Serving *All* Urban Consumers

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A marketing approach to water services in low and middle-income countries

Book 3: PREPP — Utility consultation with the urban poor

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Many people helped to shape PREPP and the authors acknowledge the willingness and constructive inputs of people who have participated along the way. These people include low-income consumers in the informal settlements and slums of Mombasa, Kampala, Guntur and Lusaka; utility and municipal managers, officers and engineers, community facilitators and NGO staff.

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List of acronyms

BPD	Business Partners for Development
DMW	Durban Metro Water
LWSC	Lusaka Water and Sewerage Company
NGO	Non-governmental Organization
PREPP	Participation-Ranking-Experience-Perception and Partnership
PSD	Pricing and service differentiation
WSSCC	Water Supply and Sanitation Collaborative Council
WTP	Willingness to pay
WUP	Water utilities partnership

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Chapter 1

About this book

1.1 Purpose of this book

This book shows how a water utility or similar service provider can establish a dialogue with urban poor consumers to gain quality information about the services they receive and require. This is achieved through the use of a new approach called PREPP, a consumer consultation process developed primarily for this purpose.

PREPP is the acronym for Participation-Ranking-Experience-Perception-Partnership. The PREPP approach was developed and jointly piloted by social scientists and engineers who work for utilities.

PREPP helps utility staff to learn about urban poor consumers in a way that assists the actual development and marketing of utility services to poor communities and households. PREPP provides information about:

- the experience of being a low-income consumer in an urban setting;
- these consumers' perceptions of existing and future water and sanitation services; and
- their preferences for different services, payment and management options, including an indication of willingness to pay.

This information can be used to assist a utility to determine which service level (including its management and payment option) is appropriate for which situation. This consultative approach to determining appropriate options is important if the chosen service level is going to be offered at a price the consumer is willing to pay and the utility feels is financially viable.

The underpinning principle of PREPP is the value of participation and partnership between utilities, communities and NGOs, engineers, social scientists, and community development workers and residents.

1.2 Who this book is for

This book is for professionals who work to improve the delivery of water and sanitation services to the urban poor. The focus is on water supply but the techniques can be adapted, for example to reach agreement about technical options for on-plot sanitation. People who are likely to find this book useful include:

- senior managers facilitating services for the urban poor;
- staff working in utility-based slum or peri-urban units;
- utility-based engineers and managers;
- NGO/external agency staff contracted by a utility or working with one on a project;and
- NGO/external agency staff implementing projects in low-income communities.

1.3 Links to other publications

This book can be used alone or in conjunction with the marketing and business management strategies found in two other books in the series. These books focus specifically on the use of commercial marketing approaches to improve water services in low and middle-income countries. If used in conjunction the approaches in this book can help to facilitate specific aspects of an overall marketing plan leading to viable investment plans for all consumers. The series titles are:

Serving *All* Urban Consumers
A marketing approach to water services in low and middle-income countries
Book 1: Guidance for government's enabling role

Serving *All* Urban Consumers
A marketing approach to water services in low and middle-income countries
Book 2: Guidance notes for managers

Serving *All* Urban Consumers
A marketing approach to water services in low and middle-income countries
Book 3: PREPP - utility consultation with the urban poor

Book 1 presents key concepts and principles about commercially viable service provision, marketing approaches and government's enabling role in providing services to the poor. Book 2 describes how water utilities can meet the water and sanitation service needs of the urban poor by developing an understanding of the needs and wants of all consumers through the adaptation of a marketing approach. Water sector managers, typically engineers and administrators in low and middle-income countries, will find this second book useful.

1.4 How this book is organized

This book is organized in two main parts each containing different sections.

Part 1: Principles and concepts for serving the poor

Part 2: PREPP

Part 1 provides valuable background reading to make the best use of PREPP. Part 2 is practical and describes how to use PREPP. Summaries highlighting key points are provided throughout.

1.5 About PREPP

1.5.1 What using PREPP can do

From a utility's perspective the main benefits of using PREPP include the opportunity to:

- gain a greater understanding of the nature of consumer preferences for different potential service options that the utility is both willing and able to offer;
- improve understanding of consumer preferences for existing sources and their coping strategies;
- build mutual understanding and trust between the utility and its existing and potential customers that can continue after the initial PREPP process;
- improve knowledge of the utility's comparative advantage - or disadvantage - against other providers such as small-scale water enterprises; and
- use the information generated to inform an assessment of needs and investment planning.

PREPP is rapid to conduct, reasonably inexpensive and above all practical.

1.5.2 What using PREPP cannot do

PREPP will not result in a blueprint for the provision of water supply services to low-income consumers. PREPP can result in, and lead to, an improved consultation process that will enable the utility to understand the position of poor consumers, identify problems (both consumer and utility), and set up a way of working through the options to agree a solution. The solution may be different from one place to another.

