Improving Concession Bidding and Design
Task 5:
Performance Reporting by Water and Sanitation Utilities on Consumer-Oriented Issues

Final Report on
Consumer-Oriented Reporting of Service Performance

By

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Executive Summary

1. Background

Over the last several years the number of successful public-private partnerships (PPPs) in the water and sanitation sector has declined around the world, in part because of problems in the design of PPP transactions. In response to this challenge, the World Bank and a group of water sector operators called the Operators' Round Table, have undertaken a program to improve PPP transaction design and help build government/ advisory capacity in the transaction design process and related implementation.

This report is one of a series of five related reports under this program that investigate different areas of potential improvement (impact of imperfect data, risk mitigation, bid evaluation procedures, consumer-oriented reporting and key contract clauses) and explore innovative approaches to PPP transaction design that could encourage greater private sector participation in water and sanitation infrastructure projects.

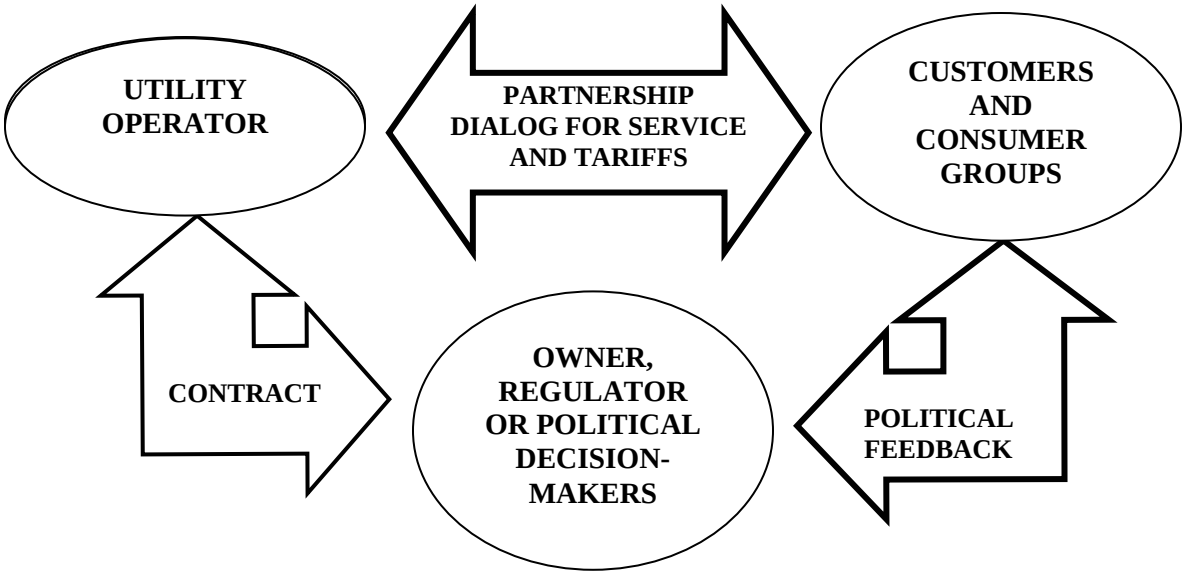
The report summarizes the relevant literature, develops case studies based on interviews with international utility operators and owners, and analyzes performance reporting by a range of international organizations. Then it summarizes critical information on issues related to consumer-oriented reporting, analyzes the cost-effectiveness of different approaches in different environments and presents guidelines based on these findings.

2. Consumer-Oriented Reporting

Many decisions are made in the water and sanitation sector that are based on inadequate or misleading information. These can be political decisions about raising tariffs or operator decisions about the level of service to be provided or consumer decisions about what type of services or water sources to use. These decisions can have significant effect on the successful operation of a water utility and on the services available to consumers. In fact, they sometimes lead to the failure of a PPP due to misunderstanding of the reasons behind tariff increases and their relationship to the service provided and related investments.

A well-designed consumer-oriented reporting system can provide the information needed to improve these decisions and involve all the appropriate stakeholders. It can also help mitigate the risks of PPP failure and increase accountability and transparency for decisions concerning the provision of water and sanitation services. To accomplish this it must provide for dialog and feedback between the three principal groups of actors in the monitoring and reporting process as shown in Figure E1.

Figure E1: Consumer-Oriented Information Feedback



3. Key Findings

The key findings are:

- There is a willingness on the part of both Operators and Owners to use consumer-oriented reporting
- However, public reporting as a tool for monitoring and communication within the political sphere is not normally used in transaction design
- Current approaches to consumer-oriented reporting are ill-defined both in transaction design and implementation
- Operators are typically not required to report service performance publicly and confidentiality agreements get in the way of public reporting
- Decisions on the amount of data to report are usually do not balance the costs with the benefits
- In situations with no regulator and related monitoring structure, customer/public participation in performance monitoring becomes more important

The best practices reported are:

- A partnership approach between operator, owner and customers
- The use of Customer Committees or Consumer Advisory Committees (both continuous and ad hoc) for discussion of key issues of service and tariffs, leading to political risk reduction and better service

- The use of survey techniques by operators or regulators to provide feedback on service performance from customers

4. Recommendations

This report recommends several new concepts, including (i) the desirability of a full partnership between utility operators, customers and Non-Governmental Organizations (NGOs) for improving service, (ii) the alternatives for implementing this partnership in terms of contracting arrangements and (iii) the utilization of a communications strategy for performance measures to facilitate this partnership. These would be implemented with both contractual and non-contractual agreements between the parties.

A more formalized approach to consumer-oriented reporting is recommended to help mitigate the risks of PPP contracts, especially in conjunction with new approaches to the organization of PPPs. Consumer-oriented reporting is recommended within different types of contracting arrangements as well as for publicly-managed utilities with variations for different environments and for different size utilities in developing countries.

Specifically, it is recommended that:

- All types of PPP transaction designs should support an owner-operator-customer partnership approach
  - To be adapted to local circumstances
  - Typically creating a Customer Advisory Committee, reporting to the owner, designed to dialog with the operator and help monitor service performance
  - With special ad hoc committees using workshops to debate rate-rebasing and tariff issues and trade-offs between investment, tariffs and service
- Every PPP transaction design should have a communications strategy specifying reporting requirements, major channels of communication and performance indicators
  - Defining the roles and responsibilities of each actor (e.g., Monitoring Unit to package information for different audiences)
- A cost-effective set of indicators (including core indicators) and reporting channels should be selected for the country environment with:
  - More detailed performance by location and possible third party monitoring for highly-politicized environments and
  - More detailed indicators for countries with more income/resources
- These reporting requirements should be specified in the Operator's contract and the mission statement of the Monitoring Unit

The partnership concept with consumer-oriented performance reporting has two different influences on the risks of a proposed PPP. On one hand, the increased complexity of the contractual relationships will increase risks of implementation problems. On the other

hand, the partnership relationship will reduce the risk of a failure of the PPP for political reasons, particularly in a highly-politicized environment. In most cases the reduced risk of failure greatly outweighs the risk of implementation problems due to increased complexity. This argues for the use of a full partnership strategy in most PPPs, and especially in highly-politicized environments.

Based on an analysis of the cost-effectiveness of alternative communication strategies in different situations, the report recommends different strategies for utilities of different size and level of information technologies, with different communication channels and different numbers of performance results to be reported. It also identifies different strategies for different political and economic environments.

The report also recommends a set of performance indicators to support the reporting process. These indicators would be reported in a format that is easily understood by consumers (e.g. color-coded maps and pamphlets). However, it is very important to have good quality data for performance, since poor data can be misleading. Therefore, the decision to provide more data for decision-makers should wait for the availability of good quality data. Data provision in stages is recommended.

Finally, seven steps for implementing an effective consumer-oriented performance reporting strategy are identified:

1. Evaluate the Needs and Readiness of Stakeholders for Consumer-Oriented Performance Reporting
2. Select the Most Appropriate Performance Information
3. Develop a Cost-Effective Communications Strategy, Specifying the Reporting Responsibilities of the Different Stakeholders
4. Define the Responsibilities for Service Performance Reporting
5. Establish Goals Baselines and Targets
6. Create an Action Plan
7. Ensure a Sustainable Performance Reporting Process

Each of these steps is critical to the successful implementation of a consumer-oriented reporting system

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Appendices

We greatly appreciate the help from the following individuals for providing key information, raising issues and making suggestions for improvement of this report: Cledan Mandri-Perrott, Camellia Staykova, Meike VanGinneken, Alain Locussol, Alex McPhail, Piers Cross and Jan Janssens of the World Bank, Charles Chaumin and Jack Moss of Suez-Environnement, Yvon Mellinger of Interagua, a subsidiary of International Water Services and Dr. Aura Matias of Univ. of Philippines, National Engineering Center. We also acknowledge the long hours of editorial and research work by Kate Pratt.

Definition of Terms

Capacity-Building: The improvement of the capabilities of an organization through training, technology transfer and/or equipment.

Consumer: A user of water or sewerage services. This included households, commercial and industrial establishments and institutions such as hospitals and government offices.

Customer: A formal recipient of water distribution or sewerage services. This includes household members, businesses and institutions.

Feedback: Information that is communicated in response to service or performance information.

Monitoring: Reviewing and analyzing performance indicators.

Monitoring Unit: A special organization set up to monitor a utility. This may be part of the regulatory body, an agency of the local government or an independent organization.

Operator: The manager of a utility or the utility itself.

Performance Indicator: A measure of the efficiency and effectiveness of the delivery of services. Performance indicators may also be considered as providing information for "metric" benchmarks – quantitative comparative assessment of performance.[1]

Performance Measure: A metric for performance. This may be a performance indicator or a component of a performance indicator.

Public-Private Partnership (PPP): One of a set of alternative structures for providing utility services that involve both public and private participation in utility management with or without private financing.

Public Reporting: The provision of information to the public through any means of communication.

Public Trust: A new alternative for PPP that sets up a "not for profit" public benefit corporation with the rights to design, construct, operate and maintain a WSS facility, backed by one or more risk guarantees by an International Financial Institution. This trust would contract with an operator/design-builder to design, build, operate and maintain the facility over a period of time. The scope of activity can include both Greenfield, new-build, facilities and/or needed maintenance of existing facilities. The bidding for this contract would be against performance criteria including extent of build-out, maintenance/rehab, operating efficiency, proposed tariff rates, extent of public sector

[1] Taken from Management of Drinking Water Systems, Guidelines for the Assessment of the Service, Draft 4, Secretariat of ISO/TC224 Working Group 3, January 30, 2004

funds needed and other criteria. In essence, these bids are least level of subsidy for maximum coverage bids.[2]

Regulator: The organization responsible to the government for the oversight and monitoring of utility operations.

Utility: A formal sector provider of water, sewerage, electric power or telecommunications services.

[2] More information on this model is provided in the Final Report for Task 1.

Improving Concession Bidding and Design
Task 5: Performance Reporting
By Water and Sanitation Utilities on Consumer-Oriented Issues

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1 Introduction

1.1 Background

In recent years the number of successful public-private partnerships (PPPs) in the water and sanitation sector has dropped off considerably. This is partly due to problems in the design of PPP transactions. Therefore, the World Bank Water and Sanitation Program has undertaken a joint program with a group of water sector operators called the Operators' Round Table, to improve PPP transaction design and help build government/advisory capacity in the tendering process, and subsequent implementation periods.

This report is one of a series of five related reports prepared for the Operators' Round Table and the World Bank under this program. These reports investigate different areas of potential improvement (impact of imperfect data, risk mitigation, bid evaluation procedures, consumer-oriented reporting and key contract clauses) and are designed to explore innovative approaches to PPP transaction design that could encourage greater private sector participation in water and sanitation infrastructure projects.

1.2 Purpose of this Report

The purpose of this final report is to summarize succinctly the information presented in three previous reports for this task: Interim Report #1: Literature Search and Review of Existing Practices, Interim Report #2: Practical Issues in Consumer-Oriented Reporting and the Revised Report on Guidelines for Consumer-Oriented Reporting. This final report presents all the significant information gathered and analyzed under this task including: (i) the results of a literature/web search on public performance reporting in the water sector, (ii) analysis of existing practice in contracting and public reporting through case studies, (iii) analysis of the factors affecting public reporting of performance, and (iv) determination of the most cost-effective practices in performance monitoring and public performance reporting. These are translated into detailed guidelines for utility operators, regulators, monitoring units and transaction advisors for public-private partnerships (PPPs) in designing and implementing the most appropriate means of reporting on service performance information to the public.

This report draws on information from a variety of sources, including available literature, interviews with international utility operators, and analysis of performance reporting by the International Water Association (IWA), the International Standards Organization

(ISO), the International Benchmarking Network (IBNET) and various departments and publications of the World Bank.[3]

This report presents several new concepts, including (i) the desirability of a full partnership between utility operators, customers and Non-Governmental Organizations (NGOs) for improving service, (ii) the alternatives for implementing this partnership in terms of contracting arrangements and (iii) the utilization of a communications strategy for performance measures to facilitate this partnership. A more formalized approach to consumer-oriented reporting helps to mitigate the risks of PPP contracts, especially in conjunction with new approaches to the organization of PPPs. It can be used in different types of contracting arrangements as well as for publicly-managed utilities and it can be applied in different environments and for different size utilities in developing countries.

In summary, this report addresses the issues related to consumer-oriented service performance reporting, summarizes critical information available on each issue, analyzes cost-effectiveness of different approaches in different environments and presents guidelines based on these findings.

1.3 Consumer-Oriented Reporting

Many decisions are made in the water and sanitation sector that are based on inadequate or misleading information. These can be political decisions about raising tariffs or operator decisions about the level of service to be provided or consumer decisions about what type of services or water sources to use. These decisions can have significant effect on the successful operation of a water utility and on the services available to consumers. In fact, they sometimes lead to the failure of a PPP due to misunderstanding of the reasons behind tariff increases and their relationship to the service provided and related investments.

Service to the customers is the real results-oriented measure of the output of a water and wastewater utility. But frequently, the level of service received by different customers is not well documented nor understood by the stakeholders, including utility managers, the monitoring organization (regulator, if any, and local government) and the public.

Utility managers normally monitor the service that the utility provides through monitoring pressure and water quality at certain locations and the utility's response to complaints. However, this is not necessarily the service the utility is providing at the customer's end of the pipe.

Over the last ten years the specification of performance measures to be reported under PPP contracts have been becoming more detailed. In some cases these specifications may be too detailed, by including requirements that are not actually used to monitor performance. At the same time the information released to the public has been limited partly as a result of confidentiality agreements in many cases countries, with a resulting public distrust and even riots in some cases over issues that would not have become so incendiary if the facts were known.

[3] Water and Sewerage Program within the Infrastructure Network, Monitoring and Evaluation, and others.

In order to counteract this distrust and risk of political failure, the role of public reporting is increasing and the role of consumer advocacy organizations has increased. Government advisory committees with customer representation have also become more common. Utility operators, on the other hand, are complaining about excessive reporting requirements that do not really come to grips with the realities of service provision within their financial constraints.

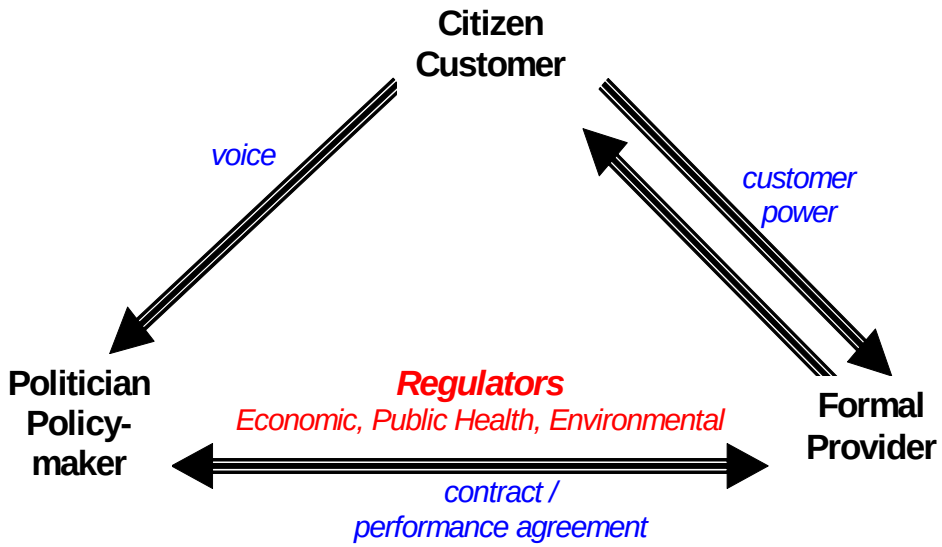
2 Lessons Learned Concerning Customer Participation and Public Reporting of Service Performance Information

This chapter draws on analysis of PPP contracts and outcomes, a review of customer participation methods, case studies of customer participation in both public and PPP settings, and an analysis of public reporting of service performance information.[4]

2.1 Customer Participation in Monitoring and Reporting

The most interesting and pertinent information on public participation and public reporting from an analytic viewpoint comes from Franceys (2004) as presented in a presentation on Customer Involvement in Utility Regulation. In this concept the Citizen Customer has a voice through the political system and some customer power in addition to the usual communications with the utility operator (Formal Provider) as illustrated in the figure below.

Figure 1: Customer Involvement in Utility Monitoring and Regulation



[4] See Cook and Stevens, 2004a, Interim Report #1 for more information on the survey of literature and worldwide web sources on these topics.

There is a range of possible public participation that can be applied to the monitoring and regulation of utilities as shown in the following table in order of effectiveness from the customer's viewpoint.

Table 1: Types of Possible Public Participation

Type of Public Participation	Type of Control of Customer Group	Action of the Community
Empowerment	Citizen Control Delegated Power	Supporting Independent Community Initiatives
Partners	Partnership	Acting Together
Involvement	Placation	Deciding Together
Consulting	Consultation	Consultation
Informing	Informing	Information
Influencing	Education	Information
Manipulating	Manipulation	N/A

Source: Modification of table from Franceys (2004).

Actual experience in the water and wastewater sector (as discussed in the following sections) has provided examples of all types of public participation, except empowerment, which appears to involve too much relinquishing of control by the operator and the government to be workable. However, the strategies in the range from Influencing to Partnership are feasible, with Partnership being the optimum, where it can be achieved.

Franceys cites his experience in the WaterVoice committees in England, which is an example of a strategy between consultation and partnership that serves as a means of monitoring utility performance and for building consensus between the customer and the utility operators. Other evidence in the case studies described below supports the effectiveness of this approach.

In addition, Kingdom and Jaganathan (2001) encourage the use of benchmarking (public reporting of service performance), as both a way to make performance more visible to utility management and "a powerful way of pressuring utilities to provide better services to consumers". Benchmarking "empowers a broad section of civil society to ask questions about why one utility has achieved demonstrably better performance than another" or, if reporting is by location, why a utility provides better performance in one location or service area than in another. If this reporting is included in a partnership context, it could become more of a cooperative exchange of information that would serve all parties (see discussions of case studies below).

2.2 Performance Indicators

The reporting of service performance depends on the indicators of performance that are made available by the operator, monitoring unit, regulator or an independent monitoring body.[5] The indicators of greatest interest to customers and consumers (as well as the operators and monitoring units) should relate to the monitoring goals and judgments that they need to make concerning the services that they are receiving and the change in these services over time. Consumer-oriented NGOs (and many governments) are also interested in services received by the poorest members of the community. Both are interested in whether the service provided is affordable and the best for the tariffs the customers are paying.

The minimum or core set of indicators that corresponds to these needs and is best suited to developing countries according to the best available information[6] is given in the following table. Definitions of these indicators are provided in Appendix A.

Table 2: Core Indicators for Consumer-Oriented Reporting

Customer Goals	Improvement Actions/Decisions by Utility	Monitoring Indicators
Expand Service to All	Increase Number of Connections	**% households with direct connections to water services**
		% households served by standpipes and wells
		% households with direct connections to sewerage services
		% households with septic tank pumping service
	Expand Service Area	**% Population not supplied**
		% Poor population not supplied
Receive Reliable, High Quality of Service	Improve Continuity and Quality of Service	**Service continuity**
		Interruptions
		Water pressure
		Sewerage Overflows
Receive Reliable, High Quality of Service	Improve Customer Service	**Percentage of complaints resolved within standard period**
Receive Good Healthy Water Quality	Maintain Minimum Water Quality Standards	**Total water quality**
Receive Fair and Equitable Pricing	Improve Affordability of Tariffs	**Affordability of water service**
		Pro-poor tariff level
	Improve Affordability of Connections	**Affordability of Connections**
Ensure Good Water Resource Management	Improve Quality of Discharges	**Effluent Treatment**
Be Satisfied with Service	Improve Customer Satisfaction with Service	**Customers Satisfied with Continuity and Pressure**
		Customers Satisfied with Water Quality
		Customers Satisfied with Water Service Response
		Customers Satisfied with Sewer Service Response

Sources: Appendix A, Cook and Stevens, 2004c and Baptie, 2004.

[5] See Appendix A for more details on performance indicators.

[6] See Cook and Stevens, 2004c, for analysis of indicators in developed and developing countries.

These basic service performance indicator categories for water distribution can be summarized as:

- Coverage of households or other potential customer bases
- Quantity of water provided or consumed
- Water quality
- Water pressure and reliability of pressure
- Customer service response times
- Customer satisfaction with different aspects of service, and
- Affordability

Sewerage or wastewater performance indicators can be summarized as:

- Coverage of households and other potential customer bases
- Service quality and reliability (frequency of sewage backups and overflows or frequency of collection of sewage from holding tanks)
- Customer service response times
- Affordability, and
- Level of treatment and quality of outflows of treatment plants to the environment (which is not a customer-oriented indicator, but one of more general consumer interest for water resource management)

Each of the above indicators has a location reference. The location can be system-wide, by service area, by administrative area, or for specific customer types, such as low-income areas.

These indicators should be designed to provide key information for three types of decisions:

- Service decisions
- Political decisions and
- Consumption decisions.

The decision-makers are the operator, the owner/political decision-maker and the customers. (see more discussion in section 7.3 below)

An approach combining data from utilities and customer surveys is the most useful one for performance reporting. It establishes a baseline of performance measurement by local areas that is more detailed and accurate in terms of service delivery “at the end-of-the-pipe” than taking only the traditional utility (or supply side) view. This approach is more meaningful to a range of stakeholders (both customers and operators) in assessing the service provided and the changes in service over time.

2.3 Different Approaches to Public Reporting of Service Performance

Five different approaches to service performance reporting in the water and wastewater sectors were examined in detail, as well as three case studies. The five approaches were the British Approach (England and Wales), the French Approach, the US Approach, the ISO Approach and the approach used in Argentina (Buenos Aires), Ecuador (Guayaquil) and Peru (La Paz).

2.3.1 Analysis of Five General Approaches

The British approach provides a number of indicators specific to developed country concerns, assuming that 24-hour standard service exists. It is regulated by OFWAT with annual publication of performance measures comparing all utilities in England and Wales. It also includes a very active set of customer service committees organized semi-independently under WaterVoice. There are independent audits of the performance measurement and achievement of targets.

The French approach is similar to the British in some ways, but the public monitoring is done by the municipality through a "Rapport du Maire." It also incorporates performance monitoring committees (Comités de Suivi), which may include customer representatives. There are several aspects to this approach, but the most common is called "affermage" and does not involve a regulator.

The US approach is organized around a more general community-based results reporting concept, which varies according to the individual needs of each community. There is a monitoring function that is designed in many cases to create a partnership approach with the citizens of the community in a results-oriented framework. In more traditional arrangements for private utilities a regulator sets the return on assets for the utility and verifies that the tariff rates are affordable and reasonable.

The approach applied in three cities in Latin America (Buenos Aires, Guayaquil and La Paz) draws from the British and French approaches but incorporates performance indicators more pertinent to developing countries (hours of service, pressure, etc.) as well as customer response times and other measures used in developed countries (e.g. amount of water pollutants of different types for water quality testing). Independent audits are also included in this approach, but the public reporting is very limited.

The approach being developed by the ISO committee TC224 is somewhat similar to the US results-oriented performance reporting in that it is closely tied to utility management in a community planning context. It does not, however, develop the concepts of public reporting or partnership with the customers. On the other hand, ISO certification of utility management may be important because it gives a cachet of modern, effective management and also assures bankers of the reliability of this type of management in a way that that reduces risk and can lead to lower financing costs. The ISO accreditation also represents a competitive advantage for bidders on a PPP contract.

