul style="list-style-type: none"> Name Number of years of activity Village of residence Vehicle (bicycle / mo-ped / motorcycle / car or truck) Technical equipment (tools, etc.)

Note: These data will be processed to elaborate operating models and business plans for professionalized rural services on the region area, such as:

- Revenue and cost assessments
- Detailed design of maintenance procedures
- Detailed design of rehabilitation / reinforcement works
- Elaboration of training programs

Many indicators will need to be adapted to the specific service level or levels in each service area. Piped systems might be expected to deliver slightly different results than a borehole with a handpump, for example.

Tool 2.C.3. Possible measures of impact	
How to use the tool	This checklist can be used by the consultants in order to develop appropriate indicators of impact due to the implementation of a PRSA approach.

Measures of Impact	Comments
Do systems under PRSA have higher functionality rates? Do these rates meet minimum national targets?	Long-term target should be in the range of 85%-90% functionality. Comparative data required from non-PRSA systems
Have service levels been increasing? What % of households have house connections or water taps on their property?	Country-specific targets needed
Are operational costs recovered in full?	Long-term target of 90% of systems recover full O&M costs
Has capital cost recovery been increasing on a consistent basis?	Country-specific targets needed
Are marginal O&M costs lower under a PRSA approach?	Comparative data required from non-PRSA systems
Has service quality improved under PRSA in terms of system reliability, water quality, and overall user satisfaction?	Specific quality measures to be developed at country level. Comparative data, including user survey data, required from non-PRSA systems

Phase 2 – Testing at the regional level	
2.D	Implementation, evaluation, and recalibration
	

This document serves to assist countries in the process of determining the need for improved rural water services, and to guide the design and development of the PRSA approach. It is impossible to anticipate all the specifics of actual implementation, for this reason no attempt is made to do so here, and dozens of appropriate management tools are otherwise available for doing so. Besides, countries are certainly adept and experienced in program implementation.

This last section simply serves to remind implementing agencies that the goal of testing an approach is not simply to make that approach “work” under test conditions, but to learn enough through implementation to make clear recommendations for either expanding or limiting the approach in the future. If the testing proves successful – meaning that the new approach represents a significant improvement over previous practice – the challenge is not only to draw out and apply any lessons learned, but to ensure that the learning does not end, and that experimentation and research continue.

Rural service delivery has historically failed to attract sufficient funding and entrepreneurial efficiencies, perhaps improvements such as those embodied by the PRSA approach can rectify these shortcomings, and make a positive and powerful difference in the quality of life of rural households.