PREPP cannot replace the need for engineers and managers to engage directly with consumers on an ongoing basis. Although it involves social scientists it requires engineers to be active in the consumer consultation process. This is important from a technical and financial perspective, for example to answer tariff and supply-related questions, and PREPP provides a way to do this.

PREPP will not instantly replace the need for other types of survey and consultation methods. PREPP is rapid, it is situation-specific and its use depends on a number of factors. PREPP is designed to be able to contribute to a larger picture and complement other survey and consumer research activities that will inevitably need to take place, for example willingness to pay (WTP) surveys using methods such as contingent valuation.[1]

1. Contingent Valuation is a demand assessment technique. Several options (each associated with a range of prices) are described to a sample of potential users who then indicate their preferences. The technique requires specialist skills and is cost effective in high-density urban and peri-urban areas.

While PREPP can give an indication of consumers willingness to pay, it will not provide data on the maximum amount that people are willing to pay - which is useful for determining future tariff policies. This can best be achieved by comprehensive WTP surveys. However PREPP is much quicker and cheaper to undertake than WTP surveys and is particularly suited to working in informal settlements.

Part 1

Principles and concepts for serving the poor

As the crisis of urban poverty deepens, grossly inadequate sanitation and water services to the urban poor remain among the most serious challenges facing the developing world. The need for increased capacity to deliver appropriate and sustained services is urgent. Established authorities need to plan new approaches and engage a wider array of players, in particular local communities themselves.

WSP (2003)

Chapter 2

Principles and concepts

2.1 Summary - principles and concepts

Context
The growing presence of national policies that favour improved services for low-income communities requires the provision of services that extend beyond the laying of pipes. This will involve:

- new approaches for communicating with customers;
- the development of new service options;
- skilled organizational management;
- strategic business planning; and
- the development of partnerships between government, the private sector and civil society to create favourable enabling environments.

Why urban poor consumers are a top priority
One-third of all urban households in the world live in absolute poverty (UNCHS, 2001) and the human and social cost of this is immense. At any given moment almost half the developing world's people are sick from unsafe water and sanitation.
The pressure is mounting to change the status quo and utilities have a major part to play. Progressive water utilities are taking a lead and finding innovative ways to sustain services to low-income communities.

Demand
Demand is a central theme in PREPP. In this book the term 'demand' is used in relation to technical design parameters, service management preferences, willingness to pay for a service and as an expression of a human right. Demand is defined as 'an informed expression of desire for a particular service, assessed by the investments people are prepared to make, over the lifetime of the service, to receive it and sustain it' (Deverill et al. 2002).

Key marketing approaches
PREPP draws on commercial marketing concepts and practice to stimulate demand. Bringing information from the consumer together with the ideas and expertise of the service provider is known as a 'marketing mix' (Wilson and Gilligan 1998). This mix contains elements of the *7Ps of marketing*, a useful tool that helps to create a menu of service options that are based on reliable knowledge of the consumer's known preferences and an assessment of what the utility can realistically provide. In this way PREPP enables service provider's to match specific technology, management and product options with the right consumer group, or *market segment*.

2.2 The context

Governments in developing countries are increasingly adopting policies to improve water and sanitation services for communities living on low incomes in informal settlements, slums and peri-urban areas. Water utilities are faced with the challenge of translating this policy into the implementation of sustainable services for all consumers. This challenge is made greater by the need to move away from supply-led approaches. There is also a need to improve institutional financial capability and credit worthiness, while all the time coping with the demands of ever-expanding urban populations. The task of filling the service gap in urban centres is urgent if the Millennium Development Goals are to be met. This requires more than the laying of pipes and networks and involves:

- new approaches for communicating with customers;
- the development of new service options;
- skilled organizational management;
- strategic business planning; and
- the development of partnerships between government, the private sector and civil society to create favorable enabling environments.

2.3 Why urban poor consumers are a top priority

'One-third of all urban households in the world live in absolute poverty.'

(UNCHS, 2001)

The human cost

1.1 billion people are still without access to a safe water supply. Two million impoverished children die each year of diarrhoea resulting from poor sanitation and hygiene (WSSCC 2003). The Water and Sanitation Collaborative Council WASH campaign (2003) states that:

- At any given moment almost half the developing world's people are sick from unsafe water and sanitation.
- Lack of water supply and sanitation robs millions of dignity, energy, and time.
- Frequent disease is the main cause of poor growth and early death.
- For a third of the world the real environmental crisis is squalor, smells and disease on the doorstep.
- Victims of unsafe water and poor sanitation occupy half of the developing world's hospital beds.
- Economies suffer as hygiene-related illness costs developing countries five billion working days a year.
- Sustainable development starts with people's health and dignity.