Of the five general approaches, the British Approach and the US results-oriented approach are the most conducive to customer-oriented performance reporting, although

the other three approaches could be adapted to that type of reporting. They all lack more formal contracting tools to achieve a full partnership strategy. (See Appendix B for more details on these approaches)

The developing country political and economic context is usually more volatile than in developed countries and this makes both operators and owners hesitant of putting information out to the public. This hesitance can be overcome over time if there is a responsible use of information in the public arena and a desire on the part of the regulator (if any) and the utility managers to communicate. The desire to communicate information on performance depends on the philosophies of operation of the owners, the regulators and the utility (e.g. whether they take a partnership approach or an adversarial approach) and on the political pressures in the environment.

It is clear that public reporting of performance is not yet common in the industry, except for requirements to make annual reports available to the public.[7] The role of Customer Committees and Monitoring Units is also not consistent and vary widely, depending on their organizational home and relationship to local governments. These are more common in developed countries and rare in developing countries, with the exception of national consumer protection committees in some countries.

The multi-lateral donors are pushing for more mechanisms to ensure accountability and transparency and have made some good experiments (e.g. Metro Manila). On the other hand, some of the international utility operators have also taken proactive positions to enhance the public reporting of performance, primarily through websites and public workshops.

2.4 Case Studies of Consumer-Oriented Performance Reporting

Three detailed case studies of PPPs in Buenos Aires, Guayaquil and Metropolitan Manila were carried out as part of this study. These included interviews of the utility operators in all cases and of the operators, the regulator and NGOs in the case of Metro Manila. (See Appendix C for details.)

The case studies of Buenos Aires, Guayaquil and Metro Manila all showed similar contractual requirements for reporting of performance information, but with very limited channels of communication for public information. These channels were focused on Annual Reports of service provision, which were made available by contract only to the regulator and to interested customers who had to make special efforts to see them. Otherwise, in all cases, the operators created their own communications channels that were independent of contractual arrangements. These were proactive steps that moved toward a partnership approach in a partial way, reflecting a less-effective form of public participation.

Buenos Aires is an older concession contract (1993) that demonstrates the characteristics of annual service performance reporting with independent auditing and limited dissemination to the public. The concessionaire widened its public reporting by

[7] See the analysis of PPP contracts in Cook and Stevens, 2004a for more details.

establishing a close working relationship with a customer monitoring committee including NGO participation. This committee is now given access to the same monthly electronic reporting on service as the regulator, which is a major step toward a partnership approach. In addition, the utility operator greatly extended the public reporting specified in its contract to include consumer/government workshops for 5-year planning purposes. This approach entered into the political arena and created a basis for a dialog on expectations for service that were related to both investments and tariffs. This relatively successful extension of public reporting did not appear in other case studies.

Guayaquil illustrates proactive public reporting from the utility operator in a highly politicized environment. This is supported by major expenditures for public information (but not customer participation) incorporated into the PPP contract. It also has independent auditing. However, its relationship with the regulator and NGO groups is still very confrontational.

Metro Manila has the most developed performance reporting system. However, this system was created by the Regulator under a separate program called Public Assessment of Water and Sewerage Service (PAWS)[8] and it is not built into the PPP contract, thus raising issues about cooperation with the operators and sustainable funding.[9]

The Metro Manila case directly links improved service performance with public participation through the Regulator's "Road Show" program. This program uses meetings with local communities together with the utility service area managers to develop and commit to actions for service improvement. The operators in Metro Manila have said that they think a partnership of this kind is a win-win-win situation, since it provides more information for their managers and a constructive forum for discussion of performance.

The Metro Manila case is also a demonstration of the value of independent, extra-contractual monitoring to increase transparency and accountability of the utility and the regulator in a highly-politicized environment. It demonstrates the usefulness of detailed location data and GIS maps for showing performance, as well as consumer surveys sponsored by the regulator (but paid for by the utilities through payments to the regulator that come from tariff revenues). The Metro Manila case also shows the use of website reporting and a Performance Café in the Regulator's office that can provide a map or table on performance by location to any visitor.

All the case studies demonstrated that the incremental cost of better public reporting was marginal in terms of the tariff rates for medium and large utilities and/or regulatory agencies. For small utilities, the cost can be more significant, but there are low-cost actions they can take to improve the quality of public reporting within their budgets.

[8] It was originally called a Public Performance Audit and then a Public Performance Assessment (PPA) to be less confrontational and more of a partnership approach.

[9] Note that the funding issue is not a question of amount of funding, since the amount required is less than 1% of the tariff revenues.

The types of communication channels for public reporting used in the case studies are shown in the following table.

Table 3: Communications Channels for Service Performance Information Used by Operators for Public Reporting in Case Studies

	Case Study		
Communication Channel	**Buenos Aires**	**Guayaquil**	**Metro Manila**
Press Releases	Proactive	Contractual	Proactive
Radio/television Talk Shows	Proactive	Proactive	Proactive
School Visits and Open Houses	Proactive	Contractual[10]	Proactive
Website Reporting on Performance	Proactive	Proactive	Proactive[11]
Annual, Quarterly and Monthly Service Performance Reports	Contractual but limited	Contractual but limited	Contractual but limited
Citizen Surveys	Proactive	Proactive	Proactive and Non-Contractual
Inserts in Monthly Invoices	Proactive	N/A	N/A
Customer Committees	Non-Contractual	N/A	N/A
NGO Forums	Proactive	N/A	Non-Contractual
"Road Shows"	N/A	N/A	Non-Contractual
Kiosks/Info Centers	N/A	N/A	Non-Contractual
Periodic Workshops on Service Planning	Proactive	N/A	N/A

Six types of participation were utilized by the utility and/or the regulator in all the case study examples (e.g. press releases, radio talk shows, school visits, citizen surveys, websites and annual reports). These channels have different levels of effectiveness in terms of number of people reached, effectiveness in reporting performance and effectiveness in getting feedback from customers. The optimum set of channels is discussed in section 2.7 below.

It is important to note that reliable information systems are not usually available for privatized utilities at the time of transfer between public and private operators. This must be taken into account in the design of performance reporting in PPP contracts. There should be time allowed in the contract (typically 2-3 years) to develop a good information system, which can then give reliable performance measures.

[10] Contractual in the sense that a general information program is requires and funded under the contract.
[11] In the case of Metro Manila, the Regulator also has a website that is being developed with more information than provided by the operators on service performance.

2.5 The Roles of NGOs in Performance Monitoring

Although they are secondary actors in the context of PPP transactions, NGOs, and Consumer Organizations (COs) in particular, are playing an increasing role in water sector monitoring in many developing countries. However, there is a large variation in the approaches that are taken by COs in different countries, some are confrontational and do not contribute to a constructive dialog for improving performance or getting more value for consumers. Other approaches can be very constructive and effective. (See Appendix D)

The most effective role for COs appears to be in monitoring of tariffs charged and services provided by operators as a representative of consumers and customers. The appointment of NGOs to oversight committees is a positive step taken by some governments that supports this role. However, the most constructive approach to improving service varies from country to country, depending on the attitude and policies of the government toward consumer protection and utility monitoring. In many cases the participation of COs on monitoring committees or regulatory boards was a very effective mechanism (e.g., Argentina, Colombia, Philippines, Zambia, Senegal).

2.6 The Roles of Monitoring Units

In some countries and contract situations (e.g., Budapest, Gabon, Senegal, Sofia, Tallinn and Tangiers), monitoring units have been set up. These can be set up within a municipality, as part of a regulatory agency, or as an independent body. The level of consumer-oriented reporting varies depending on the type of monitoring unit that has been created.

Under the Buenos Aires, Guayaquil and La Paz approach[12] the government monitoring unit requires that annual service performance reports be provided and audited by an independent auditor, including verification that the methods and data are satisfactory for the determination of performance. These reports are made public to a limited extent in the offices of the utility, although any customer may request a copy. This is a start for a public reporting requirement, but is still not sufficient.

In Metro Manila the Regulator (MWSS) established an independent monitoring operation with public reporting called Public Assessment of Water and Sanitation (PAWS)[13] with the University of the Philippines involved to ensure credibility. This monitoring is independent of the two concession contracts, whose reporting to the MWSS is confidential. The MWSS has its own program of public reporting, including "Road Shows" or public meetings with local citizens and government leaders and utility managers, a website and a Performance Café, where individuals or NGO representatives can come and get information on performance for any area. This type of multi-faceted public reporting may be the wave of the future.

[12] See Interim Report No. 1 for more details.

[13] Originally called Public Performance Assessment or PPA. It was set up by a consulting firm with the assistance of the University of the Philippines. See Cook, Stevens and Matias, 2004.

There are also other effective measures of reporting which are useful for comparison of services received by different utilities. A good example of this is the “Report Card” format used in India.

Monitoring units that are part of the regulatory agency tend to keep their data confidential and not available for public reporting. This will vary with the situation, but secrecy is not conducive to consumer confidence. It would appear that at least the publication of the service aspects of concession contracts and annual reports on service achievements relative to appropriate targets is essential for public confidence. This kind of reporting is more likely if the monitoring unit is located outside of the regulatory agency, e.g. in a local government office that is more concerned with public information, but it can be specified as a special responsibility for the agency or the monitoring unit.

The existence of a monitoring unit does not constitute adequate public reporting from the point of view of service improvement. To be most effective they must be required to report performance to the public using multiple methods and be complemented by programs that involve the customers with active feedback in order to generate momentum for potential service improvements. Then they can also be effective for increased accountability and transparency and a broader partnership can be formed between the public, the regulator and the utility operator for increased service.

It should also be noted that Monitoring Units are never, and never can be totally independent. They should, therefore, be looked on as a useful adjunct to, but not a substitute for, the owner and operator carrying out their monitoring duties.

2.7 Lessons Learned about Public Reporting of Performance

The lessons learned from the analyses of all the above information are summarized in terms of the purpose of consumer-oriented reporting, the drivers for and barriers to consumer-oriented reporting and current knowledge of its results.

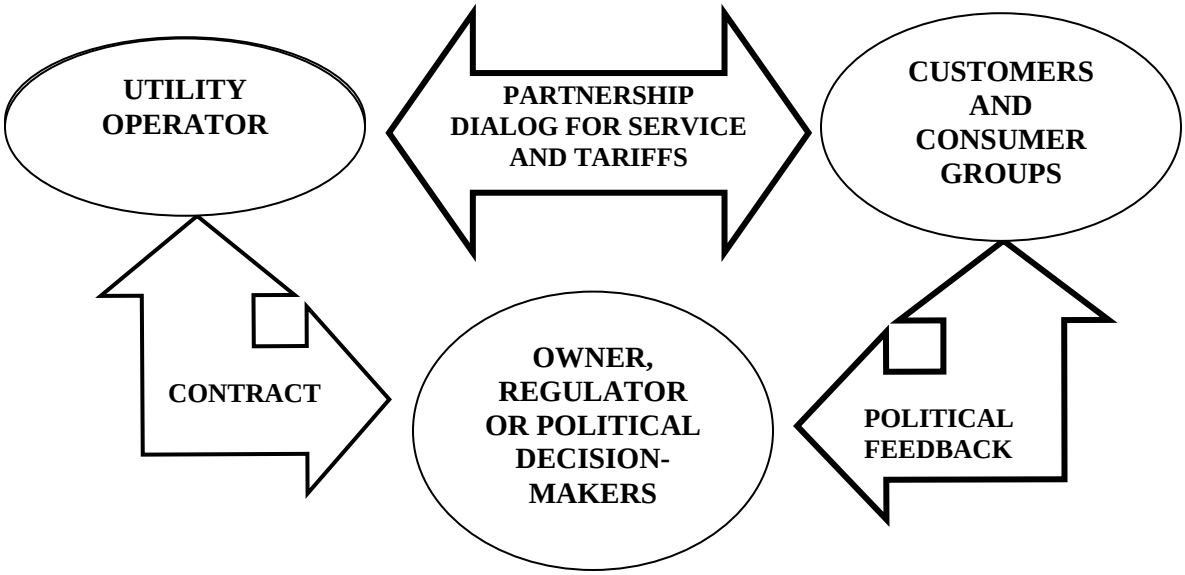
2.7.1 Effective Consumer-Oriented Reporting

To be effective consumer-oriented reporting must accomplish two things: a) make consumers aware of the level of service that they are receiving for their money and b) improve the level of service that is provided to them by utility companies, whether they are publicly or privately operated. It can also provide the public with information on potential trade-offs between service, tariffs and investments, when the situation is open to that type of discussion (usually at key tariff resetting times or at 5-year planning periods).

To effectively monitor service performance WSS operators, monitoring units and owners need a set of service performance indicators. These performance indicators, if made public in a form that is sufficiently detailed by location and in a form that can be readily understood by the public (e.g., color-coded maps of good and bad service), can facilitate more and better public or customer participation in the evaluation of service provision. Such customer feedback promotes greater openness and accountability in the decision-making processes, which can also improve service delivery.

This information empowers customers and civil society to take action to identify service performance issues and recommend ways to improve service. In a PPP, these customers have three avenues to take action: (i) go directly to the utility, (ii) lodge a complaint with the regulator, or (iii) go to their political representative to voice their concerns. In a partnership environment with consumer-oriented reporting, the operator will be open to direct discussion that could result in service improvements. Also the customers as informed stakeholders or advisory committee members can communicate with the owner or the political powers to support the necessary decisions for service and tariff changes. This is illustrated in Figure 2 below.

Figure 2: Public Information Feedback



Many stakeholders are also interested in more transparency and accountability regarding their utility services. This is a measure of good governance that is pursued by many civic organizations (e.g. consumer advocacy groups) and is politically desirable in many countries throughout the developing world. However, there are different perspectives on transparency and accountability for different stakeholders.

Utility managers are interested in accountability to meet their own management objectives. They may have incentives to be more efficient and to keep costs down, especially if they are private sector managers with appropriate contracts. They also want to keep their customers and the regulator satisfied. Also case studies show that more public reporting of performance will reduce the level of suspicion that is engendered by confidential reporting, especially in highly politicized environments. [14]

[14] See Interim Report No. 1 for Task 5.

2.7.2 Drivers for Improved Public Reporting of Performance

In summary, the different stakeholders have different reasons for supporting improved public reporting of performance:

- Utility operators (if they are proactive) want to reduce potential opposition to their programs for service provision, tariff setting and plans for service improvement by creating a consensus with customers, owners and local governments or regulators;
- Local governments, utility owners and their monitoring units want to provide information to consumers and interest groups to satisfy their need to know the level of service being provided to different customers and to customers in different locations;
- Consumer-oriented NGOs and interest groups (and sometimes local or national governments and pro-active utility operators) want increased transparency and accountability on the part of the operator and the regulator in order to reduce actual or perceived mis-management of the water and wastewater sector;
- Regulators (where they exist) want to demonstrate that they are operating in a transparent manner and are proactive in serving the interests of the consumers;

2.7.3 Barriers to the Public Reporting of Performance

The main barriers to the successful implementation of the public reporting of performance are:

- Secrecy of agreements in some cases, particularly in older contracts, which prevent information on performance reporting and performance target achievements from being made public;
- Lack of specification of the requirements for information and processes related to public reporting in public-private partnership contracts;
- Lack of definition of the role of monitoring units in the process of public reporting;
- Lack of government interest in accountability and transparency in some countries (although this can be compensated by the interests of the NGO community and the multi-lateral donors);
- Resistance/lack of incentive for some operators to be transparent, since not all operators feel that provision of information is in their best interest;
- Lack of a partnership approach in most cases to the relationship between operators, customers and owners or regulators.

2.7.4 Current Knowledge of Results of Consumer-Oriented Reporting and Partnership Approaches

In general, consumer-oriented reporting has been an afterthought in the water and wastewater sector in developing countries and therefore implemented only in some cases and in an ad hoc manner. Similarly, a partnership approach has also been relatively rare and only partially implemented where it has been used (e.g., Buenos Aires and Manila for PPPs and Chennai for a publicly-managed utility).

Consumer-oriented Reporting

Based on the information gathered in the case studies described above, the effectiveness of the various channels for consumer-oriented reporting varies along three dimensions: are discussed in Appendix E, based on current research information. These indicate that a strategy that combines the following components is most effective:

- Press releases or radio talk shows for the broader audience
- Annual reports on performance, distributed by both paper and internet
- Customer surveys that both provide performance information and ask for comments on the level of service and the level of satisfaction with service
- Regular feedback sessions with partner NGOs and/or Customer Committees
- "Road Shows" discussing current performance issues, problems, achievements, and planned actions by the utility, with local community groups

The cost of consumer-oriented reporting is marginal for large and medium-sized utilities, even with detailed location reporting of performance.

Partnership Approach

There are different approaches to public reporting in different countries, but the most successful of these use the concept of partnership between the key stakeholders (operator, regulator/monitoring unit and customers). The desirability of a partner-style communication approach has been identified by both operators and other stakeholders, especially in highly-politicized environments (e.g., Buenos Aires, Manila and Guayaquil). In all three cases, the greater the partnership, the more the participants feel that they are in a win-win situation. The lesser the partnership, the more confrontational the situation becomes and more time is spent arguing over tariffs and perceived mismanagement rather than in improving service.

In this context, NGO participation and international donor interest in public feedback to improve performance and accountability has also been increasing, but the traditional contracting arrangements do not take advantage of this potential. New contracting features are needed to handle this participatory approach and to complement the new models for PPP implementation.

Based on the information gathered in the case studies described above, the following conclusions can be drawn about the partnership approach to operator-customer relations, or steps toward that approach:

- Public reporting and a partnership approach is critical in a highly politicized environment for reducing the level of confrontation, conflict resolution and reaching consensus among stakeholders
- The public, regulators and operators can be involved in a joint monitoring and feedback process to improve performance and resolve conflicts (win-win-win partnership)
- The use of Consumer Organizations is growing in partnership with government and regulatory agencies for monitoring of service performance
- Future contracts between governments and utility operators should require more explicit actions to report performance data to the public and to solicit and respond to public feedback in order to improve service as part of a partnership approach

3 Cost-Effectiveness and Public Reporting of Service Performance

Cost-effectiveness analysis involves setting up a target for effectiveness and then quantifying it and the costs for achieving different levels of effectiveness. Comparing the results of the numerical measures for effectiveness and costs produces cost-effectiveness ratios that can be used for the selection of indicator sets for different circumstances. This is applied to the public reporting of service performance below.

3.1 Cost-Effectiveness of Performance Reporting for Different Situations

3.1.1 Utility Size and Technical Sophistication

Both the cost analysis and the cost-effectiveness results are related to utility size and technical sophistication. For this analysis utility size is divided into three categories: small, medium and large. This relates to population served, where small is less than 300,000, medium is 300,000 to 1 million and large is a million or more. The small size includes towns and small cities.[15]

The analysis is based on three levels of information system: low, medium and high. A low-level information system means mostly manual data processing with basic computer skills. A medium-level information system means some digital databases are available for the utility/regulator and there are staff available with computer systems administration and programming skills. A high-level information system means that most managers and technicians are equipped with computers and there is an information system support group with digital data for the water supply system, including GIS data. Most large utilities and regulator agencies either have a high-level information system or are in the process of developing one.[16]

3.1.2 Performance Reporting Requirements and Effectiveness for Different Situations

The effectiveness of the public reporting of service performance can be divided into three categories:

- Effectiveness of the performance measurement for decision-making
- Effectiveness of the institutional arrangement for communication of service performance information
- Effectiveness of the process for public participation, transparency and accountability

Each of these aspects is discussed below.

[15] The concept of small city varies from country to country. In China 1 million would be a small city, In small countries this category could be less than 100,000 population.

[16] Care should be taken when using mapping techniques that sample size and localization techniques are statistically reliable and meaningful. If interpreted wrongly they can distort real differences between locations that can lead to erroneous management decisions.

3.1.3 Effectiveness of Performance Measurement for Decision-Making

The most appropriate set of core indicators for performance measurement based on usefulness for decision-making is the set given Table 2 above. These are used in the following analysis, with different options for the level of detail of reporting depending on the size of the utility and level of technical sophistication.

3.1.4 Effectiveness of the Communications Strategy

Effectiveness of the communication strategy is defined as the provision of data to the largest number of interested stakeholders through various channels with the best prospects of getting feedback to improve service. The effectiveness of the various channels is discussed in Appendix E, based on current research information. These indicate that a strategy that combines the following components is most effective:

- Press releases or radio talk shows for the broader audience
- Annual reports on performance, distributed by both paper and internet
- Customer surveys that both provide performance information and ask for comments on the level of service and the level of satisfaction with service
- Regular feedback sessions with partner NGOs and/or Customer Committees
- "Road Shows" discussing current performance issues, problems, achievements, and planned actions by the utility, with local community groups

This strategy is essentially a partnership strategy that combines elements that reach a broad audience with those that have the ability to communicate the performance information, the ability to get feedback from customers and those with the greatest potential for improving service.

A partnership strategy with open and continuous communication is the most desirable outcome[17]. This is not easy to implement and takes significant operator staff time. Nevertheless, this may be the most effective strategy from both the operator and consumer viewpoints for successful utility operations in most situations. Therefore, this package of communication channels is adapted as the basis for the cost-effectiveness analysis.

3.1.5 Index of Effectiveness

The presence of the core indicators and basic communication strategy is the starting point for effectiveness, but there are two factors to consider: a) whether or not survey data is gathered and b) how many locations are needed for effectiveness measurement. There is usually a difference of opinion between stakeholders on these points, since utility managers normally do not need more detail than for each service area, from a management point of view.

It is also important to have good quality information. More information points with low quality will not improve decision-making, or can even be misleading.

[17] The most complete case of this approach identified at present is for Chennai in India, where the utility is publicly-owned and is making a concerted effort to achieve this strategy with open communications and information sharing.

Nevertheless, when political considerations come into play, it is important to know the political distribution of service performance. This is even more important for the regulator and certainly for the public. The more detailed the location information is for the service performance indicators, the more effective they are in terms of the customers' knowledge of the service they receive.

Three levels of location detail are used here: a) general, utility-wide information, b) service-area information and c) local community information. An effectiveness index was created for to represent the amount of information available to assess service performance. The index was calculated assuming that additional data points have declining decision value.[18]

Table 4 summarizes the Effectiveness Index by utility size and number of results to be reported.

Table 4: Effectiveness Index[19] for Different Size Utilities

	Package of Communication Channels			
	Press, Annual Reports, Customer/NGO Committee(s)	Press, Annual Reports, Customer/NGO Committees(s), Road Show(s)	Press, Website Annual Reports, Customer/NGO Committee(s), Road Show(s)	Press, Website Annual Reports, Customer/NGO Committee(s), Road Show(s)
	Indicator Data[20]			
Utility Size	System-wide Indicators without surveys (est. 10-20 results reported)[21]	System-wide Indicators with surveys (est. 15-30 results reported)[22]	Service Area Indicators with surveys (est. 45-700 results reported)[23]	GIS-level Indicators with surveys (est. 150-1600 results reported)[24]
Small Utility	100	150	280	741
Medium Utility	100	150	928	1,791
Large Utility	100	150	2,398	4,117

[18] The decision value for the initial fourteen core indicators was taken as 10, the next 100 indicators as 5, the next 1,000 data points as 3 and any additional location indicator points as 1. Other values could be used, but small changes do not have a significant effect on the outcome.

[19] Calculated with initial core data=10, next 100 data points = 5, next 1000 data points =3 and other data points =1)

[20] The number of indicators that are generated is based on an assumption that a small utility would have 3 service areas, a medium-sized utility will have 15 service areas and a large one 50 service areas on average.

[21] Assuming that public reporting is limited to the utility offices and a simple website. The maps for this level of reporting are assumed to be much simpler, one-page maps, with manual location of performance information.

[22] Assuming that surveys are designed and carried out by a local university or survey company, using a prototype from another project. Public reporting is assumed to be customized to municipality needs as in the Buenos Aires case study.

[23] Assuming that performance data is reported by utility service area and then aggregated for the system as a whole.

[24] Assuming that performance data is reported by administrative district and then aggregated to the service area and to the system as a whole.

3.1.6 Analysis of costs

As noted above, the costs of the public reporting of service performance must also be estimated in the context of utility size and available information technology. Smaller utilities with less technology and lower revenues and operating budgets must have more modest goals for public reporting of performance. For medium and large utilities the costs become marginal compared with other operating costs and a more detailed reporting system can be implemented. Cost estimates for different size utilities with different levels of information technologies are given in Appendix F.

The costs of performance reporting in Appendix F were derived from costs reported in Cook and Stevens (2004c) and modified with the additional information taken from the case studies described in Chapter 2. The BNPWSS information was modified to reflect only the consumer-oriented performance reporting which is a subset of all the performance reporting required for utility monitoring.[25] These cost estimates are assumed to apply to all countries, although the actual costs may vary significantly from country to country and should be used when making a specific recommendation for a given country.