The social and economic cost

'Water has an economic value in all its competing uses and should be seen as an economic good. However, it is recognized that within this principle,it is vital to recognize the basic right of all human beings to have access to clean water and sanitation at an affordable price'.

The 4th Dublin Principle

Poverty and social exclusion are one result of development policies and practices that fail to take account of and involve people. Therefore it is a fundamental concern of government and their partners how people, especially the poor, can be involved in the development processes that affect their lives (Deverill et al. 2002). Socially inclusive societies are most effectively built upon principles of participation and gender-responsive decision-making based on good information. Failure to embrace such principles results in continued poor living conditions and unsustainable livelihoods, particularly those of women and children (Figure 2.1).

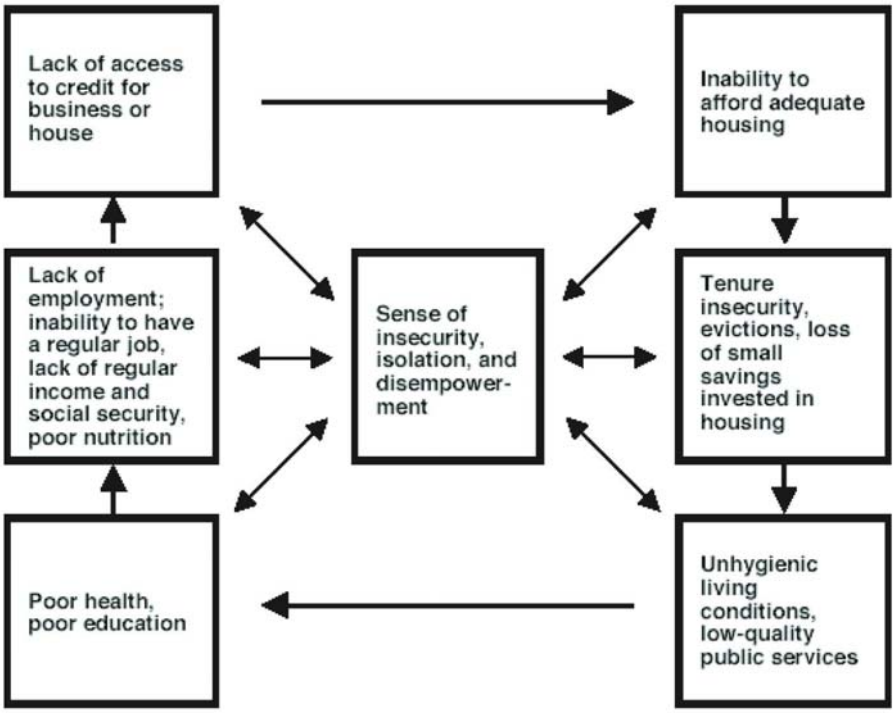


Figure 2.1. Cumulative impacts of urban poverty[1]

1. Source: Baharoglu, D. and Kessides, C. (2000)

The need for action

'Serving the urban poor with water and sanitation requires the ability to deliver an inflexible, expensive, asset based service to a rapidly growing urban population of whom up to half will be living at or below the poverty line, often in informal, 'illegal' housing areas'.

Franceys and Bos (eds.) 2002

The challenges of providing services for the poor are all too clear to utility managers. Rapid urbanization, growing poverty, informal settlements and deteriorating public and environmental health issues compete for attention with institutional reform and decentralization. Too few links are made between these factors to challenge the real problem of ever-declining service levels (see Table 2.1). Pressure is mounting for utility managers and stakeholders in the sector to change the status quo.

Table 2.1. Utility service levels in selected African cities[1]

Type of supply	Kampala (Uganda)	Dar Es Salaam (Tanzanica	Conakry (Guinea)	Nouakchott (Mauritania)	continuo (Benin)	Ouagadou gou (Burkina Faso)	Bamako (Mali)
In-home	36	31	29	19	27	23	17
Standpipe water fetched by household	5	0	3	30	0	49	19
Independent providers/ traditional sources	59	69	68	51	73	28	64

1. Source: Adapted from Collignon & Vezina (2000) cited Kayaga S (2001)

The inequities that exist in service provision in urban centres are well documented (see WSP-SA, 2001). So too is the growing recognition that governments must act on this imperative. It is often said that together policy, partnership and technical innovation provide the required enabling environment to bring about change. These opportunities exist and yet they remain illusive. What is still not clear is whether utilities have sufficient incentives to serve the poor outside a general sense of public duty (Franceys and Bos (eds), 2002). However, progressive water utilities are taking a lead and learning from the lessons of well-targeted urban poverty programmes.

Durban Metro Water South Africa provides a good example of a utility striving to offer low- income consumers a choice of water technology and management option (see Box 2.2). These efforts are made possible by the existence of a supportive enabling environment where clear goals can be defined and partnerships can be formed. Utilities are also beginning to network more effectively, for example through the Water Utilities Partnership (WUP) in Africa. Together utility managers are realizing the potential, sharing what works and finding solutions to problems (Coates et al. 2001).

2.4 Demand

Customer demand is a central theme in PREPP. In this book the term 'demand' is used in relation to technical design parameters, service management preferences, willingness to pay for a service and as an expression of a human right.

This understanding of the term reflects the different perceptions of demand held by people participating in PREPP. The engineer who perceives demand as a quantitative matter related to the supply of water, the economist for whom demand needs to be expressed

Box 2.1. Marketing of water service options in Durban, South Africa[1]

Durban Metro Water (DMW) has developed a menu of service options for unplanned areas:

- Water kiosks where people fetch and pay per 20-litre container
- Water kiosk with storage where people fetch and pay per 20-litre container
- Individual connections with a 200-litre ground tank in the yard, with trickle feed
- Individual house connection with limited pressure through roof tank
- Individual house connection with full pressure (conventional 24hr supply)

In informal settlements the 200-litre Durban Ground Tank has been successfully promoted to meet the typical water needs of a household. The tank enables households to be connected in areas lacking in urban infrastructure. During piloting this technology option was sustained by the use of community-selected bailiffs trained by DMW. The bailiff also looked after water kiosks, an alternative for those residents unable to afford the ground tank.

1. Durban Metro Water web-site: http://www.durban.gov.za/water/index.htm

through willingness to pay, and the sociologist, civil society representative or community member for whom demand may be about rights and a moral obligation (Parry-Jones 1999). Demand in the context of PREPP means:

An informed expression of desire for a particular service, assessed by the investments people are prepared to make, over the lifetime of the service, to receive it and sustain it.

(Deverill et al., 2002)

One problem in understanding demand is that people talk of it in very general ways - 'we want safe and affordable water'. This generalization does not say anything about the service, management or payment option that people prefer or expect. A utility wishing to respond effectively to demand must understand this point and know how to deal with the situation. They must know how to communicate with people and negotiate the best option.

2.5 Marketing and demand

Marketing is a management process for identifying, anticipating, and satisfying customer demand and requirements in a cost efficient manner according to the Chartered Institute of Marketing, UK.[2] Being 'demand responsive' means finding out what the consumer wants, and is willing and able to pay, before presenting what can be provided to best meet these requirements. Talking to consumers about their current practices, needs and preferences is the best way to be demand responsive. Using the information gained the provider can build a relationship with the consumer, gain trust and then negotiate the best service option. To do this marketing professionals develop a marketing mix to suit a particular situation. This mix is based on determining the best combination of **p**roduct, **p**rice, **p**romotion, **p**lace, **p**eople, **p**rocess and **p**resence (the 7Ps of marketing).

2. Based on the definition supplied by the Chartered Institute of Marketing UK

Box 2.2. Expressions of demand - some key issues

- Who is expressing demand matters: The poor, the socially excluded and women are often given little opportunity to enter this type of negotiation even though they too are users of water supply. The result is often inappropriate technology options and unsustainable services.
- Some people do not seem to express demand: it is likely that demand exists but it is hidden, or latent. These people may only begin to express demand as they become aware of the benefits to them
- People may also express demand without understanding what they have committed themselves to, or the consequences for them in the longer term. For example there may be an agreement at a household level to have a new utility-supplied storage tank installed to overcome an irregular supply of water. However, it may not be apparent at the time of purchase, or upon entering an agreement with the supplier, that the maintenance of the tank is the responsibility of the householder. Alternatively a community may resist accepting a water kiosk if they think this will hamper their desire for household connections.
- People express demand in different ways: e.g. passive attendance at a community meeting, or a request through a third party (councillor, traditional leader).

Using the marketing mix and 7Ps in the urban water supply context

In the context of water supply the development of a marketing mix involves creating a menu of service options that are based on reliable knowledge of the consumer's known preferences and an assessment of what the utility can realistically provide. Getting the marketing mix right involves the utility in a range of responsibility and activity.

The 'mix' in marketing is crucial - the introduction of communal standposts with shared management (product) will not work without good communication (people). Decentralizing customer services to zone offices will not be effective without letting local customers know about the move (promotion). The emphasis on process is also important. Identifying what consumers currently want should not ignore what they may require in the future. A utility has to be able to effectively predict future demands and growth in its potential customer base.