The current level of technical sophistication of the information system in an organization is important, because the indicators could be a small increment of effort and cost where basic data are already in the information system, or it could be very expensive if the system would have to be up-graded to support the required information.

This is particularly true for location information in more detail than service areas (e.g., local government units), which requires a GIS infrastructure to support. Simple mapping by service area does not require a GIS, to designate service area performance, but merely a graphic software program that is readily available and a base map image, along with some training. On the other hand, information on service to low-income areas is most effectively provided by GIS data that can readily identify these areas and overlay the service information on a map. These situations are identified and treated differently in the cost analysis below.

Another consideration is whether the information must be collected in survey form or not. If not, the data collection is mostly from internal utility sources and is somewhat less expensive, although there is still substantial data processing to do for more detailed location information. Also much of the data on performance is normally required at some level of detail in most concession or management contracts, so that the additional cost of data processing is relatively small, as indicated Appendix F.

[25] See Appendix A for a listing of all types of performance reporting for PPP contracts.

3.1.7 Most Cost-Effective Strategies

The results of the cost-effectiveness analysis are shown in Table 4 below.

Table 4: Suggested Performance Reporting Strategy by Size of Utility[26]

	Package of Communication Channels			
	Press, Annual Reports, Customer/NGO Committee(s)	Press, Annual Reports, Customer/NGO Committees(s), Road Show(s)	Press, Website Annual Reports, Customer/NGO Committee(s), Road Show(s)	Press, Website Annual Reports, Customer/NGO Committee(s), Road Show(s)
	Indicator Data			
Situation	System-wide Indicators without surveys (est. 10-20 results reported)	System-wide Indicators with surveys (est. 15-30 results reported)	Service-level Indicators with surveys (est. 45-700 results reported)	GIS-level Indicators with surveys (est. 150-1600 results reported)
Small Utility with low-level Information System	X			
Small Utility with medium-level Information System		X		
Medium-sized Utility with low-level Information System			X	
Medium-sized Utility with medium-level Information System				X
Medium-sized Utility with high-level Information System				X
Large-sized Utility with medium-level Information System				X
Large-sized Utility with high-level Information System				X

[26] See Appendix C for detailed assumptions.

The results show that small utilities are better off with only the core indicators and basic communication channels for consumer-oriented reporting without consumer satisfaction surveys, for low-level information systems and with consumer satisfaction surveys for medium-level information systems (since the additional data processing is not onerous).

The medium-sized utilities should use core indicators with consumer satisfaction surveys in all cases. However, with low-level information systems they should focus on reporting at the service area level. For medium and high-level information systems, they should move to a system with more detailed GIS data for location.

Large utilities and regulatory agencies should always use the more detailed indicator set with GIS location data, as long as they have at least a medium-level information system. This detailed location data is particularly important where the public information system is important for accountability.

This cost-effectiveness analysis can be carried out for individual cases, when the cost and decision value of data has been estimated. The results may vary, but they are not sensitive to small changes in costs or number of performance results required.

3.1.8 Country Conditions

Another significant contextual factor is the country situation. The main choice for this factor is whether or not to have the performance results kept by an independent organization.

If the country has a government with limited transparency and a very politicized environment, it will need the maximum of credible input on customer-oriented indicators, with an independent observer as the guardian of the data (as in Metro Manila, with the University of the Philippines as the trusted independent source). Also in these environments service to low-income areas is frequently a major issue and more detailed reporting on this aspect of service may be required.

If the country has a government with well-developed public accountability and a relatively unpoliticized environment, then it may need some customer-oriented indicators, but would not have to have them kept by an independent group, unless that is the least-cost solution.

3.2 Analysis of Cost-effectiveness and Usefulness of the Indicators in Different Situations

3.2.1 Methods for Reporting of Service Performance

There are many methods for public reporting of service performance, but these must be selected to match the needs and capabilities of the utility and the regulatory agency. A recommended set of methods is included in Table 7 for different size utilities with different technical capabilities. The methods of reporting should also be adapted to each type of decision and the audience for that decision (e.g. reports in some cases, easy-to-read maps or pamphlets in others).

For smaller utilities with limited budgets, simpler reporting of system-wide data should be sufficient. This should be supplement by the formation of a customer committee to get some feedback on service provision and to provide a formal institutional setting. This committee should have a formal set of responsibilities for handling complaints and recommending changes in service or service targets. Small utilities with medium-level information systems should also be able to provide simple maps of service performance and coverage.

3.2.2 Time Frame of Developing Reporting Systems

The time frame for reporting of quality information should include a startup period of about 1 and ½ years for the basic management information to be developed by a newly privatized utility. In most cases this process starts from a very under-funded and obsolete information system, run by individuals without the necessary training. This is particularly true and may take a few months longer in the case of a GIS-oriented system where base maps must be created to the required level of accuracy or purchased, in some cases from commercial or government sources.

4 Development of Guidelines for Consumer-Oriented Reporting

The partnership concept between utilities and their customers for performance monitoring has been shown to lead to greater accountability and transparency in the water and sewerage sectors about services received and changes in service delivery over time (e.g. Metro Manila Performance Assessment for Water and Sewerage – PAWS, and Buenos Aires five-year utility service planning). Both of these programs benefited from consumer-oriented reporting[27]. This approach is particularly effective in the case of PPPs, but it also applies to publicly-managed utilities (e.g. Chennai).

To make this approach more effective, the current design of PPPs and the responsibilities of publicly-managed water and wastewater utilities need to be updated to accomplish this job as effectively as possible. This is made more complicated by the lack of definition of specific responsibilities for public reporting of the more-or-less independent monitoring agencies that are being created, creating a challenge for those involved in the design and implementation of effective PPPs and publicly-managed utilities.

Also there are new concepts of PPPs without the traditional regulatory agency, which will have to rely on more direct interactions between the utility operators and their customers in order to ensure that the highest quality and best value of service is provided. A continuous dialog is needed between utility operator, customers and interested NGOs. This type of performance monitoring emphasizes the role of active customer participation and the importance of broader public support that could be provided through consumer-oriented performance reporting. NGOs can also play a greater partnership role in these new types of PPPs, if their roles are designed into the monitoring system.

Consumers and NGO consumer-advocacy groups and regulators (where applicable) are looking to get the best service for the tariffs that are paid by consumers. On the other hand, the utility operators are aiming to achieve the best performance for the minimum amount of money spent. This situation can benefit from a dialog where performance deficiencies are identified and discussed, and where the utility operator can respond with the most cost-effective actions to correct them. A partnership can facilitate consensus-building and provide a basis for conflict resolution. The partnership dialog will contribute to mutual understanding of the relative importance of different aspects of service to consumers and the costs to operators of alternative actions to improve service. This can lead to consensus action programs that will improve service while allowing the operator to keep tariffs as low as possible for different groups and locations.

To respond to these challenges, consumer-oriented service performance reporting needs to be designed into the structure and process of utility monitoring and reporting. This applies to both PPP contracts and to publicly-managed utilities. A good consumer-oriented reporting system will keep all the major stakeholders and consumer groups informed. It should also be easy to understand, but still act as a yardstick that conveys the important details of service as it reaches the customers. With this yardstick the customers

[27] See Interim Report No. 1 for Task 5.

can judge the service that they are receiving and compare it to past levels of service, to service received by customers in other locations or to service provided by other utilities. They can also judge whether they are getting the best value in terms of service for the money they are spending.

5 Development of a Partnership Between Utility Operator and Customer

The creation of a partnership between an operator and its customers in a developing country is complex and varies with different environments and for different contractual arrangements. There are two dimensions of the environment that are important: the level of resources available (e.g. low-income countries and medium-income countries) and the level of politicization. The size of the utility and the population that it serves are also important for the type of strategy to be adopted.

The risk of impediments to the success of a PPP increases with the complexity of the contractual arrangements. Therefore, the contracting process should be kept as simple as possible. However, the risk of failure due to misunderstandings and associated conflicts between the utility and its customers and/or their representatives is also significant (e.g., Guayaquil or Colombia) and the contract design needs to maximize the potential for consensus-building in order to avoid a failure outcome.

The more politicized the environment, the higher the risk that political factors will enter and lead to failure. Therefore, the more a full partnership approach (with effective service performance reporting) is needed to mitigate the risk, since information and communication in the appropriate context counters distrust and political interference in the process of service provision. The adaptation of the partnership approach to different environments is discussed in Chapter 4 below.

To create a full partnership between the utility operator, the customers and interested NGOs, with the involvement of the monitoring unit, all the relationships need to be defined contractually for PPPs, and in some form of Citizens' Charter for publicly-managed utilities (as in Chennai). The entities involved are:

- The utility owner (local state or national government or shareholders)
- The utility operator;
- The monitoring unit (either a unit within the regulators office if that exists, a unit set up within the owner's organization if that exists, a unit set up as part of a local government body, or a separate independent unit reporting to one of these organizations which has the responsibility to receive and disseminate service performance information);
- A Customer Committee or a Citizen's Advisory Committee with a contract or a charter reporting to one of these organizations.

The types of responsibilities for each of these entities under different contracting arrangements for PPPs are summarized in the following table.

Table 5: Recommended Distribution of Responsibilities by Contract Type

	Responsibilities			
Responsible Entity	**Management Contract**	**Affermage Contract (with Monitoring Unit)**	**Concession Contract (with Regulator)**	**PWC Model (with Monitoring Unit)**
Owner	-Negotiate and sign contracts with operator, monitoring unit and Committee -Review and disseminate performance information -Enforce performance	- Same as for Management Contract	-Negotiate and sign contracts with operator and Committee -Help define role and responsibilities of regulator -Review and disseminate performance information	-Negotiate and sign contracts with operator and Committee -Define charter with monitoring unit -Review and disseminate performance information -Enforce performance
Operator	-Negotiate and sign contract with owner. -Collect and process specific service performance information into a form suitable for dissemination	-Same as for Management Contract	- Same as for Management Contract	- Same as for Management Contract
Monitoring Unit or Regulator	Not Applicable	-Work with owner to create a publicly-available charter with responsibilities -Review and disseminate performance information	-Define roles and responsibilities of regulator - Review and disseminate performance information -Enforce performance	-Same as for Affermage Contract

Table 5: Recommended Distribution of Responsibilities by Contract Type (cont.)

	Responsibilities			
Responsible Entity	**Management Contract**	**Affermage Contract (with Monitoring Unit)**	**Concession Contract (with Regulator)**	**PWC Model (with Monitoring Unit)**
Customer Committee or Citizen Advisory Committees	-Contract with owner and create a publicly-available charter with responsibilities - Review performance information and discuss in detail with operator. -Also recommend actions for service improvement	-Same as for Management Contract	-Same as for Management Contract	-Same as for Management Contract

5.1 The PWC Model

The PWC model for a PPP transaction developed in a parallel report (Price, Waterhouse-Coopers, 2004) embodies the concept of the owner creating a public trust, without a regulatory agency. This creates a special need for performance monitoring to supplement the means available to the owner. This need can be met by creating a full partnership among the owner, the operator and the customers, with the help of NGOs. It also requires the functions of a monitoring unit (receiving and disseminating performance information) to be assigned to an arm of the owner, or, alternatively, to a separate monitoring unit set up by the local government.

There are four arguments for creating these monitoring functions within the trust. First, the trust/owner will have a contractual relationship with the operator and this could include reference to the monitoring unit. Second, there will be an on-going dialog between the public trust/owner and the operator so that information can easily pass through to the monitoring unit. Third, there is a commitment on the part of the public trust to ensure that the operator is efficient and effective and the role of the monitoring unit would support this commitment. Fourth, it is likely to be the least-cost solution compared to setting up an independent unit.

The entities involved in creating a partnership with a public trust are:

- The public trust (owner);
- The utility operator;
- The monitoring unit within the public trust;
- A Customer Committee or a Citizen's Advisory Committee reporting to public trust/owner through a contract or a charter.

The responsibilities of the four entities are described in the following table. The main concept is that the public trust serves as a framework for the partnership with contracting responsibility, since it has the interests of the customers as the basis for its mandate and has a legal relationship with the operator. The trust/owner would put in the contract with the operator the responsibility for the data collection and processing and for conducting meetings with the committee. The trust/owner would create the monitoring unit and make it responsible for information products to all concerned audiences and for public dissemination (although the operator could take initiative for dissemination in its own interests as well). The trust/owner would also contract with (and fund) the Customer Committee or Citizen's Advisory Committee members to attend meetings and provide feedback.

The only issue that is unresolved in this arrangement is that the Customer Committee or Citizen's Advisory Committee would not have authority to enforce its recommendations. This responsibility would fall to the board of the public trust, in case the committee could not come to an agreement with the operator.

Table 6: Recommended Distribution of Responsibilities with the PWC Model

Responsible Entity	Contracting	Data Collection	Data Processing	Dissemination	Feedback
Public Trust (Owner)	-Negotiate and sign contract with operator and Committee specifying responsibilities. -Define Charter with Monitoring Unit				
Operator	Negotiate and sign contract with Public Trust/Owner specifying responsibilities	Collect specific service performance information, from both operators information systems and customer surveys	Process the performance information into a form suitable for dissemination (summary information by location, reports, tables and maps)	Provide the information to the monitoring unit	

Table 6: Recommended Distribution of Responsibilities with a Public Trust (cont.)

Responsible Entity	Contracting	Data Collection	Data Processing	Dissemination	Feedback
Monitoring Unit	-Work with Public Trust/Owner to create a publicly-available charter stating mission, goals and responsibilities		Create different products for different target groups (general customers, customers in specific locations, customers with special service needs-e.g., hospitals, NGOs with interest in service to poor areas, etc.)	Provision of information in accessible forms (performance website, kiosks, special reports for interest groups, presentations for meetings of Customer Committees or Citizen Advisory Committees)	
Customer Committee or Citizen Advisory Committees	Contract with the Public Trust/Owner and create a publicly-available charter stating mission, goals and responsibilities				Review performance information at regular meetings and discuss in detail with operator. Also recommend actions for service improvement

More details on how to implement this full partnership strategy with consumer-oriented performance reporting are given below.

5.2 Contract and Non-Contract Agreements

Both contract and non-contract agreements are necessary for implementing a full partnership between owners, operators and consumers, as listed in Tables 5 and 6. Where a contract is not the right instrument (e.g., for monitoring units or regulatory agencies), a publicly-available charter stating mission, goals and responsibilities is the recommended approach.

The use of standardized clauses for contract and non-contract responsibilities for consumer-oriented reporting is needed for each of the different contracting arrangements in Tables 5 and 6. It is clear that the distribution of responsibilities and a few other aspects of performance reporting should be left as flexible as possible for the best adaptation to the local situation. However, in most cases the specific recommendations given below will be applicable. Standard specifications for the reporting process for

different circumstances (e.g., concession with regulator, public trust, or public management) can and should be developed and adapted to local circumstances.

6 Communications Strategy

To be effective, consumer-oriented reporting should be viewed as a communications strategy that supports the ideal of a partnership between the operator, the regulator and the public, including NGOs. A good communications strategy answers the following questions:

- Who should be receiving the communications?
- Why should they be getting service performance information?
- What should be reported?
- How should it be reported?
- When should it be reported?
- What organizations should be responsible?

In addition, both the operator and owner should consider the likely results of reporting different kinds of information and have a strategy for dealing with failures (either in results or in reporting) and the causes of failures.

Each of the six primary questions concerning an effective communications strategy for water and sewer utilities is addressed below.

6.1 Who Should Be Receiving Service Performance Information?

Service performance monitoring should serve the purposes of all the stakeholders, including utility owners, operators, regulators, financiers, suppliers, customers and consumer NGOs. However, it is primarily civil society and the customer base of the utility that will benefit from the consumer-oriented aspects of performance reporting.

In a partnership situation, the desired outcome is information sharing among all stakeholders aimed at improved services. Therefore, other interested parties should also be allowed to access the information, including the media and interested government agencies. Proactive utility operators favor an open forum with more information available to consumers on the services they are receiving.[28] This creates a basis for more informed discussion of services received and the value of these services.

6.2 Why Should They Be Receiving this Information?

The customers and NGOs who are the target recipients of this information, need it for:

- Determining what kind of service they are receiving compared with other customers or other locations served by the utility;

[28] See case studies for Buenos Aires and Guayaquil in Appendix C. This also was reported in interviews with international utility operators.

- Investigating the service received by special groups (e.g., low-income groups), and
- Assessing whether or not they are getting the best value in terms of service for the amount paid, that they can get.

The regulator and the utility owner or public trust is interested in having the utility meet its contractual obligations and, in many cases, also would like to satisfy the desire of the government to appear accountable and transparent for political reasons. In many cases the regulator also wants to appear accountable in order to avoid any appearance of corruption or collusion with the utility managers.

The utility customers (and the NGOs who serve as public watchdogs) want to be sure that they are receiving the best possible services for the tariffs they are paying. Some NGOs are also interested to see that the service provided to low-income groups is as good as the service provided to other groups.

In cases where international donors provide financing for the utility, there is an interest to foster good governance and promote transparency and accountability for all parties. This increased accountability becomes a win-win-win situation, where all stakeholders can improve their situations (except those who benefit from poor governance).

6.3 What Should Be Reported?

There are several categories of performance information that can be measured and reported by a utility, as shown in Figure 2. All of these are important to some stakeholders. However, only some of these are of interest to consumers and civil society.

The three categories of most interest for consumer-oriented reporting are operational service, customer service and customer satisfaction. These three types of information, combined with information on tariffs and affordability are also important to consumer-oriented NGOs that want to assess whether consumers are getting best value and whether customers or potential customers in low-income areas are receiving the service they need.

Figure 2: Performance Monitoring Needs by Key Stakeholders

	Key Stakeholders					
Performance Category	**Utility Operator**	**Regulator or Public Trust**	**Owner**	**Financiers**	**Customer**	**Civil Society**
Financial	**X**	**X**	**X**	**X**	**x**	**x**
Operational Efficiency	**X**	**X**		**X**		
Operational Service	**X**	**X**	**X**	**X**	**X**	**X**
Customer Service	**X**	**X**	**X**		**X**	**X**
Customer Satisfaction	**X**	**X**	**X**		**X**	**X**

Note: A small x means only the part of the information related to tariffs is of direct interest.

Operational service includes hours of operation, water pressure, water quality and service interruptions. Customer service includes speed and adequacy of response to complaints or requests for connections. Customer satisfaction is a survey-based measure, where customers are asked to rate their satisfaction with different aspects of the service they receive. Finally, affordable tariffs for consumers and fair tariffs for poor households are important for consumers. (See Appendix A for examples of indicators in these categories).

The goals and decisions that can be addressed by consumer-oriented performance reporting in a partnership setting are shown in the following table. For each consumer-oriented performance measure, the goals of the partnership and the related decisions to be made by the operator are given, along with the stakeholders that may play a role in influencing that decision.

Table 7: Goals and Decisions Influenced by Consumer-Oriented Performance Reporting

Consumer-Oriented Performance Measures	**Goals**	**Decisions**	**Stakeholders Involved**
Operational Service (coverage, hours of service, pressure, reliability)	-Expand service to all -Receive high quality reliable service	-Increase number of connections -Increase service quality and reliability	Operator Regulator Public Trust Customers/NGOs
Customer Service (response to complaints and requests)	-Respond effectively to customer requests	-Increase the effectiveness of responses to customer complaints and requests	Operator Regulator Public Trust Customers/NGOs
Customer Satisfaction	-Ensure customers are satisfied with service	-Improve service in areas important to customers	Operator Customers/NGOs
Affordability	-Receive fair and equitable pricing	-Improve affordability of tariffs	Operator Regulator Public Trust Customers/NGOs

6.4 How Should It Be Reported?

There are many channels for reporting service performance information. Some are required contractually of a private utility operator (or through the charter of a public utility) and some are the responsibility of other stakeholders, such as the regulator, the monitoring unit or local government. These channels include:

- Annual Reports on service performance;[29]
- Website reporting on performance;
- Surveys of customers that both report performance and ask customers for their opinion on the services received;
- Reports to Customer Service Monitoring Committees on service performance;
- "Road Shows" where performance information is provided to local communities in feedback sessions;[30]
- Meetings or workshops with public groups and local governments for service planning;[31]
- Special reports on performance distributed to the public;
- Kiosks or information desks that report on service in monitoring units, commercial areas and utility offices;
- Press releases or radio announcements describing performance and improvements in service;
- Inserts into customer bills regarding service performance;
- Open house presentations or school visits that discuss performance.

The operator, the utility, the monitoring unit (if any) and the local government must choose which of these channels to use in a given situation. In a genuine partnership situation, several of these channels would be used to inform customers, NGOs and the general public.

This choice of reporting channels should be made based on the effectiveness of using different channels, which are discussed in Appendices E and F. The optimum choice will depend on the size of the utility (or the regulator) and the level of its information system as well as the level of politicization of the society, which influences the desire for performance reporting by government or civil society.

6.5 When Should It Be Reported?

The frequency of reporting of service performance must be addressed as part of the communications strategy. The standard reporting period has been the annual report under most contracts and for most public utilities. This is appropriate for much information that needs to be considered for a whole year (e. g., average hours of service, coverage, etc.). However, some performance information is more useful on a monthly or quarterly basis

[29] This would include reports of independent auditors, where available.

[30] This channel was shown to be the most effective means of getting public feedback to improve service in the case of Metro Manila (See case study in Interim Report No. 1 for Task 5).

[31] These are particularly useful during rate rebasing discussions.

(e.g., water quality, shortages or service interruptions). Some more proactive utility operators report monthly performance to the regulator[32] and some regulators require monthly reports on certain aspects of performance.

The selection of the frequency of reporting for different indicators will depend on whether the channels for reporting can handle a certain frequency and on the costs and benefits of more or less frequency. If the information would not be used in a more frequent format, then it should not be required.

Table 8: Suggested Frequency of Performance Reporting

Indicator Category	Performance Indicator	Recommended Frequency
Financial	Financial Indicators	Yearly
Operational Efficiency	Efficiency Indicators	Yearly
Operational Service	Coverage	Yearly
	Water Pressure	Quarterly
	Water quality	Monthly
Customer Service	Customer Complaint Response Time	Quarterly
Customer Satisfaction	Satisfaction with service	Yearly

6.6 What Organizations Should be Responsible?

A good communications strategy must specify which organizations are responsible for each step of the reporting process. As noted in Chapter 2 above, the entities involved are:

- The utility operator;
- The owner and its monitoring unit (either a unit within the regulators office if that exists, a unit set up within a public trust if that exists, a unit set up as part of a local government body, or a separate independent unit reporting to one of these organizations which has the responsibility to receive and disseminate service performance information);
- A Customer Committee or a Citizen's Advisory Committee with a contract or a charter reporting to one of these organizations.

Generally performance reporting starts with the operator, who has gathered the information in most cases for internal management purposes. However, this information may not be complete, particularly with respect to feedback from customers on satisfaction with services, which may require another stakeholder to collect the information. If it is not complete, then another entity (normally the monitoring unit), would be tasked with the responsibility to collect and process the missing information.

Another consideration is the credibility of the reporting organization. If the source is a private operator, many contracts (but not all) require independent auditing to confirm the

[32] Case of Buenos Aires in Interim Report No. 1 for Task 5.

validity of the reported results. Where this auditing is not required, the possible use of an independent agency or organization can be considered for collecting or reporting additional performance information. This consideration would be strongly influenced by the degree of politicization of the environment. In a highly politicized environment, there is suspicion of all the major stakeholders (operator, regulator, government) and there is more demand for an independent source for at least some of the performance information.[33]

Normally, the regulator or the monitoring unit (if it exists) would be responsible for reporting of performance to the public, especially for comparing more than one operator. In other cases, the local government, which has an interest in public information, would be responsible for this reporting. The decisions on these responsibilities are usually made as part of a negotiation between the stakeholders.

The Customer Committee or Citizen Advisory Committee would have the responsibility to provide feedback to the operator and recommend areas for service improvement. Discussions concerning the priorities of actions to be taken and their locations would take place between the committee and the operator.

To have an effective communications strategy for consumer-oriented performance reporting all of the above questions must be answered. The process for answering them is described in the following chapter.

[33] See case study for Metro Manila in Appendix C and Cook and Stevens (2004c).

7 Steps for Creating An Effective Public Reporting Process and Capacity-Building

7.1 Evaluate the Needs and Readiness of Stakeholders for Consumer-Oriented Performance Reporting

7.1.1 Needs Evaluation

As noted in a recent guide to results-based monitoring and evaluation[34], it is best to start the development of an effective monitoring and reporting system with an analysis of the different needs for reported information and how each stakeholder will use the information for informing the customers, local government, NGOs or the general public. The evaluation of needs would start from the goals of the stakeholders and the decisions that are being made by the operator to support these goals. The relationship of the consumer-oriented reporting to meeting these needs (as discussed in Section 3.3) would be examined.