Developing a process to do this involves making and adjusting decisions within the framework of an overall strategic vision involving marketing, planning, implementation and monitoring. Further examples of using the marketing mix are included in Figure 2.2.

One service does not fit all

In many countries the notion of water being supplied 24 hours a day, seven days a week is far from being a reality. However providing a level of service to all rather than a few is a top priority for governments and partners. With finite resources the starting point for many is the realization that different groups of consumers will tolerate and accept different levels and types of service.

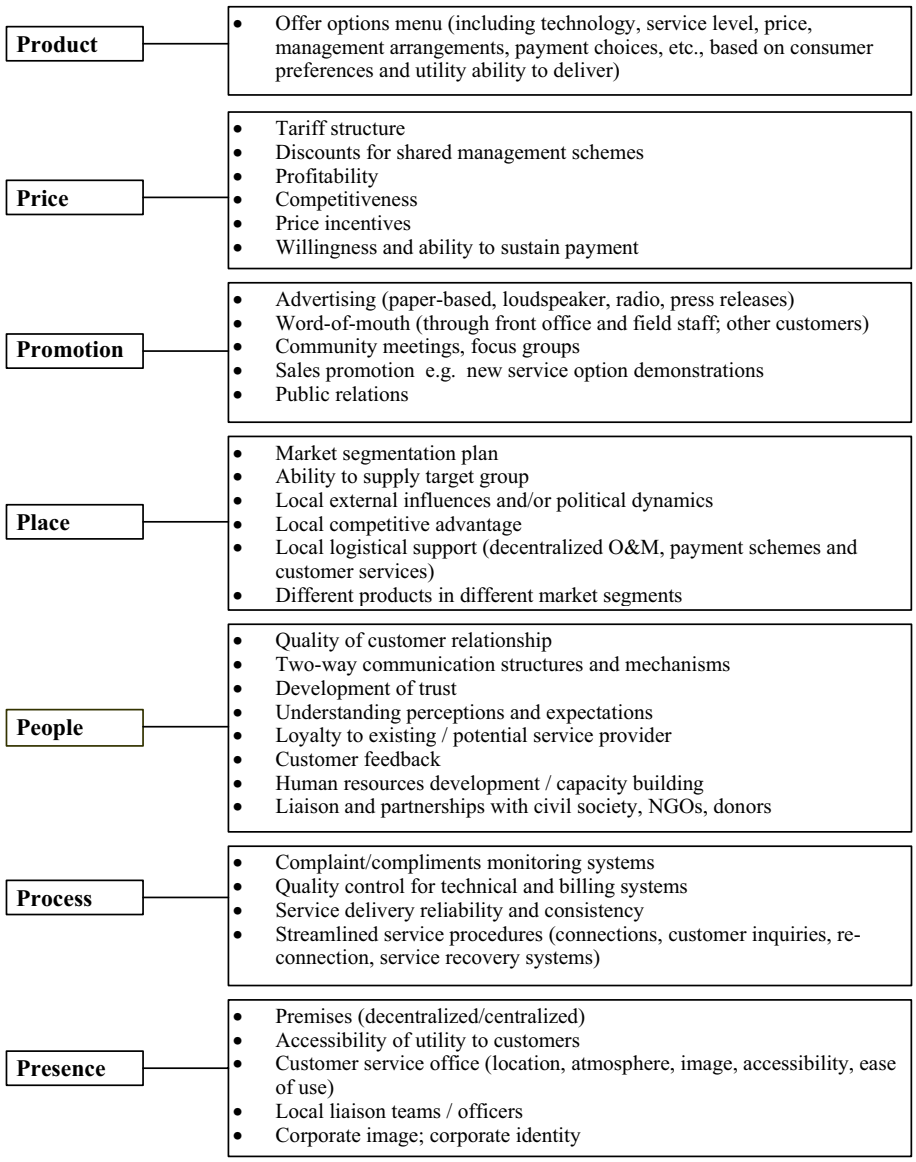


Figure 2.2. Using the 7Ps to develop a marketing mix in a water utility[1]

1. Adapted from Brassington & Pettitt, (2000)

Achieving this is about matching specific technology, management and service options with the right consumer group, or market segment. The basis here is the presence of sufficient information for the different groups to make an informed choice. This may involve appropriate persuasion where necessary (for example through social marketing) and readily available and reliable access to the service (affordability, location, reliability and frequency).

This approach might seem to undermine political and social aspirations of achieving equitable levels of service. Looking at citywide service provision from this angle means that extending services to non-traditional areas (slums, informal settlements, peri-urban areas) can become a financially viable option for a utility. Supporters of this approach

consider it as being key to achieving social inclusion and poverty alleviation in rapidly growing cities.

Examples of practice

The following case studies are examples of innovative marketing to promote water and sanitation services in poor communities where both the services and prices have been differentiated to suit different customer groups. More detailed case studies are included in Book 2.

Here marketing concepts have been used to serve poor communities, whether intentionally or otherwise. The service providers have developed appropriate products or service options that they have *promoted* to selected *people* (potential customers) at viable *prices*, using appropriate *processes* to communicate effectively with poor communities, in selected *places* where there are demands for service improvements. In doing so the service provider has enhanced its *presence* as a consumer-orientated organization. They have therefore been addressing the 7Ps of marketing.

Box 2.1 summarized the various service options provided by Durban Metro Water (a publicly managed utility) to serve poorer communities. Private operators have also used innovative options with encouragement from regulators. Box 2.3 highlights interesting developments on concession contracts in Manila in the Philippines. The provisions in the contract for increases in service coverage have encouraged the private operators to differentiate service and price to previously non-served low-income consumers, using innovative technologies and approaches with generally successful results.

Further examples of interesting pilot programmes have occurred in Buenos Aires, where a private operator, Aguas Argentinas, was awarded a concession in 1993 to manage water and sanitation in the capital of Argentina. The concessionaire had a contractual target of achieving full service coverage by the end of their 30-year contract. They began to develop programmes to serve the poor through differentiating services and in particular connection charges. A summary of their approaches is set out in Box 2.4.

A number of community-orientated initiatives have been developed in Bolivia by Aguas del Illimani, the private operator in Le Paz, El Alto. As part of their contract they have specific performance targets clearly spelled out in the concession contract that increase annually until the end of the contract in 2026. To achieve these targets the utility sought to use a marketing approach to target services to the needs of the poor. Some of their initiatives are highlighted in Box 2.5.

Examples of municipal management come from Guntur and Rajhamundry, where the Administrative Staff College of India (ASCI) has undertaken market research. Recent initiatives are briefly described in Box 2.6.

Challenging predict and provide methods

Using marketing tools and practices, challenges conventional 'predict and provide' methods to overcoming gaps in service provision. Evidence shows that a large investment in additional treatment works to ensure that a sufficient quantity of water is available rarely results in improvements for the urban poor, unless specific measures are implemented to achieve this objective.

Box 2.3. Approaches for serving poor areas in Manila [1]

In Manila, in the Philippines, water supply in the city has been made the responsibility of two private operators who manage water services under a concession form of contract, supervised by a government regulator. Examples of some of their innovative approaches to reaching the poor are briefly described below.

Group taps or yard connections for two to five households where users form groups, register connections and share the cost for usage. The group is given one mother meter and while it is encouraged to install sub-meters to avoid problems with the sharing of cost, some groups opt not to install sub-meters to reduce costs. The group leader collects payments from each member and pays Manila Water.

Bulk water supplies to a community group for on-selling was successfully developed in some settlements where access was difficult. The utility supported the community organization in helping households to complete application forms, etc. With this approach, installation costs as well as the utility's non-revenue water costs are minimized with the mother meter located outside the area, usually along main roads, where it can easily be seen and monitored for illegal tapping. The majority of the households in one community paid the costs of pipe installation from the mother meters to the respective households. To minimize project cost, the community coordinated and organized their efforts and contributed their labour (men, women, and children alike) to reduce costs. This project initially provided water to about 250 families. Within the community association there is some 'community' pressure for each household to pay their bills, otherwise the entire community suffers in case of a disconnection for nonpayment.

The 'Bayan Tubig' ('water for the community') programme, provides individual household connections in low-income areas at a reduced cost. This programme waives the land title requirement and allows payment of connection fees by installment over a period of 6 to 12 months (in some cases this has been stretched to 24 months).

Technically, this approach involves constructing a conventional underground water main until the narrowness or condition of the access route makes this infeasible. From this point the rest of the network is built either above ground or on the ground, partially covered or attached to a wall. This distribution pipe delivers water to a battery or cluster of water meters from where each homeowner makes their own plastic connection, above ground. The programme shows that, given the opportunity, residents of unplanned areas would prefer individual water connections rather than public standposts.

As a result of these initial programmes the researchers observed that the once mostly dilapidated houses have been slowly replaced by structures made of more permanent materials. With more time on their hands and water to use, the women are able to clean their surroundings. Sanitation in the areas covered has improved as households now have their own toilets and bathrooms within their homes

1. An edited version of Inocencio, A., Manila Water and Sewerage Concessions, in Weit, A., and Franceys, R., Beyond Boundaries: extending services to the urban poor, Asian Development Bank, 2002

The conventional 'predict and provide' approach to overcoming the service gap has been to invest large amounts of money in bulk water supply infrastructure to ensure a sufficient quantity of water. The likely population within a reasonable time horizon is predicted, taking the standard design criteria of litres of water used per person per day, adding on for commercial and institutional use, and providing treatment works and transmission mains sufficient to meet these criteria.