A second aspect of needs evaluation should consider the political and economic environment. This is illustrated in Table 9.

Table 9: Relationship of Environment to Need for Partnership and Performance Monitoring by Consumers

Environment	Low-income Countries	Medium-income Countries
Low politicization (good governance, open information, no civil conflicts)	Recommended indicators, Simple public reporting,[35] Feedback through surveys and/or focus groups	Recommended indicators, More advanced public reporting,[36] More extensive and regular feedback from committees
Medium politicization (good-fair governance, some distrust of civil servants, some civil conflicts)	Recommended indicators for more locations, More extensive public reporting,[37] Full partnership desired[38]	Recommended indicators for more locations, More advanced public reporting, Full partnership desired
High politicization (poor-fair governance, major distrust of civil servants, many civil conflicts)	Recommended indicators for all relevant locations, More extensive public reporting, Full partnership needed	Recommended indicators for all relevant locations, More advanced public reporting, Full partnership needed

[34] Ten Steps to a Results-Based Monitoring and Evaluation System, A Handbook for Development Practitioners by Jody Zall Kusek and Ray C. Rist, The World Bank, Washington DC, 2004.
[35] Simple public reporting includes reporting through the press and publications (annual reports etc.)
[36] More advanced public reporting includes, in addition, Websites and performance maps.
[37] More extensive public reporting includes the use of other media, e.g. radio, for outreach to a wider audience.
[38] Full partnerships include surveys, citizen/customer committees, and road shows.

In situations of low income and low levels of politicization, the basic requirement would be the public reporting of information on service performance in a general manner, without elaborate customer or citizen advisory committees. Where additional resources are available and citizens are better prepared to participate, committees can provide a regular and effective feedback mechanism. For a full partnership, there would need to be consumer or advisory committees to monitor and discuss performance by location and "Road Show" presentations by the utility and monitoring unit for most administrative districts (See further information on these options in the following chapter on communications strategy).

7.1.2 Readiness Analysis

This step would examine the roles of the different stakeholders in generating and processing the information and communicating it to each audience, and the ability/readiness of each organization to carry out the related responsibilities. The readiness of the different entities to carry out their responsibilities depends on the availability of information to the public and the technical capabilities of each stakeholder.

This analysis should first assess whether the performance information is available to consumers. In particular, it should verify that those aspects of contractual arrangements that concern utility service performance and targets are made available to the public. No secrecy or confidentiality clauses should be applied to these data.

A very important point in the readiness analysis for new PPP contracts in developing countries is that there is frequently only low quality information on performance available at the time the private operator takes over a previously public-managed utility, due to under-funded and obsolete information systems, run by individuals without the necessary training. Therefore, the time frame for reporting of quality information should include a startup period of about 1 and ½ years (or longer in some cases) for the basic management information to be developed. This may take longer in the case of a GIS-oriented system where base maps must be created to the required level of accuracy or purchased, in some cases from commercial or government sources

Secondly, this analysis should assess the ability of the utility operator to collect, analyze and report different types of performance data. If any one aspect of performance cannot be adequately covered in a credible manner (e.g. customer satisfaction), then the responsibility for collecting and reporting this information should be assigned to another stakeholder that has the capability (monitoring unit, regulatory agency or third party).

Thirdly, this analysis should assess the ability of the monitoring unit to process and disseminate performance information to the public. If there is a lack of technical expertise to handle these tasks, then contracting for these services would be required.

Fourthly, this analysis should assess the ability of the committee to carry out its tasks in a credible fashion. Membership in the committee would be selected so as to ensure the competence of the committee in the monitoring task.

Funding of the different entities would also be examined for sustainability.

7.2 Select the Most Appropriate Performance Information

Once the general needs have been identified in Step 1, the selection of the best set of indicators should focus on a relative simple, but robust set of performance outcome measures, touching on all the key aspects of performance that would be used by the customers, local government and/or civil society to monitor specific aspects of performance that relate to decisions. Good performance indicators are unambiguous, verifiable, consistent with long-term incentives for good performance and easy for the public to understand.[39]

There are many sets of service performance measures that are important to different stakeholders as reported in Appendix A. A set of recommended consumer-oriented performance indicators are given in Table 10 that suit the goals and decisions faced by the utility operator and the Customer Committee or Citizen Advisory Committee. The definitions of these indicators are given in Table A1 of Appendix A.

Table 10: Recommended Core Indicators for Consumer-Oriented Reporting

Customer Goals	Improvement Actions/Decisions by Utility	Monitoring Indicators
Expand Service to All	Increase Number of Connections	% households with direct connections to water services
		% households served by standpipes and wells
		% households with direct connections to sewerage services
		% households with septic tank pumping service
	Expand Service Area	% Population not supplied
		% Poor population not supplied
Receive Reliable, High Quality of Service	Improve Continuity and Quality of Service	Service continuity
		Interruptions
		Water pressure
		Sewerage Overflows
Receive Reliable, High Quality of Service	Improve Customer Service	Percentage of complaints resolved within standard period
Receive Good Healthy Water Quality	Maintain Minimum Water Quality Standards	Total water quality
Receive Fair and Equitable Pricing	Improve Affordability of Tariffs	Affordability of water service
		Pro-poor tariff level
	Improve Affordability of Connections	Affordability of Connections
Ensure Good Water Resource Management	Improve Quality of Discharges	Effluent Treatment
Be Satisfied with Service	Improve Customer Satisfaction with Service	Customers Satisfied with Continuity and Pressure
		Customers Satisfied with Water Quality
		Customers Satisfied with Water Service Response
		Customers Satisfied with Sewer Service Response

[39] From Kingdom and Jaganathan, "Utility Benchmarking: Public Reporting of Service Performance", Viewpoint, The World Bank, Washington DC,

In making a final selection of indicators for a given situation, the analyst should consider the following rules:

- Identify a prioritized list of indicators that can be put together easily and consistently (this may have to be implemented in stages over 2-5 years)
- Analyze the indicators that meet specific goals and decision needs
- Adapt best practice to your practice
- Don't let the indicator list become a wish list
- The quality of data is more important than the quantity
- Form and train a team to collect and process indicator data
- Test the indicators with consumers and NGOs before using them for reporting

In addition to service performance indicators, the communications strategy should take into account the periodic need to communicate the trade-offs between service delivered, tariffs charged and investments to be made by the operator or owner. This part of the strategy would involve the use of workshops with a range of stakeholders (including customers, local government and consumer advocates) to discuss the most appropriate level of service, tariffs and investments for the situation.

7.3 Develop a Cost-Effective Communications Strategy, Identifying the Reporting Responsibilities of the Different Stakeholders

Depending on the situation described in Step 1 (public or private operator, existence of monitoring unit/customer committee or not, interest of local government, interest of civil society) and the readiness analysis, a communications strategy should be developed. This includes a detailed plan for the sequence of steps in the reporting process and the responsibilities of each organization in each step. This strategy may need to have an initial phase for the development of a quality information system with initial indicators that are simpler than the later ones adapted to an improved information system.

This strategy should address the decision needs of different stakeholders. The information supplied should address three kinds of decisions:

- Service decisions
- Political decisions and
- Consumption decisions

For service decisions,:

- The operator would need to know
  - The detailed services provided by location, including hours of service, pressure, water quality and reliability (interruptions in service) and
  - The level of satisfaction of customers with service received
- The owner would need to know
  - The general level of service delivered, including coverage with adequate pressure, average hours, water quality achieved, reliability (interruptions in service) and

    - The level of satisfaction of customers with service received
- The customers would need to know
    - The detailed services received by location, including hours of service, pressure, water quality and reliability (interruptions in service) compared with service received in other locations in a form that is easy for customers to understand

For political decisions:

- The owner and political decision-makers need to know
    - The area covered by connections and services
    - The satisfaction of the customers with the service received
    - The tariff charges for different income groups
    - The financial sustainability of the utility at present tariff levels
    - Potential changes in service or tariff level and their relationship to investments and its justification
- The customers need to know (in order to inform their political representatives)
    - Potential changes in service or tariff level and their relationship to investments and its justification

For consumption decisions:

- The customers would need to know the cost of services received by location, and the quality of service and water compared with other sources

The selection of the communications strategy would address each of these types of information needed and the appropriate channels to provide them, based on a cost-effectiveness analysis. The information provided should be useful and relevant to the responsibility and capacity to act of the relevant decision maker.

Also some thought should be given to protecting against the deliberate misuse and manipulation of information for partisan purposes by unscrupulous groups.[40] This is a delicate type of analysis, which should not be used as an excuse for secrecy, but careful attention needs to be paid to the form of the information presented to the public.

Effectiveness in this case is defined as the provision of data to the largest number of interested stakeholders through various channels for each type of decision with the best prospects of getting feedback to improve service, make the best political decision or make the best consumption decisions. The effectiveness of the various channels is discussed in Appendix E, based on current research information. These indicate that a strategy that combines the following components is most effective:

- Press releases or radio talk shows for the broader audience
- Annual reports on performance, distributed by both paper and internet
- Customer surveys that both provide performance information and ask for comments on the level of service and the level of satisfaction with service

[40] This problem came out in all three case studies described in Appendix C.

- Regular feedback sessions with partner NGOs and/or Customer Committees
- "Road Shows" discussing current performance issues, problems, achievements, and planned actions by the utility, with local community groups
- Periodic workshops for discussion of trade-offs between service, tariffs and investments

A partnership strategy with open and continuous communication between owner, operator and customers is the most desirable outcome[41]. This is not easy to implement and takes significant operator staff time. Nevertheless, this may be the most effective strategy from both the operator and consumer viewpoints for successful utility operations in most situations.

The effectiveness of a given strategy must be balanced by considerations of cost. The procedure is to start with the least-cost methods of collecting, processing and reporting service performance, which reach all the stakeholders. This will normally involve a combination of communication channels.

The least-cost approach should then be compared with other available combinations of communications that are more effective but at a higher cost. The user must then determine if the additional benefits of the improved method or combination of communications channels are worth the higher cost.

As noted in Chapter 3 above, costs must also be judged in the context of utility size and available information technology. Smaller utilities with less technology must have more modest goals for public reporting of performance. For medium and large utilities the costs become marginal compared with other operating costs and a more detailed reporting system can be implemented.

The comparison between effectiveness and costs to arrive at the most cost-effective solution must be made for each situation. However a typical package of indicators, level of detail by location and communication channels that would be cost-effective for each situation, is given in the following table.

[41] The most complete case of this approach identified at present is for Chennai in India, where the utility is publicly-owned and is making a concerted effort to achieve this strategy with open communications and information sharing.

Table 11: Suggested Performance Reporting Strategy by Size of Utility[42]

	Package of Communication Channels			
	Press, Annual Reports, Customer/NGO Committee(s), Workshops	Press, Annual Reports, Customer/NGO Committees(s), Road Show(s), Workshops	Press, Website Annual Reports, Customer/NGO Committee(s), Road Show(s), Workshops	Press, Website Annual Reports, Customer/NGO Committee(s), Road Show(s), Workshops
	Indicator Data			
Situation	System-wide Indicators without surveys (est. 10-20 results reported)	System-wide Indicators with surveys (est. 15-25 results reported)	Service-level Indicators with surveys (est. 40-700 results reported)	GIS-level Indicators with surveys (est. 150-1600 results reported)
Small Utility with low-level Information System	X			
Small Utility with medium-level Information System		X		
Medium-sized Utility with low-level Information System			X	
Medium-sized Utility with medium-level Information System				X
Medium-sized Utility with high-level Information System				X
Large-sized Utility with medium-level Information System				X
Large-sized Utility with high-level Information System				X

The cost-effectiveness results given above are a good guideline. However, they should be adjusted for specific situations. For example, if the need for more detailed public information is a driving factor, then detailed GIS location data should be provided. If there is not a GIS in place, performance data on a map by service area, drawn by hand can be very useful for communicating performance information.

[42] See Appendix F for detailed assumptions.

It is also very important to have good quality data for performance, since poor data can be misleading. Therefore, the decision to provide more data for decision-makers should wait for the availability of good quality data. Data provision in stages is recommended.

Even smaller utilities should report some location data, which can come from a simple image map. This would show at least the service coverage locations and the areas not served by a utility (including low-income areas).

Similarly, some smaller utilities would want to have survey data for their customers to support decisions from time to time (e.g. when considering a major expansion). They would then move to core indicators with survey data. Annual surveys are good for tracking changes in customer satisfaction over time. The management of the utility would determine this strategy.

Regulators of large utilities should take advantage of the information systems of those utilities to supply more detail for their information systems. This is best done on a partnership basis, as in Metro Manila.

Credible and accurate performance reporting is particularly important in highly-politicized environments with active media and civil society. In the case of Metro Manila, which is a highly-politicized environment, the Board of Directors of the Regulatory Agency determined that the increase in credibility of implementing a relatively comprehensive performance reporting program was worth a significant investment.[43]

Medium and large-sized utilities should be able to support more methods of public reporting especially if they have a high-level information system. This should include websites, kiosks and road shows. The maps of performance could be more sophisticated, especially with GIS data to support it. Most utilities in this size range are either using or planning to use GIS technology for their own management purposes, and it could be easily applied to public reporting as well.

7.4 Define the Responsibilities for Service Performance Reporting

The responsibilities of the utility operator for service performance reporting must be the first to be clearly specified since this is the start of the reporting process. If the operator were private, this would be in the form of contract clauses. If the operator is public, this would be in the form of a public charter or an agreement with the local government.

Most, if not all, of the information on services provided and received by customers can be most effectively collected, summarized and reported by the operator. There may be issues of verifying the performance information that should also be addressed. In the case of a PPP, this may be a contractual matter, with the possible involvement of a third party auditor. In the case of a publicly managed utility, some arm of the government should

[43] This program also led to a re-engineering of the internal information system of the Regulatory Agency to better fit their decision-making needs and to a greater data-sharing partnership with the operators.

play this role. An independent third party may sometimes be required to guarantee credibility, especially in highly politicized environments.

Once the operator's responsibilities are specified, then the other agencies responsible for reporting or distributing the information must have their responsibilities specified. This would include the methods and channels of communicating the information and the frequency of updating the information. Decisions on the division of responsibilities are usually made as part of a negotiation between the stakeholders. This negotiation would also cover the sharing of costs and the payment for those activities, which is normally covered by the tariff.

Once these responsibilities are specified, then they can be identified as contractual or non-contractual for the operator. The contract for the operator should specify all the reporting actions that must be taken, including the methods and channels to be used. The further actions of the other stakeholders would then be shown as non-contractual items that are not the responsibility of the operator.

There will always be tensions between sources of information, and differences of opinion as to the objectivity of information from different sources. Likewise, the independence, responsibility and resources of regulators and monitoring units will remain difficult to resolve. It is important not to create additional structures that become involved in attempts at micro management of details over which they have neither responsibility, nor authority, nor the means to act.

7.5 Establish Goals Baselines and Targets

Once the process for reporting has been set up, a set of goals should be established both for the implementation of the process and for the development of the performance indicator targets.

The process should be implemented in stages corresponding to data collection, processing, reporting and communication. Each stage should have a target delivery time frame for each group of indicators. The groups should be selected based on similarity of data collection and processing.

Targets for the performance indicators should be developed at the start of the indicator data collection process. This involves identifying a standard for each indicator, measuring the baseline performance and setting performance targets to be achieved over a period of years. In PPP contracts these targets are a critical component, and they are also very useful for results-oriented monitoring of publicly-managed utilities.

7.6 Create an Action Plan

Finally, an action plan should be developed which summarizes the goals and targets. This plan should provide detailed steps for each participating organization to take in accomplishing the implementation goals. The action plan should include actions for the design of the consumer-oriented performance reporting system and for its implementation.

The design actions should be developed by the transaction advisor, the utility owner, the operator and participating NGOs in the case of a PPP and by the utility owner and participating NGOs in the case of a publicly-managed utility. The implementation actions should be developed by each organization with responsibilities as listed in Tables 5 and 6. Each action should have a start and completion date as well as a responsible party and contributing parties. The final result should be a working consumer-oriented performance reporting system and process.

7.7 Ensure a Sustainable Performance Reporting Process

Once the consumer-oriented reporting process is put in place. It needs to become sustainable both financially and politically. To become financially sustainable, the process needs to be funded from continuing sources of funds. Since in most cases the costs are marginal to the utility, the operator's participation can be ensured by an agreement to carry out the required activities. In the case of a PPP this is normally part of the contract. For a public utility, this can be in the form of an agreement between the local government and the utility.[44] For organizations other than the utility that have a role to play in the reporting process, a secure funding arrangement must be established at the beginning of the process.

To become politically sustainable, the reporting process must be viewed as successful. Once it is seen as successful in monitoring and improving service to customers by the government the support will be provided to continue it. This political "buy-in" to the process will happen more quickly and thoroughly if there is a partnership among the customers, the owner and the operator and if other stakeholders and organizations representing consumers are part of the partnership.[45]

[44] In the case of Chennai, a "Citizen's Charter" was created to state this agreement.

[45] The case of Metro Manila shows that continuing funding for performance monitoring was achieved despite disagreements between the utility and the regulator concerning the source of sustainable funds because it was successful from the regulator's viewpoint.

8 Conclusions

This report presents a variety of information from many sources concerning the current situation in public reporting of service performance and customer feedback. The key findings are that:

- Despite the willingness of both Operators and Owners:
  - Public reporting as a tool for monitoring and communication within the political sphere is not used in transaction design
  - Current approaches to customer reporting are ill-defined
  - Operators are typically not required to report service performance publicly
- The costs of reporting are not typically balanced with the benefits
- With no regulator and related monitoring structure (as in the PWC Model), customer/public participation in performance monitoring becomes more important

The best practices reported are:

- A partnership approach between operator, owner and customers (only partially achieved in some cases – e.g., Manila, Buenos Aires)
- The use of Customer Committees or Consumer Advisory Committees (both continuous and ad hoc) for discussion of key issues of service and tariffs, leading to political risk reduction and better service (Buenos Aires, UK WaterVoice, French Customer Committees, Argentina, Colombia, Zambia NWSSC)
- The use of survey techniques by operators or regulators to provide feedback on service performance from customers (Operator surveys – not all made public, Consumer "Report Cards" in India)

The key recommendations are:

- All types of PPP transaction designs should support an owner-operator-customer partnership approach
- Every PPP transaction design should have a communications strategy specifying reporting responsibilities, major channels of communication and performance indicators for each
- A cost-effective set of indicators and reporting channels should be selected for the country environment with:
  - More detailed performance by location and possible third party monitoring for highly-politicized environments and
  - More detailed indicators for countries with more income/resources
- These reporting requirements should be specified in the Operator's contract and the mission statement of the Monitoring Unit

These concepts can help utilities and other stakeholders respond to the need for greater accountability and transparency that has been growing, especially in developing countries and the need to move to innovative organizational structures for PPPs.

The partnership concept with consumer-oriented performance reporting has two different influences on the risks of a proposed PPP. On one hand, the increased complexity of the contractual relationships will increase risks of implementation problems. On the other hand, the partnership relationship will reduce the risk of a failure of the PPP for political reasons, particularly in a highly-politicized environment. In most cases the reduced risk of failure greatly outweighs the risk of implementation problems due to increased complexity. This argues for the use of a full partnership strategy in most PPPs, and especially in highly-politicized environments.

Based on discussions of the cost-effectiveness of alternative communication strategies in different situations, the report recommends different strategies for utilities of different size and level of information technologies, with different communication channels and different numbers of performance results to be reported. It also identifies different strategies for different political and economic environments.

Finally, seven steps for implementing an effective consumer-oriented performance reporting strategy are identified:

8. Evaluate the Needs and Readiness of Stakeholders for Consumer-Oriented Performance Reporting
9. Select the Most Appropriate Performance Information
10. Develop a Cost-Effective Communications Strategy, Specifying the Reporting Responsibilities of the Different Stakeholders
11. Define the Responsibilities for Service Performance Reporting
12. Establish Goals Baselines and Targets
13. Create an Action Plan
14. Ensure a Sustainable Performance Reporting Process

Each of these steps is critical to a successful implementation of a consumer-oriented reporting system

Appendix A
Definitions of Performance Indicators

The following table gives examples of performance monitoring indicators that could be used for performance monitoring. These indicators were selected based on best practice examples and a listing of the goals and improvement actions by utilities that they would help to monitor, as shown in the following tables. Table A1 gives the recommended Core Indicators that are most appropriate for Consumer-Oriented Monitoring based on research carried out under this project, the BNPWSS project[46] and other sources. These are a subset of the Performance Monitoring Indicators provided in the Task 2 Report.

Table A1: Recommended Core Indicators for Consumer-Oriented Reporting

Customer Goals	Improvement Actions/Decisions by Utility	Potential Monitoring Indicators	Potential Alternative Indicators
Expand Service to All	Increase Number of Connections	**% households with direct connections to water services** - [nos households with connections/total house count]	% households with access to water services (including standpipes) or % households with working connections
		% households served by standpipes and wells - [nos households /total house count]	% households with access to water services (including standpipes)
		% households with direct connections to sewerage services [nos households with connections/total house count]	% households with direct access to sanitation services [nos households with toilet or latrine/total house count]
		% households with septic tank pumping service - [nos households /total house count]	% households with access to sewer services
	Expand Service Area	**% Population not supplied** [estimated population not supplied/total population in service area]	Estimated Population Not Supplied, or number of areas greater than 1000 population not supplied; or percentage of population supplied
		% Poor population not supplied [estimated population in areas with median income below the national urban poverty line not supplied / total estimated population in areas with median income below the national urban poverty line]	% of poor areas not supplied [number of areas with median income below the national urban poverty line not supplied / total number of areas with median income below the national urban poverty line]
Receive Reliable, High Quality of Service	Improve Continuity and Quality of Service	**Service continuity** [average number of hours the service is available per day]	Average number of hours at minimum pressure standard
		Interruptions [number of days the service is interrupted per year]	
		Water pressure (%) [minimum pressure at the boundary to the consumers property]	% of connections meeting the water pressure standard [nos connections where the standard is met/total connections]
		Sewerage Overflows (%) [number of connections with overflows/total connections]	

[46] Cook and Stevens, 2004c, funded by the Bank-Netherlands Water Partnership Water Supply and Sanitation Program.

Table A1: Recommended Core Indicators for Consumer-Oriented Reporting (cont.)

Customer Goals	Improvement Actions/Decisions by Utility	Potential Monitoring Indicators	Potential Alternative Indicators
Receive Reliable, High Quality of Service	Improve Customer Service	**Percentage of complaints resolved within standard period** [nos of complaints resolved within standard period specified by contract / total number of complaints]	Percentage of complaints responded to within 30 days (%)
Receive Good Healthy Water Quality	Maintain Minimum Water Quality Standards	**Total water quality** [percentage of samples passing standard sampling frequency on all tests as per KDSWB guidelines]	
Receive Fair and Equitable Pricing	Improve Affordability of Tariffs	**Affordability of water service** [domestic tariff as % of per capita GDP for a given volumetric consumption of 72m3 per capita per annum]	Domestic tariff as % of household income for a given volumetric consumption of 72m3 per capita per annum
		Pro-poor tariff level [life line domestic tariff as % of per capita GDP for a given volumetric consumption of 72m3 per capita per annum]	[life line domestic tariff as % of household income for a given volumetric consumption of 72m3 per capita per annum
	Improve Affordability of Connections	**Affordability of Connections** [connection charges as % of per capita GDP]	Connection charges as % of household income
Ensure Good Water Resource Management	Improve Quality of Discharges	**Effluent treatment** [volume of wastewater treated before discharge back to water course/total volume of effluent discharge]	Wastewater treatment level [% wastewater treated at level 1, level 2, etc.]
Be Satisfied with Service	Improve Customer Satisfaction with Service	**Customers Satisfied with Continuity and Pressure** (% of surveyed customers rating continuity and pressure fair, good or very good)	
		Customers Satisfied with Water Quality (% of surveyed customers rating water quality fair, good or very good)	
		Customers Satisfied with Water Service Response (% of surveyed customers rating water service responses of utility fair, good or very good)	
		Customers Satisfied with Sewer Service Response (% of surveyed customers rating sewer service responses of utility fair, good or very good)	

Table A2 gives additional indicators for each goal area that may be useful for other stakeholders, but are not of primary interest for consumers. These indicators would be used primarily by utility managers and monitoring units.[47]

Table A2: Additional Performance Indicators

Goals for Utility or Monitoring Unit	Improvement Actions/Decisions by Utility	Potential Monitoring Indicators	Potential Alternative Indicators
Expand Service to All	Increase Number of Connections	Number of connections [Nos connections total or by category - e.g. household, commercial, etc.]	Number of working connections
	Expand Service Area	Extension of pipe network [km of pipe laid in period]	% Extension of pipe network [km of pipe laid in period/ total km of pipe at beginning of period]
		Available production capacity (mld) [Sum of design capacity of each operational works/projected capacity]	
	Improve Metering Rate	Number of working metered connections	% metered connections [Metering rate = nos working metered connections/ total working connections]
		Metered revenue water - [volume of metered water sold]	
Ensure that Existing Network Meets Standards	Reduce Water Losses by Physical Loss Management	Km of pipe under bulk metering or pressure management regime [km of pipeline under regime / total km of pipeline]	
		Km of water pipe maintained [km of pipe replaced, relaid, laid new or relined]	Rate of Water Pipe Replacement (%)
		Investment [total annual modern equivalent (MEA) value of pipework rehabilitated / total MEA of pipework]	
	Reduce Unaccounted for Water	**Unaccounted for Water** [(volume of water produced -volume of water paid for)/volume of water produced]	
		Physical losses as percentage of total water produced [av. Volume physical loss/ total volume produced]	
		For 24hour supply zones – nightline flow – Mld [average flow rate from supply reservoir between 12pm and 4am]	
	Reduce Sewer Pipe Breakages	Km of sewer pipe maintained [km of pipe replaced, relaid, laid new or relined]	Rate of Sewer Pipe Replacement (%)

[47] For further information on these indicators, see Task 2 Interim Report. See also analysis in Cook and Stevens, 2004c.