Box 2.4. Pilot programmes in Buenos Aires [1]

In a range of projects in low-income situations the utility (Aguas Argentinas) found that they had to differentiate their services to suit demand - no single approach suited all situations. Two examples of their approaches are described below.

'The Participative Water Service' Projects
Here there are 'direct links' between the residents of the area (via an association or 'leader' or NGO) and Aguas Argentinas. The utility generally designs the projects and supervises implementation. To promote subsequent payment, a single invoice is given to the community for a year, to see if they are really willing to pay. Meters are installed for the community bill to limit wastage of water. Typically, one person signs on behalf of the neighbourhood, often designated by community committee meetings with minutes. After the trial year is successfully completed, individual billing is introduced, based on an assumed water usage.

In one barrio (area), shallow pipes were laid in each alley and just one meter was provided for the entire area. In this barrio, each family was paying their own bill (unmeasured, using average consumption), and there was no connection fee. To reduce costs and promote participation, all the bills for the neighbourhood were given to one community representative for distribution.

The company found that this 'barter' operating method, with the community providing the construction labour to reduce costs, is only feasible for areas where the idea of community work is accepted.

Appropriate sanitation in Buenos Aires
A system of shallow sewers was designed for one area because of the high groundwater table, using 'individual or collective septic tanks with liquid effluent transported by a small diameter PVC network (75mm instead of 200mm in traditional Aguas Argentinas secondary networks) with shallow gradients'. '

Since the plots were too small (<100m2) to take both a septic tank and a soakaway, the removal of liquid effluent was essential. The cost of the secondary network (the largest item in the sanitation network) was reduced by more than half by the small diameter network and the low gradients (less excavation required in areas where the water table is less than one metre below the surface).

"The effluent collected is at present evacuated directly into a nearby river: as a result Aguas Argentinas does not charge for the service. When the company network is extended into this area, the collector will simply need to be connected to the mains: the service will then be charged for.

1. Source: Based on Lyonnaise des Eaux (now Ondeo), 1999, and investigations by Richard Franceys as part of a BPD study visit in 1999.

This approach often fails to notice that half the water delivered is usually lost through leakage and theft, whilst the other half is sold to consumers at a price below the cost of supplying that water, with little notice taken of recovering capital costs. Experience also shows that a fair proportion of consumers do not pay their water bills even when they are below cost.

The predict and provide approach addresses bulk water supply issues in broad terms, but usually fails to satisfy the demand of many consumers in the long term. Hence the need for a marketing approach.

Box 2.5. Programmes for serving the poor in Le Paz, El Alto in Bolivia[1]

Aguas del Illimani, the private operator in Le Paz, El Alto has embarked on a series of promotional programmes aimed at raising the company's profile among its users and encouraging wider use of its services, such as:

The 'School Programme' increases awareness about the water and sewerage system by taking children to visit the treatment plants.

The 'Neighbourhoods Programme' advises and explains the procedures necessary to obtain a water and sewerage connections in selected neighbourhoods.

The 'IPAS' programme (Peri-urban Initiative for Water and Sanitation)
The objective of this programme was to test innovative approaches for sustained provision of water and sanitation services in the low-income areas of La Paz and El Alto. The project promoted the use of appropriate technologies, sound social intervention methodology and access to micro-credit mechanisms for construction costs. The micro-credit mechanism also allowed families to develop their credit history and later request subsequent loans for income-generating activities.At the IPAS project level, community selection procedures were based on the Demand Responsive Approach, where communities are consulted beforehand about whether they are interested in participating. Aguas del Illimani first approached different communities in their expansion areas and presented the IPAS project, explaining how it worked and the technology. After internal consultation, the community committed itself to the project by presenting the signatures of at least 70 per cent of its inhabitants.

As a result of savings in installation costs and also as an incentive for participating communities, the utility offered a discounted connection fee of about 60 per cent of the original connection fee, payable in 60 monthly instalments in the water bill at no interest.

1. An edited version of Vargas, M., Incentives for utilities to serve the urban poor El Alto, Bolivia edited by Franceys, R, for WSSCC, 2002

Market segmentation

Companies that sell goods differentiate between different groups of consumers and target the marketing of their products according to each groups' needs. Deciding how to identify the different groups is complicated. Many different factors can be 'mapped' to create a picture of each group that takes in to account age, sex, income, education, occupation, family size and even nationality and religion.