Table A2: Additional Performance Indicators (cont.)

Goals for Utility or Monitoring Unit	Improvement Actions/Decisions by Utility	Potential Monitoring Indicators	Potential Alternative Indicators
Improve Efficiency of Service Operation	Improve Operational Efficiency	**Working ratio (%)** [total annual operating expenses/total annual operating revenues]	
		Operating Ratio (%) [total annual operating expenses/total annual revenues]	
		Staff Index [number of staff per 1,000 connections]	
		Investment (%) [total annual modern equivalent value (MEA) of mechanical and electrical plant replaced / total MEA of mechanical and electrical plant]	
	Improve Management Efficiency	Labor Costs [total annual labor costs as a percentage of total annual operational costs]	
		Outsourcing [total costs of services contracted out to the private sector as a % of total annual operational costs]	
		Cost of production and distribution per m3 [annual operating costs/annual volume produced]	
		Cost of power per m3 [annual energy cost/annual volume produced]	
		Power limitations [total number hours where production quantity was impaired by power limitations/ total hours]	
		Percent utilization of water treatment capacity [total water treated/capacity of treatment plant]	
		Percent utilization of wastewater treatment capacity [total water treated/capacity of treatment plant]	
Improve Reliability and Quality of Service	Improve Customer Service	Waiting time for a new connection [average number of days]	
		Waiting time for answer to queries and repair [average number of days]	
		Billing accuracy – [number of consumer queries over bills issued/total number of bills issued]	

Table A2: Additional Performance Indicators

Goals for Utility or Monitoring Unit	Improvement Actions/Decisions by Utility	Potential Monitoring Indicators	Potential Alternative Indicators
Achieve Good Healthy Water Quality	Maintain Minimum Water Quality Standards	Bacteriology [percentage of samples passing standard sampling frequency as per national/municipal guidelines]	
		Turbidity [percentage of samples passing standard sampling frequency as per national/municipal guidelines]	
		pH [percentage of samples passing standard sampling frequency as per national/municipal guidelines]	
		Chlorine [percentage of samples passing standard sampling frequency as per national/municipal guidelines]	
		Filtered water [percentage of water filtered before distribution]	
		Color [percentage of samples passing standard sampling frequency as per national/municipal guidelines]	
		Heavy metals [percentage of samples passing standard sampling frequency as per national/municipal guidelines]	
		Insecticides [percentage of samples passing standard sampling frequency as per national/municipal guidelines]	
Fair and Equitable Pricing	Improve Affordability of Tariff	Affordability [domestic tariff as % of per capita GDP for a given volumetric consumption of 72m3 per capita per annum]	Domestic tariff as % of household income for a given volumetric consumption of 72m3 per capita per annum
		Pro-poor tariff [life line domestic tariff as % of per capita GDP for a given volumetric consumption of 72m3 per capita per annum]	
		Frequency of billing [number of bills issued per year]	
		Enforcement [number of people disconnected each year for non-payment]	
	Improve Affordability of Connection	Accessibility [connection charges as % of per capita GDP]	
Full Cost Recovery	Improve Revenue Stream	**Operating Ratio (%)** [total annual operating expenses/total annual revenues]	
		Loss of revenue potential [annual revenue received/annual value of water produced at average tariff]	
		Collection ratio [revenue collected/ revenue billed]	Average collection period (days) by customer
		Debt service ratio [total annual debt service/total annual operating expenditure]	

Table A2: Additional Performance Indicators

Goals for Utility or Monitoring Unit	Improvement Actions/Decisions by Utility	Potential Monitoring Indicators	Potential Alternative Indicators
Integrated Water Resource Management	Ensure Availability of Water	Number of years the service area's water resources will satisfy demand, taking into account current and future levels of consumption and preservation measures	
		Resource limitations [number of days per annum that water resources volumes are restricted/365]	
		Resource limitations [number of days per annum that water resources volumes are restricted/365]	

Appendix B
Different Approaches to Public Performance Reporting

This appendix summarizes different approaches to performance reporting and its relationship to public reporting of service performance. Contrasts are made among the British, French, American approaches and a developing country approach for Argentina, Ecuador and Bolivia that is modeled to some extent on the British approach, but adapted to developing country conditions. The approach being used by ISO is also examined.[48]

The British Approach to Public Reporting of Service Performance

Under the British system of utility regulation, each Water Authority (utility) is granted a license by the Secretary of State for the Environment. All licenses are structured in the same way and each license requires the utility to furnish to the Director of the Office of Water Services (OFWAT) a set of quality of service targets and to "monitor and assess the quality of services as compared with any relevant service target". The license also specifies that once a year the utility must furnish a Service Target Report to the Director of OFWAT. Along with this Service Target Report, the utility may also be required to specify any measures that are being undertaken to reach the service targets.

Each Service Target Report must by accompanied by a letter from independent auditors hired by the utility stating that the methods used and the steps taken are adequate for the purpose of ascertaining the Level of Service Information in the Service Target Report, and whether the service targets have been achieved.

This system has been developed on the theory that the people closest to utility operations (e.g. utility staff and managers) can collect the indicators in the most cost-effective manner. However, the independent auditor is needed as a means to counteract any tendency by the utility to misreport the data and to ensure that its collection and analysis is as accurate as possible.

Public Reporting

The utility is also required to i) "draw the attention of the customers to the existence of Levels of Service Information and the Service Target Report", ii) "make copies of the most recent Level of Service Information and Service Target Reports available for inspection" at each relevant utility location, and iii) "send a copy of the most recent Level of Service Information and Service Target Report to any person requesting it".[49]

OFWAT specifies the service indicators to be reported, and the Secretary of State for the Environment conveys these to each utility each year.[50] OFWAT has established a set of ten customer service performance indicators that are used for comparative reporting (see Table 1).

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[48] These are brief descriptions based on a rapid analysis of these alternatives.

[49] The text in quotes is the standard language from a license agreement for SevernTrent Water Ltd.

[50] OFWAT and its Customer Service Committees are paid for by license fees collected from the water and wastewater utilities.

"OFWAT publishes five reports annually on comparative performance to promote greater efficiency and quality of service".[51] Also OFWAT publishes the licenses for each water and wastewater utility on the web. Many utilities (e.g., Wessex Water) post their performance against targets for OFWAT and other customer service indicators on the World Wide Web.

Water companies and their customers use these reports to compare services and to generate some kind of indirect competition for service provision. Also shareholders of the utilities in their shareholder meetings use the reports of comparative service

Table B1: **OFWAT Customer Service Indicators**

Indicator No.	Indicator Name
DG2[52]	Properties at risk of low pressure
DG3	Properties subject to unplanned supply interruptions of 12 hours or more
DG4	Population subject to hosepipe bans
DG5	Properties subject to sewer flooding incidents
DG5	Properties at risk of flooding from sewers (once in ten years)
DG5	Properties at risk of flooding from sewers (twice in ten years)
DG6	Billing contacts not responded to within 5 working days
DG7	Written complaints not responded to within 10 days
DG8	Bills not based on meter readings
DG9	Received telephone calls not answered within 30 seconds

to confront utility managers with any shortcomings on reaching service targets and with any differences in targets from one utility to another.

OFWAT also funds and supports WaterVoice, which represents the interests of water and sewer service customers and speaks independently of OFWAT. WaterVoice operates

51 From OFWAT Service Delivery Agreement, 2000-2003.

52 The list starts with DG2 because the initial indicator, DG1, was eliminated the reporting requirements.

through nine regional committees[53] in England and a committee for Wales. They represent the interests of customers in respect of price, service and value for money; they also investigate complaints from customers about their water company. The duties of the Committees are "to keep under review all matters that affect the interests of the Customers, to investigate complaints and to make representations on behalf of customers. The work of the committees is to monitor the service provided by the companies and work with them to make improvements."[54] The WaterVoice committees also participate in public consultations organized by OFWAT and review the customer research funded by OFWAT.

WaterVoice also maintains a register of Best Practices for each type of service performance measure. This is provided on the World Wide Web.[55]

Conclusions on Public Performance Reporting

In summary, the British approach provides an intermediate level of public performance reporting through the OFWAT annual reports their website reports, which is supplemented by the efforts of individual utilities. Where these reports are used in stakeholder meetings, this is a type of consultation with some customer representatives.

The role of WaterVoice committees represents a strong consultative process, which supports discussion and feedback, but not a full partnership with customers, since it is a selected representation. Some utilities take a more partnership-oriented approach by publishing their service targets and performance against them on the web, but this is not required by their contract or by OFWAT.

The number and types of indicators used by OFWAT are pertinent to conditions in the UK, but do not necessarily represent all the service indictors (or in some cases the types of service indicators) that may be required in developing countries.[56]

The French Approach to Public Reporting of Service Performance[57]

The responsibility for the management of France's approximately 12,000-independent water utilities is under the jurisdiction of the over 36,000 local municipalities or communes, which have adopted a legal framework that provides flexibility in choosing contractual arrangements. Today, over 75 percent of the country's population (over 40 million people) is provided water and about 40 percent are provided sewage service by private companies. These percentages have roughly doubled in the last 40 years.

Under the French approach, municipalities own the treatment facilities, pipes, and reservoirs, and secure management through a wide range of long-term franchise agreements with private companies. Patrick Cairo, Director of Lyonnaise des Eaux-Dumez, explains that the strength of this format "is that it provides competition between

53 Also called Customer Service Committees or CSCs.

54 Memorandum of Understanding between OFWAT and WaterVoice,

55 http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/wv_bestpractice_03/$FILE/BPregister_aug03.pdf

56 See sections on case studies above and the following section.

57 Much of the following information is abstracted from a paper entitled: Haarmeyer , David , "Privatizing Infrastructure Options for Municipal Water Supply System, October 1992, available at: http://www.rppi.org/ps151.html#09

multiple management options and numerous water suppliers." The French model requires (1) French local governments are required to keep separate and balanced budgets for water and sewer departments; and (2) all households are metered.

Contract Performance Measures

Affermage agreements (leasing arrangements) are often mistakenly assumed to embody all that is 'the French model' because they have been so successfully and extensively used to provide public WATSAN services in France. However, affermage remains only one of the contract options that go to make up the French model. Municipalities in France use three general types of contractual approaches that vary in the degree of responsibility assigned to the private companies for managing water-supply systems. Depending on the particular circumstances, variants of these approaches are available. The three contract types include:

- Concession - A private company contracts to finance, build, and operate all installations. Bids represent what a firm will charge for water service, with the contract duration usually 25-30 years—enabling the company to amortize its investments. The private firm is responsible for handling customer relations and billing.

- Affermage (leasing or farming out) - The municipality finances and builds the facility and contracts out to private companies for operations and maintenance. Remuneration for the private contractor comes from user fees, which the contractor collects, and reflects full operating costs plus profit. A "municipal surcharge" is added to finance fixed assets and is transferred to the public authority. The municipality remains owner of the fixed assets used by the lessor and is responsible for investments in the new works.

- Management or Service Contract - Municipality contracts out a specific part of the operations and maintenance services. The municipality retains responsibility for billing customers and remunerating the contractor. The duration of the contract is usually less than 10 years.

For affermage contracts, both in France and overseas, the duration is normally 8 to 12 years. The benefits of this approach are:

- The profitability for the operator is dependent upon increasing the efficiency of managing the assets;
- The municipality reduces its risks of not collecting adequate tariffs;
- The governments reduces its political risks of tariff setting;
- A significant portion of the commercial risk and management responsibility is transferred to the operator;
- Clear incentives and opportunities are provided for the contractor to minimize costs, to provide a reliable service and to maximize revenue collection;
- Lease contracts are a well tried and tested method;

- Performance standards can be specified and enforceable financial penalties stipulated in the contract;
- Larger contracts can attract experienced, international contractors in the sector who have the potential to achieve substantial gains in operating efficiency;
- There is a long and successful experience with this type of contract in France.

The costs of setting up these contracts include: transaction costs, the need for contract monitoring and the requirement for enabling legislation.

The risks of setting up these contracts are similar to other private sector options: unknown condition of assets at start of lease; unknown customer mix (proportion of lifeline consumers); difficulty of contract provision for informal housing areas; lack of provision of capital finance for new investment through contractor; with international contractors a potential mismatch in expectations between contractor and local government which can result in extensive high level negotiations.

The cities of Cannes and Orleans presently have "concession" contracts for water-supply services. The Cannes contract is for a system that serves 200,000 people and dates back to 1870. The Orleans city contract was initiated in 1987 to manage and expand the city's water-supply system, which serves 135,000 people. As part of the 20-year contract, the private company committed $13 million within the first five years to finance construction of new facilities.

The city of Paris entered into an "affermage" contract in 1985 for the management of its water-distribution system. The water system of France's largest city (population 2.8 million) required a major renovation and replacement program. The city split the contract in two, with one company given responsibility for the water-distribution system on the Left Bank of the Seine River and another for the Right Bank. The two companies sell water retail to households from the water they buy wholesale from the city, which retains water-treatment, monitoring, and storage responsibilities.

As an example of a typical water privatization project, Chaumont (Haute-Marne) France has a 12-year Affermage Contract. The Municipal Government is responsible for ownership of infrastructure, sets performance standards and dictates contract terms. The operator, Société Suez-Lyonnaise des Eaux, provides service within the limits of Chaumont municipality, which includes about 27,000 inhabitants. The utility serves 12,000 customers with a connection to the water network. The contract authorizes the provision of water services to customers in neighboring communities based on a bilateral contract between the local authorities in Chaumont and the neighboring towns.

The contract provides that:

- The operator is responsible for water service provision as well as for the operations and maintenance of associated facilities and equipment;
- The municipality retains the ownership of the assets and is responsible for major investments, equipment replacement and most network renewal

- An environmental regulator levies water abstraction and discharge charges and provides financing for environmental improvements in the river basin;
- The same operator provides water and sanitation services based on two different affermage contracts, which were signed simultaneously.

The performance measures include:

- Reduction in technical losses (30% at start of contract to 27% at 3rd year, to less than 24% at 6th year);
- Meeting safety and quality requirements for drinking water distribution;
- Obligations to provide water to any customer who can be technically connected to the existing network;
- Obligations to respect various quality criteria specified by law.

The quality control measures include:

- Penalties (fines) for failing to meet objectives;
- A Customer Committee (created by law) helps users control quality of service and monitor the operator's obligations with respect to customer service;
- There are also periodic audits by an independent auditor to verify that the municipality is meeting its legal obligations, including the ones related to the utility concessions.

The customer-oriented measures include:

- Customer disconnection for non-payment is prohibited by law (a Solidarity Fund pays the bill)
- Consumers are well-represented both legally and politically

Public Reporting of Performance

The principal means of public reporting is the Customer Committee, a new institution created by a 1992 law to help users to control the quality of the service. The committee monitors the obligations and achievements of the operator with respect to customer service and acts as a consumer advocacy organization.

The municipality also publishes annual financial and technical reports to inform customers about the quality of the service being delivered. This "rapport du maire" contains the various types of legally-required information about the responsibilities of different stakeholders, water quality and tariffs. The municipality also uses it for communicating information on the operator's performance to the public and the Customer Committee.

Conclusions

In summary the French approach provides an advanced level of public reporting on service performance. French law provides for Customer Committees, which are a consumer oversight institution that monitors information on water quality, pricing and service. The Customer Committee acts as a consumer advocacy group for water and sewerage concerns.

Each municipality through the annual "rapport du maire" is required to provide financial and technical information to its utility customers regarding their responsibility of different stakeholders, water quality, service and tariffs. It is required to undergo an annual independent audit to certify it is meeting its legal obligations (water, safety, sewage, facility management, maintainability, utility business obligations, etc.) criteria established by law. They are subject to fines for not meeting their performance measures.

The success of the French approach is highly dependent upon the ability to create publicly-supported consumer protection laws that cannot be readily changed or disregarded. These laws are implemented at the highest level and applicable to the poorest user.

The US Approach to Public Reporting of Service Performance

The United States uses a results-oriented approach to performance measurement. Performance Measurement is government's way of determining whether it is providing a quality product at a reasonable cost. Following the definition used by the Government Accounting Standards Board (GASB) in the US, Performance Measurement is often referred to as Service Efforts and Accomplishments (SEA) Reporting.

Based on the Civil Service Reform Act of 1978, performance measurement was defined in 1980 by the General Accounting Office (GAO) of the US Government as an assessment of an organization's performance, including measures of:

- Productivity, which quantifies the outputs and inputs of an organization and expresses the two as a ratio. Generally, the ratio is expressed as output to input (for example, inspections per staff-day).
- Effectiveness, which determines the relationship of an organization's outputs to what an organization is intended to accomplish.
- Quality, which examines an output or the process by which an output is produced. Quality is indicated by attributes such as accuracy (or error rate), thoroughness, and complexity.
- Timeliness, which evaluates the time involved producing an appropriate output.

This approach is currently spearheaded by GASB which has been experimenting with performance measurement criteria with the intent to determine whether it was sufficiently developed to warrant the GASB, local governments and public interests groups encouragement of governmental entities to present performance measures as a part of their financial reporting. GASB has not issued a list of recommended indicators, but there has been substantial interest in government at all levels to know which performance indicators should be included and how they should be reported.[58]

Therefore, GASB and the National Academy of Public Administration surveyed 5,000 state and local governments about their use and reporting of performance measures, and GASB surveyed 1,300 of state budget offices, state agency staff and city and county budget and department staffs across the country. Then GASB visited twenty-six cities, counties, and states across the country to learn about their use of performance measurement and the effects of using the performance results, including talking with nineteen citizen discussion groups. From all of this, a set of suggested criteria was compiled that state and local governments can use in preparing an effective report on results-oriented performance information.

[58] Governmental Accounting Standards Board (GASB), available at: http://www.seagov.org/sea_gasb_project/index.shtml

SEA Performance Measures

Results orientation involves developing a strategic plan, identifying community and program outcomes, and using performance measures in the budget process to focus on actual results achieved and projected results based on allocated resources. Both financial and non-financial performance data are used to assess accountability and make educated choices, which are supported by performance audits. Benchmarks are used for identifying and building linkages with the private sector.

The establishment of an organization's major goals and objectives and their sources should include the involvement of citizens, elected officials, management, and employees. Performance information should be presented at different levels (layers) of reporting and the relationship(s) between levels of available performance information should be clearly communicated and include information to help the user find the level of performance information detail for their interests and needs.[59]

The reported performance information should assist in communicating the extent to which the organization and its programs, services, and strategies have contributed to achieving goals and objectives. The expectation is that a results orientation would encourage achievement of strategic targets, more efficient and effective use of resources, and, ultimately, improvement of performance.

As an example, in Prince William County, VA, the strategic planning process heavily considers citizen satisfaction. Citizens also have input into the state-required comprehensive land use plan that includes desired levels of service as part of its plan.[60] Involving the public in selecting and monitoring measures is the ultimate in government accountability. It provides an opportunity to demonstrate improvement of programs over time, demonstrate results compared to other benchmark jurisdictions, and to communicate with the public on issues that are of interest to them.[61]

Prince William County produces a number of public reporting venues for its citizens. The County's web page includes a copy of their latest SEA Report, and there are seven reports that incorporate performance measurement information and provide a basis for accountability and information available to citizens and taxpayers including a report of the Environment that covers water. In addition to these reports, the Office of Public Information also produces a quarterly citizen newsletter called *Prince William Reports*, which provides some results-information. In the interest of accountability and frequent communication, periodic status reports are produced with service quality measures getting the most emphasis. In addition, many departments produce monthly, quarterly, or annual reports and distribute those reports to staff, advisory board, community service providers, and, in some cases, to state agencies responsible for funding or oversight of

[59] Fountain, James, Campbell, Wilson, Patton, Terry, Epstein, Paul, Cohn, Mandi-Principal Authors, Abrahams, Mark, Walters, Jonathan-Contributors "Reporting Performance Information: Suggested Criteria for Effective Communication", October 2003, available at: http://www.seagov.org/sea_gasb_project/criteria_summary.pdf

[60] Prince William County, 2000b, available at: http://www.pwcgov.org/NeedAssistance.aspx?topic=

[61] Bernstein, David J "Prince William County, Virginia-Developing a Comprehensive Managing-for-Results Approach", September 2002

county programs.[62] In current practice, Prince William County uses a variety of citizen involvement techniques to engage citizens in strategic planning when major plan updates are required by ordinance every four years. Citizen priorities then "flow through" policy planning to implementation, including how the county measures performance, as part of the county's "governing for results cycle."[63] Citizen involvement in the early decision-making process helps with setting policy's and goals, and then performance measures can be reported that are consistent with those goals.

There are earlier precedents for engaging citizens to decide what services and conditions to improve, such as in the Neighborhood Services Improvement Project of Washington, D.C. In the 1970s citizens determined the priorities for improving in their neighborhood, which lead to significant measured performance improvements of priority services (for example, street cleaning productivity, better compliance time on health code violations), better practices by citizens to improve the neighborhood (for example, a measured reduction in poor "trash put out" practices), and increased citizen pride in their neighborhood.[64] In another 1970s project, the citizens of Arlington, Massachusetts, were engaged in community-based planning to set local improvement priorities, including citizen involvement in determining the questions for a citizen survey.i Since the 1980s, in community and regional efforts around the world, nonprofit organizations have been involving citizens in determining what are important community outcomes to measure, and have been obtaining relevant data by whatever practical means (for example, from governments and private sources, conducting their own citizen surveys) and producing reports of "community indicators."[65]

One of the best known of these efforts in the United States is conducted by the Jacksonville [Florida] Community Council, Inc. (JCCI). The JCCI has been issuing annual reports since 1985 on "quality of life indicators" (for example, JCCI, 2001), which were developed and refined over the years through extensive citizen involvement supplemented by JCCI staff research to find indicators that are practical to report. JCCI's David Swain said at a 1996 forum on community indicators, "The JCCI Quality of Life project is driven by citizen participation. From a community building perspective, the annual process of updating and disseminating Quality of Life Information is as important as the product itself. Citizen involvement in the process is the key. In the long run, this transforms the annually published documents from the product of an organization called JCCI into a body of knowledge owned and used by the community."[66]

Portland, Oregon, employs a similar approach for a number of different performance measures. The Portland SEA Report, which has been compiled since 1991, reports

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[62] Bernstein, David J "Prince William County, Virginia-Developing a Comprehensive Managing-for-Results Approach", September 2002

[63] Fountain, James, Campbell, Wilson, Epstein, Paul, Robinson, Brett-Principal Researchers, "Report on the GASB Citizen Discussion Groups on Performance Reporting", July 2002 (Marshall et al., 1999)

[64] District of Columbia, Office of Budget and Management Systems. Improving Productivity of Neighborhood Services, A Washington DC Case Study. Washington, DC: U.S. Department of Housing and Urban Development (HUD), November 1978.

[65] Gahin, Randa and Paterson, Chris "Community Indicators: Past, Present and Future," National Civic Review 90, Winter 2001, pp. 347-361

[66] Scruggs, Patricia, and Thompson, Philip "Promoting Sustainable Economic Development in Portland: A Report to the Portland Development Commission, Portland Development Commission", Portland, Oregon, October 1996.

performance measures for various public services including fire, police, parks, transportation, environment, water, and housing, as well as more general measures of livability. Selected measures for several of these services are disaggregated into eight districts with data for different districts displayed on city maps. The districts in the SEA Report correspond to the boundaries of the city's main citizen participation districts. This breakdown gives citizens a more localized view of how services are functioning in their area.[67] Their website includes Department of Environmental Quality (DEQ) program water quality and on-site septic information.[68]

Fort Worth, Texas, uses a multiple-methods approach in providing performance information to its citizenry. Rather than waiting for the local press to cover public issues the city thinks are important, the city government purchases advertising space in several local newspapers, including the local major daily and weekly papers read primarily by African Americans and Latinos. This space, called the "City Page," is a nonpartisan government vehicle for distributing important information on current issues, as well as noting successes and failures of certain programs. A video version of the City Page is broadcast on cable television. In addition, a radio program is produced to target different listening audiences, including African Americans, Latinos, and Evangelical Christians. Finally, the City Page is posted on Fort Worth's website.[69]

Charlotte, North Carolina, has similarly used multiple approaches to communicate with citizens, rather than waiting for media coverage. Spokane County, Washington, has taken issues directly to citizens for discussion in several creative ways, including "meeting in a box" kits people can use with neighbors in their homes and backyards. Spokane County generates media coverage of both the issues and the citizen events.[70]

Sample SEA inputs, outputs and outcomes with explanations provided for both water and sanitation are shown in Table B2 below.

[67] City of Portland (Oregon), City Auditor. Service Efforts and Accomplishments Report. Portland: Office of the City Auditor, 2001, available at www.ci.portland.or.us/auditor/audser/pdfs/280.pdf
Office of Management and Finance. Adopted Budget FY2001: Financial Summaries. 2001, available at www.ci.portland.or.us/finance/ADOPTED/Vol1AdoptedFY01-02%20web/Vol155_CY_FinSum.pdf
[68] OR Fact Sheet -Departmental Environmental Quality (home page) available at: http://www.deq.state.or.us/wq/standards/WQStdsFactSheet.pdf
[69] GASB Research Notes available at: http://www.seagov.org/sea_gasb_project/research_reports.shtml
[70] Fountain, James, Campbell, Wilson, Epstein, Paul, Robinson, Brett-Principal Researchers, "Report on the GASB Citizen Discussion Groups on Performance Reporting", July 2002 (Itell, 1998)

Table B2: Recommended SEA Indicators for Drinking Water[71]

Indicator	Rationale for Selecting Indicator
Input Indicators:	
Total cost of operations	To allow comparison of cost with other departments and water entities
Cost per household or type of service	
Miles of pipeline	To indicate the size of the operations for which the entity is responsible
Number and capacity of treatment plants	
Number of employee hours	To indicate time spent on providing the service
Output Indicators:	
Miles of water lines maintained, repaired, and inspected (by geographic area)	To indicate amount of infrastructure maintained
Feet of new line constructed	To indicate the increase in the infrastructure to meet the needs of industry and the community in general
Number of new services connected, by customer type	
Number of breaks, leaks, etc., repaired (by geographic area)	To indicate the level of work performed on existing system beyond general maintenance
Total gallons pumped, metered, and treated	To disclose how many gallons were pumped, metered, and treated
Percentage of total gallons pumped by user category: a) Residential b) Commercial c) Industrial d) Free to schools, etc.	To disclose the client mix and the amount of unaccounted-for-water
Unaccounted-for Water	

[71] Hatry and Fountain, 1990.

Outcome Indicators:	
Percentage of total gallons pumped that were metered	To indicate how many of the gallons pumped were metered
Number of calls about interrupted service	To determine how well the infrastructure is maintained
Number of main breaks	To indicate the condition of the infrastructure water lines
Number of breaks, leaks, etc., per 100 miles of pipeline per year (by geographic area, by severity, and type of pipeline)	
Percentage of service interruptions cleared in goal period of time	To indicate the ability of the service group to clear service calls within goal time
Percentage of breaks, leaks, and so forth, repaired within x hours of notification	
Number of complaints concerning: e) Water pressure f) Water taste g) Water odor h) Water color i) Other	To indicate the quality of the water and the service delivery from the customers' perspective (by geographic area)
Number of days did not meet federal and/or state standards (Include reason for noncompliance.) j) Primary-health-related k) Secondary-aesthetic	Indication of quality of water
Efficiency Indicators:	
Cost per million gallons pumped for: l) Treatment m) Distribution n) Containment o) Other	To indicate the cost of providing the service and the breakdown of the cost

Explanatory Indicators:	
Type of source of water supply and distance to source	The cost of water is affected by the type (above or below ground) and distance to the source and the difficulty in obtaining and bringing the water to the treatment facility
Quality of water at intake and treatments	The quality of source water is an important determinant of treatment cost
Average daily demand (by month)	To indicate the current demands on the system and to show how demand has changed over time
Billing rates: a) Residential b) Commercial c) Industrial	To determine the different billing rates
Total revenue from customer billing/total cost	To determine how much the city is subsidizing the department
Population served	To allow the reader to understand the size and demographics of the system
Square mile	
Maximum daily demand/system capacity	To indicate the level of excess capacity in the system
Treatment-plant capacity (by treatment plant)	To indicate the general flow capacity
Holding-tank capacity	To indicate storage capacity in the system
Debt service coverage ratio	To show ability to pay debt
Projected water demand in 5 years/current capacity	To indicate the need for future expansion and funding

Table B3: Recommended SEA Indicators for Wastewater Treatment[72]

Indicator	Rationale for Selecting Indicator
Input Indicators:	
Total cost of operations	To allow comparison of costs to other departments and other wastewater entities
Cost per capita of wastewater treated	
Number and treatment capacity of plants and level of treatment provided by each	To provide a picture of the size of operations for which the entity is responsible
Miles of infrastructure (pipeline)	
Number of employee hours	To indicate time spent on providing the service
Output Indicators:	
Miles of sewer pipe maintained, repaired, and inspected (by geographic area)	To indicate amount of infrastructure maintained, repaired, and inspected
Percentage of miles maintained requiring repair	
Percentage of above repaired this year	
Miles of new sewer constructed	To indicate the increase in the infrastructure to meet the needs of industry and the community in general
Number of new services connected	
Number of service calls completed (by geographic area)	To indicate the level of work performed on existing system beyond general maintenance
Amount of wastewater treated (by treatment type) (BG):	
Primary treatment, Secondary treatment or Tertiary treatment	To indicate the flow through the system and the relative volumes requiring various treatments
Dry tons of sludge produced	To indicate the volume of dry sludge produced
Outcome Indicators:	
Number of main stoppages per 100 miles of sewer main (by geographic area)	To determine how well the infrastructure is maintained
Average service response time (in hours)	
Number of complaints (by geographic area)	To indicate the quality of service, particularly from the customer's perspective

[72] Hatry and Fountain, 1990.

Number of day's effluent exceeded federal and/or state standards-number of violations of discharge permit (Include reasons for noncompliance.)	
Number of days influent exceeded treatment plant capacity	To indicate the ability of treatment process to remove pollution adequately
Number of gallons effluent that did not meet federal standards/total number of gallons processed through system	
Quality of water in receiving body downstream from discharge	
Infiltration and inflow ratio	To indicate the condition of the infrastructure and the effectiveness of the maintenance program
Efficiency Indicators:	
Percentage of repairs completed within goal time	To indicate ability of the service group to clear calls within goal time
Wastewater treatment cost per 1,000 gallons	
Treated (by treatment type): a) Primary b) Secondary c) Tertiary	To indicate the cost of providing the service and for comparison with other wastewater entities
Sludge disposal or use cost per dry ton	
Revenue from sales of by-products less costs	
Explanatory Indicators:	
Description of what the receiving body is used for	To provide information on the systems impact on the environment
Population served	To allow the reader to understand the size and demographics of the system
Square miles served	
Average daily flow/maximum daily treatment capacity (by treatment plant)	To indicate the extent of excess capacity
Debt service coverage ratio	To show ability to pay debt
Projected needed capacity in 5 years/current capacity	To indicate the need for future expansion and funding
Total revenues from customer billings/total operating costs and debt service	To determine how much the city is subsidizing the department

Conclusions of SEA Performance Measuring

The SEA program has sparked a new level of public interaction with governments at all levels. Governmental agencies are making a concerted effort to seek and involve citizens, media, and tax payers, wherever possible, especially when their department is evaluated on the success their outreach efforts. While the majority of the information regarding states, cities and counties is replete with information about public reporting of water in general, water and sanitation quality standards are scarce.

Very few of the state, city and county websites actually display their information in terms of performance parameters. San Diego has water and sanitation actual and budgeted performance measures displayed. Those involved with the promulgation of SEA data suggest the importance of being patient and persistent in the development of a results-oriented approach. It takes time for a government culture to change. Five years after the introduction of Key Results and program/performance-based budgeting, one can begin to see an expectation about the use of data-supported approaches and decision-making. Leadership needs to reinforce consistently the process of a results-oriented approach, and to look for and document successes to keep the process going.[73]

The Ecuador, Argentine and Bolivian Approach to the Public Reporting of Performance[74]

The objective of this approach to utility monitoring and inspection (technically called primary internal monitoring) is to provide the regulatory agency with sufficient information to carry out its task of regulation vis-à-vis the utility, which is geared primarily to compensating for the lack of competition in the market for the utility's water and wastewater services.

This approach consists of a system of self-monitoring and private secondary monitoring as described below. It is founded on the premise that there is an adequate flow of information provided by the utility to the regulatory agency about their activities and services. This information should accurately reflect those activities.

It is also founded on the acknowledged experience and independence of an audit firm, which certifies that the information derived from self-monitoring faithfully reflects the actions of the utility.

The regulatory agency maintains the delicate equilibrium between private and public sectors that exists when trying to compensate for the lack of competition in the market through a system of monitoring and inspection.

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[73] Bernstein, David J. (Principal Researcher) CASE STUDY: Multnomah County, Oregon "A STRATEGIC FOCUS ON OUTCOMES", September 2002

[74] Extracted from the contract specified for Guayaquil, Ecuador from official translation of Annex 2 to the Dossier of Terms and Conditions of the Call for Tender of the Programme to License the Public Drinking Water Services and Sewer System of the City of Guayaquil. It was based on the previous systems for monitoring of performance in England, Wales, Buenos Aires, La Paz, etc..

This is a variation of the British approach that has been adapted for developing countries. This system has been adopted in Guayaquil (Ecuador), Buenos Aires, Santa Fe and Córdoba (the Argentine) and in La Paz (Bolivia).

Monitoring Responsibilities

In this system, it is the utility that is charged with the task of collecting the data for the monitored performance indicators, while external auditors carry out an audit of their outcomes. This secondary monitoring consists of an audit of both the methods used by the utility to compile, process and communicate the information and the data that was collected. The auditor must certify that the data portray a reasonably true picture of the activities of the utility.

Under this system, responsibilities are allocated according to the following criteria:

Efficacy: Given that the majority of parameters included in the monitoring indicators are useful for monitoring and managing the operation of their own services, the utility is responsible for collecting and recording the performance data in a suitable format (including whether or not performance targets are met).

Reliability: The secondary monitoring of performance indicators, the methods and the achievements by an auditing agency confers a greater degree of reliability on the data and reduces the risk of errors or omissions by the utility.

Feasibility: This system requires each utility to contract with an external auditor of good repute who provides staff suitable to carry out the secondary monitoring. However, there are many firms that carry out this type of activity in most countries, so this contracting does not usually present real problems.

Level of costs: The costs of the system are absorbed by the utility. Hence, it does not represent an additional cost for the regulatory agency. For specific topics, some monitoring activities could be carried out by the staff of the regulatory agency or by the health authorities.

Since most monitoring indicators are strongly bound up with the daily operation of the utility, it is in a position to bring together the highest quantity of data on these indicators from its system of information on operations. This approach is likely to result in the collection of information at a relatively low cost compared to other approaches that use external monitoring services.

Public Reporting

This approach is not as elaborate as the British approach in that the public reporting is not specified, (except in rare cases as part of the responsibility of the regulatory agency). The availability of information to the public depends on whether or not the contract is a public document and whether or not the reported performance information is public information.

In most cases, the contract is not public and the performance information is partly public, but not disseminated widely. Also since many performance indicators can be reported in highly technical terms, there is some need for a summary in terms more easily understood by the public (or by NGOs who serve as a link to the public).

In some cases (e.g. Buenos Aires), there is a requirement to provide a summary of the annual performance information to the public. However, the means of this reporting are negotiated with the Federal authorities and do not include communicating the results to the municipalities. The utility can contribute to the public reporting through its own actions outside of its contractual responsibilities (see Buenos Aires case study).

In summary, like the British approach, the Ecuador-Argentine-Bolivian approach provides an intermediate level of public performance reporting through the annual reports and website reports, that is supplemented by the efforts of individual utilities. However, less consultation with customers takes place, since no official channel exists to consult with the customers or local representatives.

ISO TC224 Working Group on Service Performance Measures

Two ISO TC224 Working Groups are in the process of developing a set of ISO standards for service performance measurement[75]. The purpose of these ISO standards is to provide guidelines for the assessment of drinking water supply services, wastewater services and their management. The guidelines should all relevant stakeholders (including public authorities, regulators and operators) to assess both the current performance of a system and its performance over time, with a view to encouraging continuous improvement in the level of service provided to the users.[76]

The standards are intended for voluntary application since there are wide variations in expectations or requirements amongst the regions of the world. In particular the standards do not include any targets/limits for the suggested performance indicators. Thus all stakeholders can use the document irrespective of their legal status or location in the world.

The standards will also facilitate dialog between the stakeholders, enabling them to develop a mutual understanding of the functions and tasks which fall within the scope of the water services, and will provide methods and tools for drawing up objectives and specifications and assessing their performance.

In selecting and defining service performance indicators, the two ISO Working Groups in the water distribution and wastewater sectors used the following principals. Each performance indicator should be:[77]

[75] There are two ISO working Groups (WG3 and WG4) involved in performance indicator work under the TC224 activity.
[76] This introduction is taken primarily from: Management of Drinking Water Systems, Guidelines for the Assessment of the Service, Draft 4, Secretariat of ISO/TC224 Working Group 3, January 30, 2004.
[77] From Management of Drinking Water Systems, Guidelines for the Assessment of the Service, Draft 4, Secretariat of ISO/TC224 Working Group 3, January 30, 2004

- Clearly definable with a precise meaning;
- Reasonably achievable;
- Auditable;
- Simple and easy to understand;
- Quantifiable so as to provide an objective measurement of the service, avoiding any personal or subjective appraisal.

The ISO Working Groups believe that only those indicators that are "essential for effective performance evaluation" should be selected. This would favor the smallest number of performance measures that covers the relevant types of performance.

The draft service performance indicators shown in Table B4 are under consideration by the ISO Working Groups. This table summarizes only the customer-related measures related to service performance and excludes other performance indicators that relate to operations or financial management. These indicators are still under development and may change as they are finalized. Several of them are based on International Water Association (IWA) indicators.[78]

As can be seen from Table B4, the ISO Working Groups take a very broad view of performance. They start from broad management and community development objectives and derive sub-objectives related to water and wastewater performance and then indicators for each sub-objective.

This means that the indicators measure not only direct relationships to water and wastewater sector performance, but also measure community involvement in planning for this performance.

Public Reporting of Performance Indicators

Although the draft ISO indicators are intended for measurements that lead to management improvement of performance, there is very limited discussion in the current reports about public reporting. The reporting section of the report from Working Group 3 at this time includes only the following bullet points on reporting and assessment:

- "Performance indicator assessment is a fingertip task, provided that data is correctly input and an adequate software application is available;
- [performance] reports should be customized, taking into account the intended use of the information;
- General reports may be limited to tables containing the results, but may also include graphic representations [such as maps];
- Internal comparisons are very important and effective, essential to monitor the effects of improvement measures;
- External comparisons may be very important in early stages and induce improvements in later stages;

[78] Note that the format and completeness of the draft indicators varies considerably between the two draft reports. Therefore, some adjustment was necessary to put them into the same format in Table 3.

- Based on the result interpretation, weaknesses should be identified and a diagnosis established;
- From these, decision-makers should establish short, medium and long term targets for improvement and implement the remedial measures."[79]

Indicator 4c in Table B4 indicates that transparency is a goal and public access is a service quality criterion, but the suggested indicator covers only one minor aspect of public reporting (freedom of information requests) that is linked to the US system, and probably not applicable to most countries. (This indicator may be elaborated in later versions of the draft indicators, when the working group focuses on it.) Therefore, the indicators do not address public reporting as yet, except in principle.

Conclusions on ISO Draft Indicators

The indicators shown in Table B4 represent a wider range of indicators than are normally considered by utilities or regulators. They are oriented to providing utility managers and community planners with key information for the monitoring of water and wastewater service performance.

These indicators are still in a preliminary form and will be further developed by the ISO TC224 Working Groups 3 and 4. However, there are inconsistencies between the products of the two Working Groups at this stage. We have tried to approximate the more refined indicators from Working Group 3 for the categories of performance mentioned in the Draft Working Document for Working Group 4.

Nevertheless, we can conclude that the public reporting aspects of the service performance indicators are encouraged but not specified.

ISO indicators are considered important in the world development of standards for the industries involved. Therefore, once the indicators are finalized, they will become standard references for more forward-thinking utility companies and will probably appear in contract wording (as is the case in the Guayaquil contract for existing ISO standards). They may also play a significant role in the selection of a winning proposal for future concessions or other PPP contracts.

[79] From Management of Drinking Water Systems, Guidelines for the Assessment of the Service, Draft 4, Secretariat of ISO/TC224 Working Group 3, January 30, 2004, page 70.

Appendix C
Case Studies of Public Reporting of Performance

This appendix examines specific cases of Public Reporting of Customer-Oriented Performance that were relatively successful. They include Metropolitan Manila PPA, Buenos Aires and Guayaquil. In addition, a number of cases of NGO activities for monitoring water and sewerage utilities in different countries are discussed in this section.

Public reporting of service performance generally refers to the publication of service provider data by regulatory agencies. (Kingdom and Jaganathan, 2001). However, to be effective, this information must be communicated to the stakeholders in a process that facilitates feedback and leads to service improvements. Easily understandable, and accessible, service performance information enables the public to put pressure on poorly performing utilities to provide better services.

The following three case studies (Metro Manila, Buenos Aires and Guayaquil) examine different situations where public reporting was carried out. This is followed by case studies of NGO involvement in the monitoring of water and sewer utilities.

1. Metropolitan Manila Public Performance Reporting

The Public Performance Assessment (PPA) process in Metro Manila[80] represents a major extension of current efforts in developing countries to improve utility performance measurement and public feedback for service improvements. It is being used to set up a baseline and monitoring system for service levels under privatization of utilities that incorporates the user perspective and deals with changes in service to different groups of users (e.g., low income households). The PPA is outside of the contractual obligations the utilities[81], but involves the cooperation of the Concessionaires.[82]

<u>The Public Performance Assessment (PPA) Project</u>

The PPA project was designed to help the Metropolitan Manila Water and Sewer System regulatory agency (MWSS) independently monitor and evaluate the performance of the two private Concessionaires who were awarded concessions in 1997 for delivering water and sewer services to 14 million people (the largest privatization of water distribution in the world). The MWSS is both the owner of the utility and the regulator.

The goals of the Project were to:

- Increase accountability for water service performance
- Increase the transparency of water service performance
- Support good government: people-oriented and service-driven Get customer feedback for better service delivery

[80] See Cook et al. "Performance Measurement, Information Technology and Participatory Process in Metro Manila Water Distribution", Proceedings of the International Conference on Information Technology and Public Participation, MIT, Cambridge, MA, November 2003.

[81] The concession contracts do specify that the utilities must supply any information requested by the Regulator.

[82] The PPA also does not address tariff issues, only service performance issues.

- Promote results-oriented water service performance

The specific objectives of the PPA project were to:

- Improve water distribution service delivery in Metro Manila in an accountable, transparent manner;
- Design, implement and evaluate a Pilot Public Performance Assessment (PPA) system for Metropolitan Manila, including:
  - Performance measurement,
  - A PPA information system with data viewing by location and data sharing,
  - An improved public information dissemination and feedback program.
- Effect rapid transfer of technology and expertise to Philippine institutions (MWSS and University of the Philippines) for future sustainability and independence of the PPA.

Its initial form was partly a research project and partly an implementation project. The project was created in response to a major concern expressed by both public interest groups and local governments that service might decrease in some areas or for some low-income households in favor of wealthier households as a result of privatization. There were also concerns about the transparency and accountability of the MWSS in monitoring the services provided by the utilities.

In response to these concerns, the MWSS and the World Bank created the PPA Project to enhance the information available to MWSS-RO, the utilities and the public concerning the performance of the two Concessionaires in all aspects and to provide this information to the public using independent observers. The greater availability of public information was intended to improve service decisions through users feedback, as in **Figure C1**.

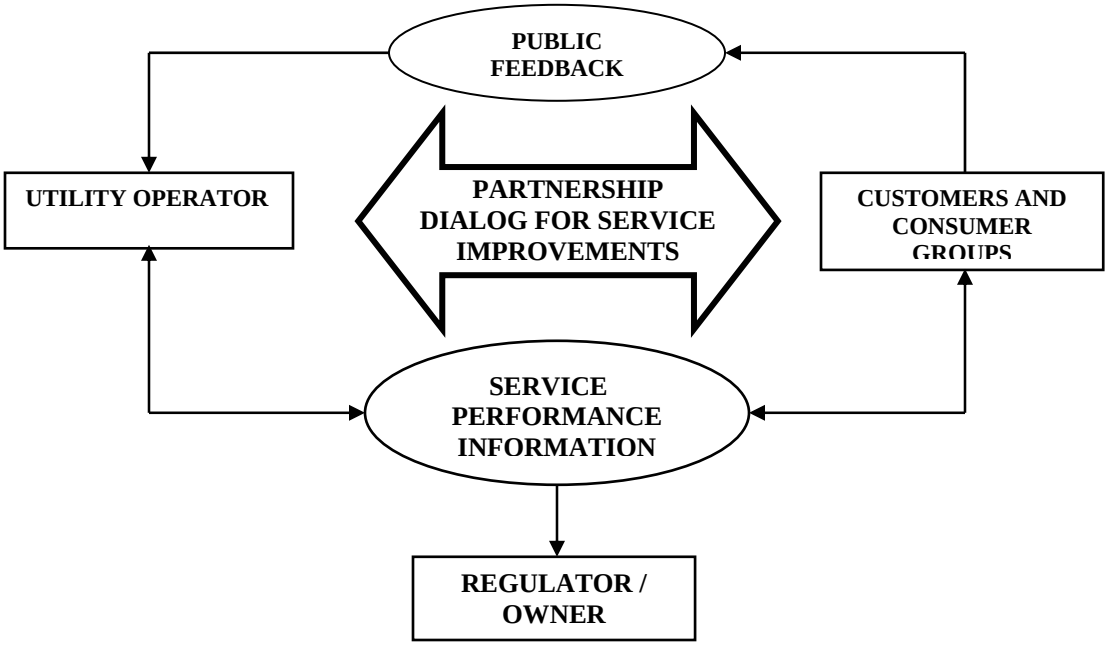


Figure C1: Public Information Feedback to Improve Service

This is different from other types of public reporting for several reasons. First, it establishes a baseline of service measurement in local areas (called Barangays) that is more detailed than available before in either Concessionaire documents or MWSS Regulatory Office information systems (including the baseline studies for privatization). This baseline provides service performance information with a customer focus as well as the usual utility focus, and is therefore more meaningful to a range of stakeholders in assessing the service provided and the changes in service since privatization.

Secondly, the PPA contains a public dissemination and feedback process that is revolutionizing the role of public participation for the Regulatory Office. The RO has recognized that it now has the tools to be more proactive in their approach to interacting with stakeholders. As a result it has organized four different ways to communicate (a) through the traditional media news releases, (b) by "Road Shows" to bring performance data maps to the local governments, (c) by providing a hands on "Performance Café" for customers and interest groups at the MWSS headquarters, and (d) sponsoring a "Performance Corner" in the Concessionaire local offices (still under discussion) where customers could see how their service compares with other locations. Also an MWSS Internet web site is being created to show performance on the web (among other things).

Thirdly, local competency and expertise for future sustainability of the PPA was developed from inception through completion of the project. Filipino experts from the University of the Philippines National Engineering Center (UP-NEC) were designated by the MWSS as the recipient of the transfer of technology component of the project. The prominent role of UP-NEC as an independent assessor of performance counteracts the mistrust of public officials that is common among interest groups and the public in Metro Manila.

The result is the start of a win-win-win situation with the Regulatory Office, the Concessionaires and the other stakeholders. The experiment is still in process, but there are indications that it has changed the dynamics in Metro Manila for improving the performance of water distribution services.

Performance Measures

PPA performance indicators were developed from a combination of sources including World Bank research in other countries, other current performance practice, concessionaire contractual obligations, and the analysis of the available performance data. The performance criteria established for the PPA are shown in the following table.

The performance criteria are evaluated from two different points of view – that of the Concessionaire/utility (i.e. Provider-level) and that of the User / Customer (i.e., Consumer-level). For each viewpoint, performance indicators were identified and calculated for 100 Barangays throughout the Metro Manila area.[83] This also allowed the ranking of Barangays according to their performance in each indicator and for combined performance across all indicators.

Table C1: Provider and User / Customer Performance Indicators Used in Metro Manila Public Performance Assessment

Performance Criteria	Provider Level Performance Indicators	User Level Performance Indicators
Network Quality	• Continuity of supply (24 hrs.) • Risk of contamination due to low pressure • Daytime pressure indicator • Nighttime pressure indicator	• Continuity of supply • Supply interruptions • Daytime pressure indicator • Nighttime pressure indicator
Water Quality	• Total coli form count • Residual chlorine concentration	• Water smell • Water color • Water taste • Sand and foreign bodies
Risk of Communicable Diseases (Health Quality)	• Confirmed cases of cholera and typhoid fever • Suspected cases of cholera and typhoid fever	
Service Quality	• Promptness of effective response to complaints • Resolution of complaints	• Courtesy of concessionaire • Effectiveness of complaint resolution • Speed of resolution of complaint
Coverage	• Percent population with connections • Percent population with multi-house meter service • Percent population with public tap service • Percent establishments with connections	

The Consumer-Level performance indicators are based on consumer responses to a set of survey questions that reflect perception of service provision while the Provider-Level performance indicators are based on review and analysis of Concessionaire data. Statistical measures of performance were calculated from provider data, using new techniques not previously employed by the Concessionaires. These indicators were aggregated and combined to accomplish a range of performance reporting objectives as a means of decision-support for the MWSS Regulatory Office. (Note that Health Risk was

[83] More Barangays are being included as part of an annual data collection activity by UP-NEC which will cover all Barangays in a five year period, while still giving performance measures at the municipality level each year.

kept separate from the other indicators and coverage by household was considered but not retained, due to lack of detailed data)

The most effective aspect of this performance system was the ability to see local performance results in color-coded maps (e.g. good, fair and poor performance by Barangay shown as different colors). This attracted both public and utility manager interest.

Improved Feedback Process

Before the PPA project, MWSS was a purely reactive organization with one-way communication, which issued press releases responding to issues raised by the press or relayed news of happenings in the Metro Manila water system and the MWSS organization. It also tried to create positive stories in the press to improve the MWSS image as a regulator, with little success.

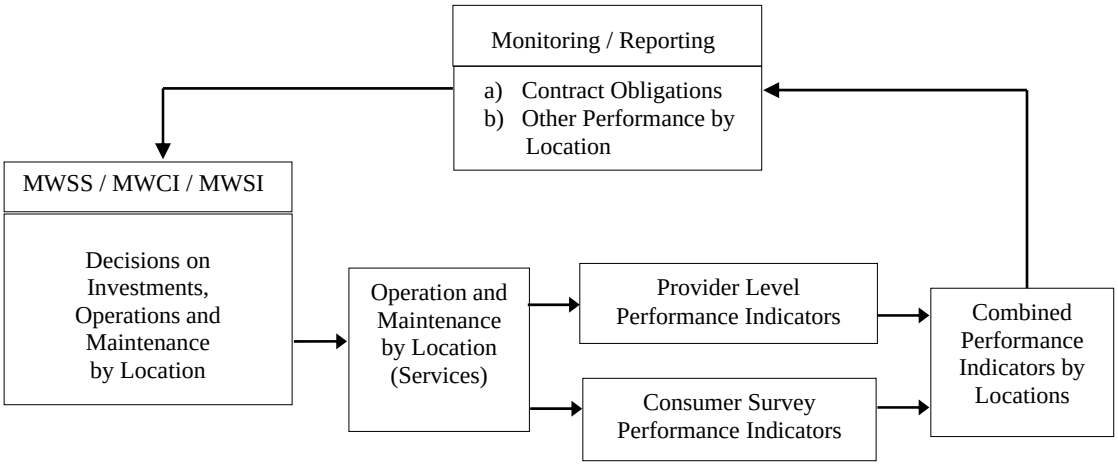


Figure C2: PPA Performance Feedback

The PPA project instituted a four-pronged strategy to create a more pro-active approach. The four components were: (a) "Road Shows" to bring performance data maps to the local governments, (b) a hands-on "Performance Café" for customers and interest groups at the MWSS headquarters, (c) a "Performance Corner" in the Concessionaire local offices where customers can see how their service compares with other locations and (d) an MWSS Internet web site is being created to show performance on the web. These are illustrated in Figure C3.

Road Shows

The Road Show component was the first one implemented by the MWSS, and the first to produce results. The Road Show was created as a new means of providing feedback to those communities (Barangays) that had been surveyed for their opinions about water service performance in their areas.

The steps taken by the MWSS for a Road Show evolved over time. After this evolution they were:

1. Prepare reports, maps and survey results for the Barangay (using PPA info system with GIS mapping)
2. Organize a Barangay meeting with Concessionaire Managers present
3. Present performance and survey results
4. Get feedback on Issues
5. Have Concessionaires show how they plan to improve performance
6. Elicit an Action Plan and commitments from the Concessionaire

The Road Shows were originally conceived by the MWSS as means of presenting survey results to the public, without any intervention by the Concessionaire. This generated some interest in what service they were receiving, but raised some questions that only the Concessionaire could answer. Then the Barangay representatives in the meeting asked MWSS to invite Concessionaire managers so that they could ask them those questions. The MWSS responded to this request and brought the managers to the next meeting. When the questions became specific as to when and where the service would be improved, the managers were put on the spot, but they gave the information.

This gave an opening for the MWSS to ask the managers to make a commitment for improving service by a certain date. The MWSS asked for this commitment in writing and then followed up to see if the commitments were observed.

The evolved form of the Road Shows was a major form of Metro Manila citizens' empowerment for those who participated. They were using the MWSS as a vehicle for increasing the accountability of the Concessionaires to their concerns. The MWSS greatly benefited from showing a proactive side to the public and increasing the transparency of their actions to monitor the Concessionaires.

Performance Café

The Performance Café, is a room designated at MWSS headquarters for showing performance to the MWSS staff, Concessionaires or general public. This room has information about PPA on the walls and has a computer access to performance data that can be used by anyone with help from PPA staff. They can create and print performance maps for any indicators in any location, or for the area as a whole and give them to the visitors. They can also print out a table of performance indicators for any selected Barangay.

The Performance Café represents a major step in making information available to the public in a way that is easy to understand because it is color-coded on a map and it shows a 5-point scale from very good to very poor. It also showcases the GIS technology that can give an answer to the question, "What service are we getting in my Barangay?" Another innovation that was implemented in the Performance Café was the mapping of squatter areas, which are the main low-income areas in Manila. The Concessionaires created new programs to specifically help the squatter areas and also increase their

revenues and reduce leakage. The extent of these programs in low-income areas can be seen using the GIS technology for mapping.

This has a limitation, however, in that a person must come to MWSS headquarters in order to access the information. Another limitation is that accessing the data requires the assistance of PPA staff. These limitations can be overcome with the implementation of the other two components of the PPA public feedback program.

Performance Corners in Concessionaire Offices

In order to place the results of the PPA performance analysis close to the consumers, the project recommended the creation of "Performance Corners" in the local offices of the Concessionaires where many people go to pay their water bills. The idea is to have a place designated in these offices where MWSS staff can place maps and description of the service performance of these offices. This would be an extract of the information from the PPA Performance Café that is oriented to the local area served by the office. To complement the Performance Corner, the PPA project also recommended that the Chief Regulator also give an award for best performance and most improved performance that could be displayed in those offices. The idea is that this would give a positive incentive for the Concessionaires to adopt the Performance Corner concept.

This component is still under discussion between MWSS and the Concessionaires.

Performance Website

Another PPA recommendation that is now being implemented is the development of an MWSS website. This website would provide the public with an overview of the MWSS mission and responsibilities. It had been recommended as part of the proposed MIS development before the PPA project, but not implemented.

The PPA expanded on the recommendations for this website to include an interactive performance page. This page would give a visitor the ability to enter a location and see the service performance indicators for that location.

This component will expand the availability of the information in the Performance Café to those who have access to a computer and the Internet.

Stakeholder Comments

Another method used to gain stakeholder feedback during the PPA project was a series of Stakeholder Forums held in Manila. The final stakeholder forum in June 2001 elicited comments from a wide range of stakeholders, notably:

> "The PPA system has given the MWSS-RO a solid basis for assessing performance and we will use this for both our internal validation of Concessionaire performance and as a basis for being more proactive with our customers." Col. Angel Agustin, Deputy Administrator, Customer Service Regulation, MWSS-RO.
>
> "We do not want the PPA to be used as a hammer, but as a Partnership Tool…It may also give us key information (performance by location) to use in rate rebasing discussions." Mr. Antonio Aquino, President, Manila Water Company, Inc.

> "The PPA has great potential for giving important information on Concessionaire performance to people in poor communities. It gives us more hope that there is a structure or system where good performance information can be obtained." Sister Annie Abion of CHHED Foundation, NGO activist, Manila.
>
> "…the inclusion of consumer perception through the Consumer Survey was a breakthrough…we can see a model on how we should really measure our performance and improve the delivery of service to the general public …rest assured that CONSUMERNET will be one with you, in partnership with you, for the effective implementation of the project." Mrs. Teresa Mahiwo, CONSUMERNET, NGO activist, Manila.

In addition, the National Economic Development Agency (NEDA), which is the national economic planning body in the Philippines, stated that this is one project that has increased accountability and transparency in the Philippines and not just talked about it. They believe that it could be applied to privatizations of water supplies in other cities as well. They also stated that the approach may well be applicable to other sectors, such as energy and sanitation.

Cost of Public Reporting

The cost of contractual public reporting in the Metro Manila case is in two parts: the annual contractual arrangement with UP-NEC and the additional costs for the Regulator's office. The UP contract cost is in the range of US$40-50,000 and this includes the survey of 400 Barangays, processing of the survey to get performance indicators and the processing of information from the concessionaires to arrive at the performance indicators. The annual cost for MWSS for the maintenance of the PPA performance measures, running the Performance Café and the Road Shows is estimated at US$30-40,000 per year. Website publication of performance information is not considered a significant cost on top of normal website maintenance. At the start, this required a one-time investment for information systems that is estimated at US$200-250,000.[84]

Conclusions

In conclusion, the contractual system for public reporting was limited in Metro Manila. However, a major effort was undertaken by the MWSS for both research and implementation of the PPA. This has revolutionized the public reporting of information in Metro Manila and created much more of a partnership than is found in other countries.

It is now apparent that the privatization agreements for Metro Manila Water Utilities were not completely transparent and accountability was being side-stepped by both the utilities and the regulatory agency. This was due to the unrealistic nature of the performance and penalty clauses in the Concession Agreements. It was also due to the lack of attention of the baseline report to the variations in existing performance by location throughout the Metro area.

If the PPA had been implemented prior to the privatization, with its emphasis on identifying service by location, there would have been a basis for accountability. It would also have served as a starting point for monitoring actual performance changes by

[84] Including all information systems aspects of the PPA and GIS data development, but not including the research to define the indicator system.

location, and led to increased transparency for the public, since the actual performance would have been clear from the start. This transparency would have led to a better estimate of the necessary capital investments and also would have given the Concessionaires a more realistic basis for making their bids. There would have been no need to hide the difficulty of meeting the performance targets.

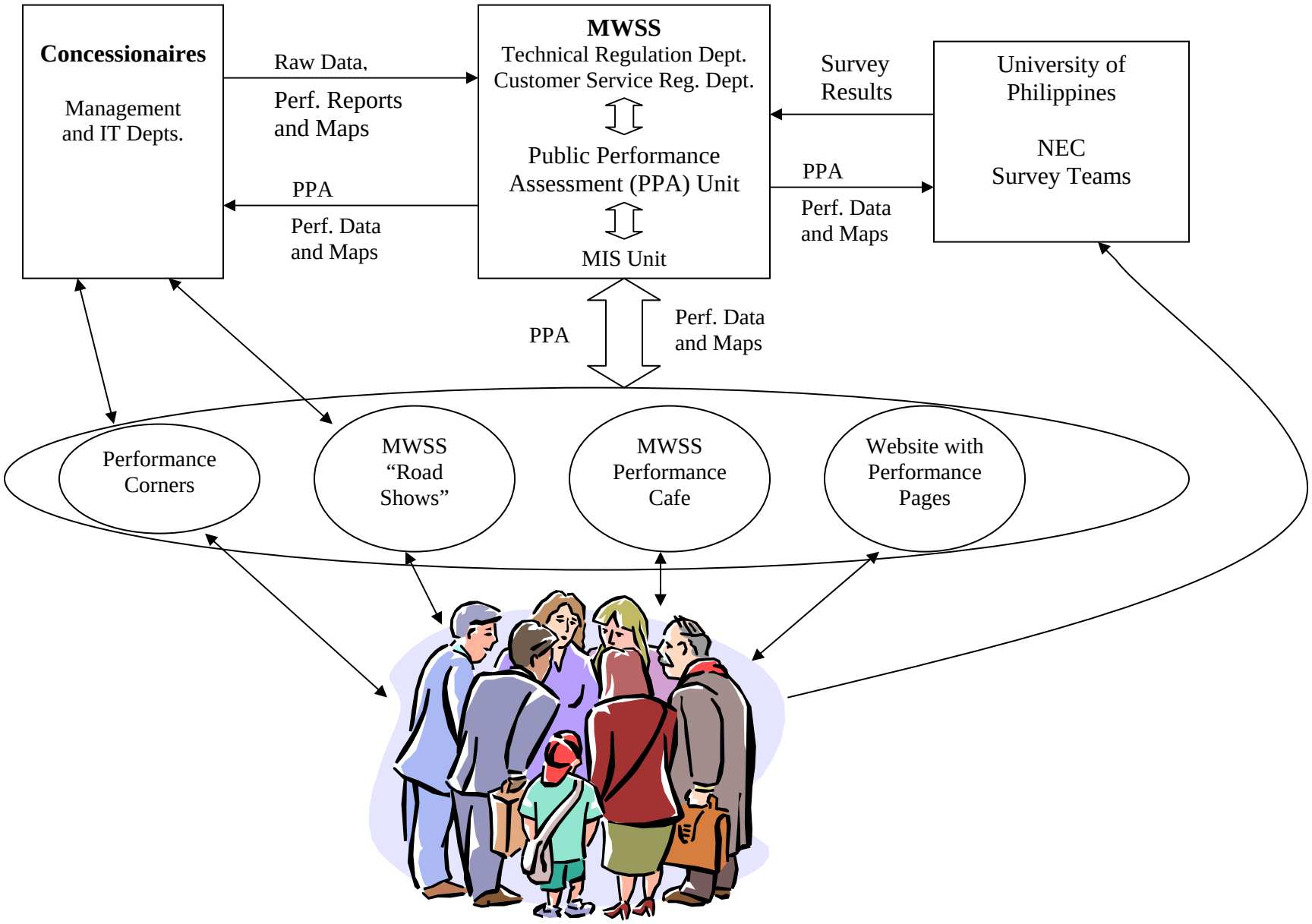
The PPA performance indicators were also used in support of litigation between the Regulator and one of the Concessionaires in resolving a dispute over contract issues in 2003. This produced a new reason for the development of a performance reporting system from the viewpoint of the regulator, and it could work equally well for the concessionaires' further service levels documentation.

The PPA, however, did not address the issue of tariff adjustment, as this was purposely left out of the approach. This is a weakness in implementing a more complete partnership approach between the operator, the owner/regulator and the customers.

The role of NGOs has increased, although the full impact of the PPA public reporting has yet to be felt. The media have also been slow to exploit the information, which is not as readily visible as it could be, since it is found primarily in the MWSS headquarters.

The total cost of public reporting is on the order of US$70-90,000 per year with an initial investment of US$200-250,000. When the investment is annualized over five years and added to the annual costs, it is still less than 1/2 of 1% of the tariff revenues. So it is an insignificant component of the water and sewer tariffs in this case.

Figure C3: IT Links Between MWSS, Concessionaires and the Public



2. Buenos Aires Public Performance Reporting

The concession contract in Buenos Aires, Argentina, is one of the longer concession experiences in a developing country as it was established in 1993 for a 30-year period. It includes the entire water cycle of water supply, water distribution and wastewater treatment.

It is a full-responsibility concession contracted to Suez Environment, a large international firm based in France. Therefore, it includes technical and cost management, the development and elaboration of expansion and rehabilitation plans and capital investments.

The Buenos Aires area has a population of about 10 million, making it one of the largest concessions in the world. The contract is with the Federal Government, but there is the Province of Buenos Aires, the City of Buenos Aires and 17 municipalities who are stakeholders in the concession.

Buenos Aires is a relatively wealthy city with a large middle class. However, the per capita income has taken a major plunge in the last two years due to the economic crisis in Argentina.

Concession Performance Requirements

There are two major reports required annually by the concession contract: a) a Service Level Report and b) a Progress Report on the 5-Year Plan for capital expenditure.

The major performance objectives reported annually are:

- Improvement of water and wastewater services (from a poor starting condition) with time-related targets for achievement (e.g., minimum pressure of 10 m for served areas, water quality[85] and time of response). (See Table 1) Water pressure is reported as % of area served which meets the standard.
- Expansion of coverage to full coverage (from 60% coverage for water and 50% for sewerage in 1993), numbers of new connections for water and sewer.
- Environmental targets (e.g. increased % of wastewater to be treated and increase in level of treatment) and water discharge quality for each plant.
- Expansion projects started and completed.

The annual Service Level Report to the regulator shows the level of achievement of all targets and a synthesis of this information is required to be supplied to the customers (without a specified method for the customers to receive it, except through the regulator's office or the offices of the utility). Also reported are the capital expenditures and tariff changes, which are tied together. The Regulator vets the customer report and no public

[85] Water quality reporting includes the percent meeting standards from testing for (i) bacteria, (ii) chlorine, (iii) turbidity, (iv) nitrates, (v) alumina, (vi) chrome, (vii) mercury, (viii) cyanide, (ix) arsenic and (x) lead on an annual comparison basis. The water quality standards were also reported for 1993, 1998 and 2003, including color, taste, turbidity and 47 other quality measures.

relations material is allowed other than straight performance reporting. The objective of this reporting is a high level of transparency and accountability.

The information in these reports is required to be audited by two independent auditors, one for the technical aspects and one for the financial aspects. The methods used to determine the Level of Service must also be certified as satisfactory for producing accurate information.

Table C2: Response times for Customer Requests Reported in 2003

Request	Quantity	Median Response Time 2003	Median Response Time 2002	Standard for Median Response Time
1. Water Connection	2,836	12 days	15.6 days	30 days
2. Sewer Connection	1,580	10 days	18 days	30 days
3. Pipe Repairs	11,971	5.3 days	6 days	30 days
4. Low water Pressure	27,995	0.82 day		
5. Water Leaks	68,698	1.5 days	1.7 days	10 days
6. Sewer Overflows	5,206	0.96 day	0.89 day	1 day
7. Water Stoppages	13,336	0.59 day	0.89 day	1 day
8. Water Quality	4,096	1.22 days	1.19 days	1 day
9. Water Filtration	4,327	3.9 days	4.8 days	10 days
10. Sewer Collections and Connections	123,724	0.8 day	0.8 day	10 days
11. Meter Breakdowns	1,397	2.2 days	1.7 days	1 day

Source: Informe Annual y de Niveles de Servicio, Aguas Argentinas, 2003.

The information reported has evolved over time. This has changed in two ways:

- The quality and reliability of information has increased and
- There have been changes in the way the information is packaged for different stakeholders.

In 1993 at the start of privatization, the information on services was very poor. There was no macro metering of water pressure and flow, so basic information was missing. This required investment in monitoring equipment, which took some time to order and install before better information was available. Also the rest of the information system for operations had to be built from scratch (taking 1-2 years).

The methods of reporting to the Regulator have also evolved over time. Initially reports were submitted in hardcopy to the Regulator's office. Now there is electronic transfer of information with monthly and quarterly information provided upon the request of the Regulator.

The communications and quality of reporting is still improving.

Public Reporting

The public reporting for the Concessionaire has also evolved over time as the Concessionaire experimented with different methods. Originally, there were only hardcopy reports submitted to the Regulator's office. This was supplemented by placing Public Synthesis Reports in the offices of the Concessionaire (20-25 offices).

Next, there were summaries of performance reporting that were sent to customers with their bills at the end of the year. This was very limited reporting due to the space constraints on the inserts, which were small leaflets. This did not appear to work for the Concessionaire since the large majority of customers did not read the inserts (inserts with practical advice were read more often).

Recent developments (in the last two years) include performance reporting on the Concessionaire's website. This is relatively successful, but limited to those with Internet access.

Specially packaged and tailored regular information is now provided to each of the 17 Municipalities. Also the Association of Consumer Organizations now receives access to on-line information on performance, similar to the Regulator's office.

The Concessionaire also pursues public relations activities, such as education programs in the schools and open door sessions with public groups, which provide education about the water cycle, the services and the role of the utility in the economy. They also include information about the value of water, and the improvement in water and wastewater systems since privatization.

Voluntary Public Reporting

In addition to the evolution of reporting over time, there was an example of extensive voluntary reporting by the Concessionaire. This occurred during the preparation of the Second Five-Year Plan for the Concession in 2000, and took more than a year to complete.

The Concessionaire put together a series of presentations on service quality aimed at a variety of stakeholder groups. The information in these presentations was checked with the Regulator's office for validity before they were made. Some of these presentations were made as part of a public hearing process, which was an extra-contract activity agreed with the Regulator and some were for municipalities and other stakeholder groups.

This consultation process was intended by both the Regulator and Concessionaire to get "buy-in" from the different stakeholders as the plans were adjusted to their needs. At the end of the process, the different municipalities gave their approval to the revised plan. This approval was not a legal requirement, but was critical to the political process.

A key aspect of the presentations was that they were forward-looking in that they provided information on investments that would have to be made in the future to achieve the targets and the expected impact on tariffs. This allowed the stakeholders to make

trade-offs during the discussions and in their recommendations for service improvements. This was a major addition to the public reporting aspects of the Buenos Aires concession, which entered into the political arena and created a basis for a dialog on expectations for service that were related to both investments and tariffs.

Impact of the Recent Economic Crisis in Argentina

In the last two years there has been a major economic crisis in Argentina and the average per-capita income has plummeted. This has led to major political pressures on all services (among other businesses) to minimize prices. There has also been a major increase in nationalism with increased pressure on international firms, such as Suez Environment to justify their role.

It is generally a more sensitive environment than before 2000. Argentines are less likely now to trade-off better service for higher prices. Also the government has had to shift its position to be responsive to more ideological positions that question privatization, regardless of performance. There is also more criticism of any service interruptions that may occur than there was before 2000.

As a result, the Concessionaire has taken a more proactive approach to reporting information to the public. It is presenting more educational programs and more paid advertisements in the newspapers to publicize good performance. It is also more sensitive to the different views of stakeholders and provides more tailored messages to each group, primarily through the media.

Some of the recent improvements in providing performance information to municipalities and on its website were also in response to this more demanding environment.

Cost of Public Reporting

The Concessionaire considers the cost of contractual public reporting in the Buenos Aires case as a marginal cost because it is basically a summary of the same information that is required for the Regulator. There is some cost for printing and dissemination in the range of US$20-30,000 per year. At the start, this required a one-time investment for information systems that is estimated at US$5-10,000.

The extra effort to tailor information for the municipalities and other stakeholders has some cost, estimated at US$10-20,000 per year. Website publication of performance information is not considered a significant cost on top of normal website maintenance.

Public satisfaction surveys can be considered another aspect of public reporting. These are done primarily for management purposes, so they do not represent an additional cost. However, the cost of these surveys in this case is estimated at US$10-20,000.

Conclusions

In conclusion, the contractual system for public reporting in the Buenos Aires concession was limited. However, it has been expanded by the Concessionaire (in collaboration with the Regulator's Office), through voluntary actions that have significantly increased the availability of service performance information to the public. Therefore, the public

reporting program is both contractual and a non-contractual reaction to the need for more publicly-reported information.

The types of public reporting of service delivery information in this case included:

- The annual service performance report – available at company offices and the Regulator's office;
- Customer surveys to determine satisfaction with service;
- An active program of education in schools, open-door presentations and plant visits;
- Radio and newspaper advertisements;
- A website with performance information; and
- A special voluntary program at the time of the Five-Year Planning exercise to prepare extensive materials and participate in workshops with public officials and NGOs in discussion of investment plans and trade-offs of service expansion vs. tariffs for the future.

The voluntary workshop program was a major addition to the public reporting aspects of the Buenos Aires concession. This approach entered into the political arena and created a basis for a dialog on expectations for service that were related to both investments and tariffs. This was a relatively successful extension of public reporting that did not appear in other case studies.

The role of NGOs has increased and the Concessionaire has significantly increased the level of information to the Association of Consumer Organizations.

The total cost of public reporting is on the order of US$50-60,000 per year with an initial investment of US$10-20,000. This is less than 1/10 of 1% of the tariff revenues. So it is an insignificant component of the water and sewer tariffs in this case.

3. Guayaquil Public Performance Reporting

In April 2001, International Water Services (Guayaquil) BV of the Netherlands won a 30-year concession contract awarded by the Ecuador National Modernization Council (CONAM), financed by the Inter-American Development Bank. The company formed an Ecuadorian subsidiary with local partners called Empresa Interaguas, which has exclusive rights for water distribution, collection and treatment of wastewater, direct billing and collection from customers throughout metropolitan Guayaquil.

Guayaquil has a population of 2.3 million with a growth rate of 3 % per annum. According to UNICEF, 70% of the population lived in poverty in 2000, up from 32% in 1995. Just over two-thirds of the city's residents currently receive municipal water services. Those left without are typically in the poorest neighborhoods, which are also burdened with a lack of sanitation infrastructure. Ecuador is currently suffering its worst financial crisis in forty years and economic conditions are deteriorating.

The contract requires Interaguas to manage, improve and expand operations of the water services for Guayaquil under the responsibility of the Guayaquil Potable Water and Sewage Company (ECAPAG), the municipal-based waterworks authority of Guayaquil, Ecuador. Interaguas' relationship with residential customers is governed by general consumer rules and by national law. It stated goal is "to provide water and sewerage services in accordance with the contract and also help improve the living conditions of the people of Guayaquil and the sustainable development of the local environment".

With the signing of the concession, ECAPAG took on the new role of autonomous sector regulator to enhance accountability. Its primary functions are to ensure that the investor fulfills its contractual obligations and that residents of Guayaquil receive adequate service. ECAPAG retains full ownership of the existing assets and receives an annual concession fee of one million dollars. Duties include oversight of quality, technical control and supervision, economic and financial supervision, tariff setting, and claims resolution.[86]

In 2002, Interaguas increased the number of registered and billed customers by 12 percent. Interaguas chose to begin the expansion program in the community of Isla Trinitaria, a slum of some 100,000 residents located on an island in Guayaquil.

By the end of 2004, Interagua plans to install 50,000 new meters. They've also reduced prices by paying for bulk generator services for energy. Other new connections, about 100 a month, are installed on empty lots in already serviced areas where the municipality registers the plots and land ownership is legalized. Illustrating the synergies between the company and the local government, the mayor has accordingly instituted a program to allocate 40,000 lots to low-income citizens, to help them achieve service and to discourage squatting.

Interaguas has also introduced ongoing, comprehensive monitoring of effluent discharges in the River Guayas.

There is a cross-subsidy program designed to make water service affordable to low-income customers, which is strongly supported by ECAPAG. A telephone tax and small drainage maintenance tax currently provide additional subsidy funds.

Interaguas is changing the culture from one that was reactive to one that plans maintenance. The company now has a regular maintenance program that over the past two years has cleared 162 km of canals of vegetation and debris. Another 4.2 km of new canals have been built. As a result, the city has seen a significant reduction in pluvial flooding. Some of the work, including the construction of drainage canals, is being reimbursed under a municipal tax mechanism. Together with community leaders, Interaguas has instituted an "El Niño Prevention" campaign, which focuses on mitigating

[86] Much of the following information is abstracted from an article entitled: MIGA in Ecuador-"MIGA-supported project to deliver water to a quarter million of Ecuador's poorest", available at: http://www.miga.org/screens/pubs/miganews/vol11no1/vol11no1.htm#6

the impacts of flooding by keeping drainage canals and sewers free of litter, using a cadre of volunteers.

Concession Performance Requirements

The major performance objectives for Interaguas are to:

- Operate and maintain the potable water services and meet technical service targets for:
  - continuity of supply
  - minimum pressure
  - water quality;
- Invest as needed to upgrade and expand services;
- Operate and maintain the sewage, and water drainage services and meet technical service targets for treatment of wastewater effluents that improve over time (exact standards to be negotiated during the 5-year tariff reviews).
- Expand the water system to include 55,238 new water connections (276,190 people), all in low-income areas, mostly in the southern part of the city, by the end of a five-year period. (The municipality hopes to have 90 percent coverage of water services and 60 percent of sewage in 10 years.)

Tariff increases are linked to:

- Pre-determined improvements in the quality of water and service
- 30% increase in potable water connections.
- 40% increase in sewage connections

It has taken Interaguas about two years to come up with reliable systems for data collection and data processing for performance reporting (both for internal purposes and external purposes).

The regulator (ECAPAG) continues to ask for more information, although the information provided is not necessarily well utilized. The regulator is still experiencing difficulties in carrying out its new functions.

Public Reporting

Since its inception, the project has had a strategic identity campaign in place to let the public know about the company, service, and expansion plan, as well as to educate them on how to conserve water. The environment is highly politicized, partly because this is the first privatization in Ecuador in recent years, and partly because of the economic conditions in Guayaquil. Therefore, there is a lot or pressure on Interagua management to present a clear picture on their actions and progress toward their targets. They have adopted a policy of being "honest about what they have and have not accomplished"[87]. The idea is to get information into the community before the lack of information leads to speculation in the press.

[87] Interview with Yvon Mellinger, General Manager of Empresas Interaguas, May 2004.

The campaign has so far involved the news media, radio, a website, and face-to-face communications, including grassroots visits to 150 schools, 300 community meetings, and 10,250 individual homes. The objective of Interaguas for the campaign is to "Let the community know exactly what we plan to do and get their input, so there's as little disruption to their neighborhoods and lives as possible." The door-to-door interactions are proving to be a very positive measure. Also, programs such as the El Nino Prevention Campaign also serve to bolster Interaguas' image.

Since eighty percent of Interaguas' clients are lower income, the company determined that using radio ads and news interviews was the best medium for minimizing costs and still effectively reaching its customers. The company found that meeting NGOs and public officials in a radio news program was generally more effective for getting a message out and receiving feedback than were confrontations in public forums.

Interaguas also puts out press releases for the local newspapers trying to put forward a positive message on what it is trying to do in providing water service. (This program does not always work in favor of Interaguas, for example reports on provision of service to low-income areas generated stories in the press on how low-income areas were getting better service than middle-income areas.)

In addition, Interaquas conducts customer surveys, which provide feedback on services received. These are considered essential to monitoring public reactions to Interaquas services and image.

Interaguas has recently introduced a new customer service office and improvements to its Call Center in order to increase its responsiveness to clients. A major goal is for service requests to be answered in just one call or visit.

Interaguas maintains a customer complaint database and monitors the overall number of complaints received in a month. One target is for the number of complaints not to exceed 1,500 per month. However, they receive one complaint for every two meters because the house connection pipes are in such bad shape.

The company is also trying different ways to get people to pay their bills on time, and has introduced new collection services and incentives such as price reductions and prize giveaways for those with current accounts.

Cost of Public Reporting

Client outreach is not an afterthought for the Guayaquil project. There is a contract provision requiring an upfront expenditure of $1.5 million dollars to provide public education during the initial years[88]. However, the cost of this reporting is considered by Interaguas as a part of doing business. It is necessary to maintain a working relationship with the stakeholders and the company "will spare no expense" in achieving this goal.

[88] The actual cost of public reporting is substantially less in a given year than this sum, which includes the time of company personnel for school visits, etc., as well as publications and information dissemination.

Conclusions

In conclusion, the system for public reporting in the Guayaquil concession was well funded under the contract, with substantial outreach activities. The situation in Guayaquil requires a significant investment in public reporting to maintain a working relationship with its stakeholders in a highly politicized environment. Because the population served is mostly low income with little education, a more active public reporting program is needed than for other situations.

The types of public reporting of service delivery information in this case included:

- The annual service performance report – available at company offices and the Regulator's office;
- Customer surveys to determine satisfaction with service;
- An active program of education in schools and plant visits;
- Radio and newspaper advertisements and interviews; and
- A website with performance information.

The role of NGOs has been active from the start and the press has been highly politicized.

The costs for the public reporting aspects of the utility operations represent a significant component of the water and sewer tariffs in this case. These are still small on an annual basis compared to the water tariff per cubic meter.

Interaguas' approach to its contract is much more than just provision of water, sewer and drainage; it is trying to provide an education for its customers on the sustainable water use in twenty-first century living.

Appendix D
Potential Roles of NGOs and Consumer Organizations in Monitoring Water Utilities

Some NGOs and Consumer Organizations have traditionally seen themselves as watchdogs over the provision of water service and pricing in both developed countries and more recently in developing countries. This has often been an adversarial role vis-à-vis the water and wastewater utility operators and the government. However, in some cases this role has evolved into a more constructive one as representative of consumer interests in a formalized committee structure. These roles are explored below.

1. Types of NGOs

The term NGO is used here in a broad sense as a special interest organization that is not part of a government institution or a for-profit company. Within the NGO category, there are two types of particular interest to the monitoring of water and service utilities: a) development organizations (DOs) and consumer advocacy organizations (COs). The DOs see themselves as protectors of the poor and are interested in seeing poor sectors of the population supplied with services at affordable prices. The COs see themselves as protectors of all consumers and are interested in getting the best value in terms of service for price (or tariff) paid for all consumers. Of these two, COs are the most likely to have a long-term interest in water services.

There are, of course, differences between COs both in terms of their capabilities and interests. COs experience competition for funding, information, power and territory with other COs, and sometimes other NGOs. Relations between COs are complicated by the fact that consumer interests are not always monolithic, and there can be many points of view and approaches in addressing these interests. From the point of view of other NGOs in the sector, the consumer agenda is very wide. COs must represent all consumers, not just those who are poor. COs are sometimes seen as "fringe" organizations both within development (poverty alleviation) debates and in the water and sanitation sector.[89]

2. Issues Driving the Involvement of DOs and COs

The involvement of DOs and COs is driven by three major issues: (i) high prices paid by non-connected water users for water supplied by the informal sector, (ii) lack of water service or poor water service in many sections of large cities in developing countries and (ii) privatization of water services with uncertainty as to the service and price outcomes. In some cases also the government or utility owner has also taken the initiative and has proposed that COs have a seat on an Advisory Committee as a consumer watchdog. In other cases, such as Metropolitan Manila Water and Sewer Service Regulatory Office, the

[89] Many points in this Appendix are taken from a report entitled "From Protest to Proposal: Building Capacity for Consumer Organizations to Engage in Urban Water Supply and Sanitation Sector Reform" (World Bank Water and Sanitation Sector Program and Consumers International, 2004) supported by the World Bank- Netherlands Water Partnership (BNWP) with joint funding from the United Kingdom's Department for International Development (DFID) and the African Capacity Building Foundation (ACBF).

Board of Directors has included Consumer Advocacy Organizations as board members to help with the oversight of the Concessionaires.

3. Activities of COs

COs have undertaken many different types of actions in the water and sanitation sector. Some have been confrontational and some constructive. These include:[90]

- Fact finding and conducting workshops
- Advocacy in various forms
- Carrying out consumer education
- Becoming a service provider
- Representing consumers on advisory committees, regulatory boards and in other sector institutions

Fact-finding and conducting workshops includes: a) conducting surveys, b) holding country-wide water sector reviews, c) holding issue workshops and d) sponsoring national stakeholder meetings. Advocacy includes a) Lobbying government through petitions, letters, meetings and informal discussions, b) mobilizing consumers to demonstrate for a specific issue and c) using the media to express a position. Consumer education is closely related to advocacy, but it identifies and targets consumer groups based on the issues they face in accessing water supply and sanitation services and generally uses publications or media to get the facts across.

Service provision has taken different forms but it usually involves small-scale demonstration projects such as borehole drilling, supply of alternative water to demonstrate competition effects, etc. When it takes place, it is not a long-term activity of a CO.

Finally representing consumers on committees, boards and other institutions is the most useful long-term role for COs in the context of this report, but it takes commitment and willingness to work within the system, which is not always the desired mode of operation for a CO.

4. COs Representing Consumers

COs are often called upon to represent consumers on regulatory boards and other bodies. Examples of this are found in Zambia, where ZACA (a CO) was invited to be a member of the National Water Supply and Sanitation Council, in Senegal, where ADEETelS (a CO) has both a seat on the board of SONES the state asset-holding company in the water sector and has been appointed a member of the management committee for the next phase of water sector reform, in Metropolitan Manila, where CONSUMERNET is on the Board of Directors of the regulatory authority (MWSS). The lessons from these experiences are listed in Table D1.

[90] From World Bank Water and Sanitation Sector and Consumers International, 2004. Also 25 mini-cases of NGO activity in the Water and Sanitation sector were reported in Cook and Stevens, 2004b, Interim Report #1.

Table D1: Lessons from CO Perspective in Representing Consumers

Role of Consumer Organization	Strengths	Weaknesses
• Represent consumers through a seat on the Board	• Opportunity to influence sector from within • Allows decisions of Board to be reviewed by those with a consumer perspective (if consumers stay away, decisions will be made anyway) • Opportunity to lobby • Creates relationship with and access to decision makers (and access to information)	• Can be a "façade" • If technical issues not understood, capacity for meaningful representation lost – need training • Risk that COs will be "captured" and become part of a dysfunctional system • Can jeopardize autonomy and independence
• Consultative and participatory status	• COs have greater leeway to act if regulations or policies are against consumer interest • Input into decision-making processes through formal or informal hearings	• Lack of access to information can inhibit participation
• Certify the appointment of regulator	• Ward against regulatory capture by companies and or political interest. Appointees know that consumers will verify their continuance based on the actions they took to ensure consumer protection	

Source: World Bank Water and Sanitation Sector and Consumers International. 2004.

Within the CO community the question has been raised as to the appropriateness of COs taking positions within regulatory structures. For COs in Latin America for example, it was deemed best for them to operate outside of the official structures as they feared that consumer ability to criticize the regulatory structures could be compromised. In addition, there was the problem of secrecy as COs would be bound by confidentiality as members of the regulatory board and this would restrict their ability to bring certain issues to the public domain.

In this context some countries in Latin America such as Colombia, have established consultative or advisory bodies to advise the regulator. These bodies are composed of representatives of consumer, utilities and industry experts. In Argentina a special tripartite commission was established, involving providers, consumers and regulators, to deal with consumer concerns. However, in Africa, most COs feel that working from within the regulatory board is the best solution since it gives COs greater opportunity to instigate changes.

It was found in many cases that there appears to be a need for training of NGO personnel in providing an effective monitoring function and serving on an advisory committee. This may require some capacity building, according to the World Bank and Consumers International.

5. Conclusions

Clearly NGOs, and Consumer Organizations in particular, are playing an important and increasing role in water sector monitoring in many developing countries. However, there is a large variation in the approaches that are taken by NGOs in different countries, some are confrontational and do not contribute to a constructive dialog for improving performance or getting more value for consumers. Other approaches can be very constructive and effective.

The most effective role for COs appears to be in monitoring of tariffs charged and services provided by operators as a representative of consumers and customers. The appointment of NGOs to oversight committees is a positive step taken by some governments that supports this role. If the trend toward more constructive engagement of COs continues, they will become a key stakeholder in future water service performance monitoring and public reporting.

Appendix E
Alternative Channels for Communication

There are many channels for communication that can and have been used by utility operators and other stakeholders in a variety of circumstances. The following table provides a summary of the effectiveness of different channels.

Table E1: Effectiveness of Alternative Communication Channels

Communication Channel		Effectiveness in Reaching Consumers	Effectiveness in Communicating Service Performance	Effectiveness in Obtaining Feedback for Improved Service
1	Press Releases by Utility on Performance Issues	Very effective due to wide circulation	Limited in content and reader interest	Very limited
2	Radio/television Talk Shows and Interviews	Very effective due to wide circulation	If interesting to the listener, this is very effective[91]	Very limited
3	Website Reporting on Performance	Somewhat effective where internet is available	Very effective, if data is well presented and up-to-date	Somewhat effective if a communication link is provided
4	Annual Service Performance Reports distributed to monitoring agency and interested stakeholders	Very limited circulation, but ensures that only interested consumers are reached	Very effective, if data is well presented and in a comparative format.	Limited, since the reader has to take special action to voice feedback
5	Distribution of Inserts on Performance Issues in Monthly Invoice	Very effective since it reaches all customers	Not effective, since customers do not normally read inserts and limited space is available	Very limited, since the reader has to take special action to voice feedback on little information
6	Customer Committees or Regular NGO Forums	Somewhat effective since attendance is limited to only interested consumers	Very effective since special information can be prepared and presented on the issues by all participants	Very effective, since the sessions should be designed to give feedback

[91] Usefulness of this method was demonstrated in Buenos Aires and Guayaquil case studies, especially where a mini-debate format was used with different viewpoints. It is considered more effective than a general forum in many cases.

Table E1: Effectiveness of Alternative Communication Channels (cont.)

Communication Channel		Effectiveness in Reaching Consumers	Effectiveness in Communicating Service Performance	Effectiveness in Obtaining Feedback for Improved Service
7	"Road Shows" where the utility and regulator or monitoring agency talk to local customer groups and officials, with a presentation and feedback format	Very effective if scheduled in a manner to reach all interested localities	Very effective since special information can be prepared and presented on the issues by all participants	Very effective, since the sessions should be designed to give feedback and cover actions to be taken by the operator[92]
8	Kiosks or Information Desks with Performance Information	Somewhat effective if placed in key locations where interested consumers can query them	Somewhat to very effective, if information is presented in easy-to-digest formats, such as performance maps	Potentially very effective if kiosks are in utility offices or have communication capability, otherwise limited.
9	Meetings or Workshops with Public Groups on Service Planning and Investment/Tariff Decisions	Somewhat effective and ensures that only interested stakeholders are reached	Very effective since special information can be prepared and presented on the issues by all participants	Very effective, since the sessions should be designed to give feedback and cover actions to be taken by the operator, including trade-offs with tariff levels and investments[93]
10	Open House Presentations	Somewhat effective for schools and other interested groups	Very effective since detailed information can be presented	Somewhat effective, depending on the group

[92] This technique was used in the Performance Assessment for Water and Sewer (PAWS) program (also called PPA) in Metro Manila and found to be very effective in linking performance to improved service, through specific commitments by the operator for actions to be taken and followed up by the regulator.

[93] This technique was used very effectively in the Buenos Aires case study, but is only appropriate in the Five-Year planning context.

Appendix F
Costs and Cost-Effectiveness of Consumer-Oriented Performance Reporting

Three case studies were carried out to provide a basis for estimating the costs of consumer-oriented performance reporting.[94] These include:

- The costs of press releases on service performance
- The costs of summarizing the service performance data in forms most suitable for communication to the public (reports, tables and maps)
- The costs of reproducing this information in annual report format[95]
- The costs of programming websites to report service performance information
- The costs of preparing special reports and maps of service performance and service improvement actions for partner meetings with Customer Committees and NGOs and of reporting on the results of these meetings
- The costs of preparing maps, performance summaries and planned service improvement actions for "Road Shows" in local communities and of reporting on the results of these meetings
- The costs of open house presentation materials

In each case, the costs of this reporting was considered marginal by the utility operator and "well worth it" in terms of the positive results obtained.[96] The costs, however, will vary from one country to another and should be recalculated for the specific situation.

The results of this analysis are summarized in the Table F1 for a range of performance reporting strategies.[97]

A cost-effectiveness ratio was then calculated from the effectiveness index in Table 4 (Section 3.1.5 in the text) divided by the annualized costs of each strategy in each situation, where the annualized cost is the mid-range annual cost plus 20% of the development cost (in thousands). The results are given in Table F2.

[94] For Metro Manila, Buenos Aires and Guayaquil. See Interim Report No. 1 for Task 5.
[95] Incremental costs over the expected costs of preparing annual reports without detailed performance information.
[96] The costs of other methods, such as inserts in monthly invoices to the customer, were not considered productive for the effort involved.
[97] These costs are estimated for developing countries in 2004 US dollars, assuming local contractors or utility staff. These apply to most developing countries. The costs would be higher in locations where information technology workers are more expensive due to scarcity of skills or in developed countries with high labor rates.

Table F1: Estimated Costs of Consumer-Oriented Performance Reporting by Size of Utility

	Communication Channels			
	Press, Annual Reports, Customer/NGO Committee(s), Workshops	Press, Annual Reports, Customer/NGO Committees(s), Road Show(s), Workshops	Press, Website Annual Reports, Customer/NGO Committee(s), Road Show(s), Workshops	Press, Website Annual Reports, Customer/NGO Committee(s), Road Show(s), Workshops
	Indicator Data[98]			
Situation	System-wide Indicators without surveys (est. 10-20 results reported) [99]	System-wide Indicators with surveys (est. 15-25 results reported) [100]	Service-level Indicators with surveys (est. 40-700 results reported) [101]	GIS-level Indicators with surveys (est. 150-1600 results reported) [102]
Small Utility with low-level Information System	$5-10,000	$10-15,000 + $15,000 dev. Costs	$45-55,000 + $40,000 dev. Costs	N/A
Small Utility with medium-level Information System	$5-10,000	$8-10,000 + $10,000 dev. Costs	$40-50,000 + $30,000 dev. Costs	$80-100,000 + $100,000 dev. Costs
Medium-sized Utility with low-level Information System	$15-20,000	$30-40,000 + $20,000 dev. Costs	$60-80,000 + $60,000 dev. Costs	N/A
Medium-sized Utility with medium-level Information System	$10-15,000	$30-40,000 + $15,000 dev. Costs	$60-80,000 + $50,000 dev. Costs	$80-100,000 + $150,000 dev. Costs
Medium-sized Utility with high-level Information System	$10-15,000	$30-40,000 + $15,000 dev. costs	$50-70,000 + $40,000 dev. costs	$70-90,000 + $60,000 dev. costs
Large-sized Utility with medium-level Information System	$10-15,000	$50-60,000 +$15,000 dev. costs	$70-90,000 + $80,000 dev. costs	$100-130,000 + $200,000 dev. costs
Large-sized Utility with high-level Information System	$10-15,000	$50-60,000 +$15,000 dev. costs	$70-90,000 + $60,000 dev. costs	$70-100,000 + $80,000 dev. costs

[98] The number of indicators that are generated is based on an assumption that a small utility would have 3 service areas, a medium-sized utility will have 15 service areas and a large one 50 service areas on average.

[99] Assuming that public reporting is limited to the utility offices and a simple website. The maps for this level of reporting are assumed to be much simpler, one-page maps, with manual location of performance information.

[100] Assuming that surveys are designed and carried out by a local university or survey company, using a prototype from another project. Public reporting is assumed to be customized to municipality needs as in the Buenos Aires case study.

[101] Assuming that service area maps are prepared with simple image software with overlays of performance data and text.

[102] Assuming that a GIS system is used for map-making and that high-level systems already have GIS at some level. Also assuming that a local or regional university or similar institution is used for the GIS implementation.

Table F2: Cost-Effectiveness Ratio of Consumer-Oriented Performance Reporting by Size of Utility

	Communication Channels			
	Press, Annual Reports, Customer/NGO Committee(s), Workshops	Press, Annual Reports, Customer/NGO Committees(s), Road Show(s), Workshops	Press, Website Annual Reports, Customer/NGO Committee(s), Road Show(s), Workshops	Press, Website Annual Reports, Customer/NGO Committee(s), Road Show(s), Workshops
	Indicator Data			
Situation	System-wide Indicators without surveys (est. 10-20 results reported)	System-wide Indicators with surveys (est. 15-30 results reported)	Service-level Indicators with surveys (est. 45-700 results reported)	GIS-level Indicators with surveys (est. 150-1600 results reported)
Small Utility with low-level Information System	**13.3**	9.0	4.8	N/A
Small Utility with medium-level Information System	13.3	**13.6**	5.5	6.7
Medium-sized Utility with low-level Information System	5.7	3.7	**11.3**	N/A
Medium-sized Utility with medium-level Information System	5.7	3.9	11.6	**14.9**
Medium-sized Utility with high-level Information System	5.7	3.9	13.6	**19.5**
Large-sized Utility with medium-level Information System	5.7	2.6	25.0	**26.6**
Large-sized Utility with high-level Information System	5.7	2.6	26.1	**40.8**

Appendix G
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Note: Additional website references can be found in Appendix C of Interim Report No. 1.