In a simplified form market segmentation can be applied to the key consumer groups in the water and sanitation sector, especially in cities where growth has resulted in poor planning and inequitable basic services (see Sansom et al., 2002b). For example, in many developing countries the urban rich live in low-density residential areas and receive water supply either via municipal household connections or private boreholes. The rich form a very different segment or part of the market for water services to that of poor residents living in high-density areas. Unlike the rich, the poor get their water from sources including tanked municipal water, private vendors, limited communal standpipes, open wells and streams.

Box 2.6. Marketing initiatives in Guntur and Rajhamundry [1]

The poor in Guntur and Rajhamundry in Andhra Pradesh, India depend mainly on free public standposts and tankers provided by their municipal corporations, for potable water (Narender and Chary, 2002). The water supplied through public standposts is quite inadequate to cover the needs of the majority of the households.

Significant proportions of poor consumers have expressed their willingness to receive individual connections and are prepared to pay the required monthly charges. However, they are discouraged by the policy of the corporations that demand a one-off connection fee in the range of Rs.5000-7000 ($100-$130) to provide a household water supply connection. As a result, many poor households are excluded from the water system (individual coverage). In effect these consumers are not allowed to enter the 'shop'. This has resulted in a proliferation of illegal connections.

However, during the market research the municipal corporations' leaders realized that they needed to use innovative approaches to increase coverage of water services to the poor.

In 2002 the corporation leaders made significant efforts to remove the entry barrier. They have not only lowered the connection charges as prescribed by the Government of India NSDP programme, but also allowed the poor to pay these one-of charges in two or three installments. They have also reduced or waived the associated supervision charges for executing the work. The mayors and commissioners have visited several slums, conducted public meetings and issued on-the-spot connections to willing households. As a result of these efforts, the number of poor households with individual connections has gone up significantly in these cities in the past year. In another variation poor households were also encouraged to form groups of six to eight households to access a single connection to reduce the burden of connection and tariff charges.

The corporations have also experimented with marketing ideas such as promoting (advertising) new connections in 'Saturday connection camps' and by offering the poorest household in a group of ten a special 'bargain' low-cost connection. The experiences of Guntur and Rajhamundry demonstrate that the city governments are becoming aware of and willing to adopt marketing approaches to expand water services, particularly to the poor.

1. Source: V.S.Chary, ASCI, Hyderabad, 2002

Both groups of consumer are served differently, have different expectations of that service and will probably pay different amounts for it. Currently in most cities this differentiation is more the result of a lack of strategy than planned and targeted intervention. However, the principles of segmentation can be used positively to identify and raise appropriate service levels for the poor while maintaining those provided to the rich. Segmentation can provide focus, clarity and a manageable number of consumer groups for business and capital investment planning.

Table 2.2 illustrates how the type of house that people live in can be used as the basis for obtaining information about existing service levels. This information can be used as a starting point to market improved service options to the different consumer groups or market segments.

Table 2.2. Summary of existing service levels per market segment based on where people live[1]

Selected parameter	Bungalows and maisonettes	Flats	1, 2 or 3-roomed dwellings and swahili houses	Informal settlements (slums)
Electricity supply in dwelling	100%	97%	60%	6%
Do not receive water directly from NWCPC	35%	17%	58%	96%
Receive continuous supply of water from NWCPC	30%	31%	13%	2%
Receive water once or twice a day from NWCPC	27%	40%	24%	1%
Individual house connections	94%	78%	23%	2%
Shared connections	Nil	12%	28%	4%
No piped water connection	6%	10%	49%	94%
Obtain free water from borehole or well	5%	3%	39%	41%
Obtain water from handcart vendors	18%	45%	57%	46%
Obtain water from kiosk	Nil	22%	56%	79%
Proportion with own boreholes or wells	39%	Nil	2%	Nil
Main water source	Individual house connections (59%) and own boreholes or wells (25%)	Individual house connections (71%) and shared connections (12%)	Water kiosks (44%) and shared connections (23%)	Water kiosks (70%) and boreholes or wells (18%)

1. Source: Njiru and Sansom (2004)

Note: See *Serving All Urban Consumers. A marketing approach to water services in low and middle-income countries. Book 2: Guidance notes for managers* for detailed information about the application of the marketing approach.

Chapter 3

Low-income consumers as potential customers

3.1 Summary - low-income consumers as potential customers

Low-income consumers as potential customers
Low-income consumers comprise the biggest potential customer base for urban utilities. Yet often utility managers do not count these people as customers, failing to see the potential benefits in raised revenues. However, forward thinking managers willing to allow staff the freedom to apply demand-responsive approaches and form new partnerships to serve low-income customers are able to see value and opportunity.

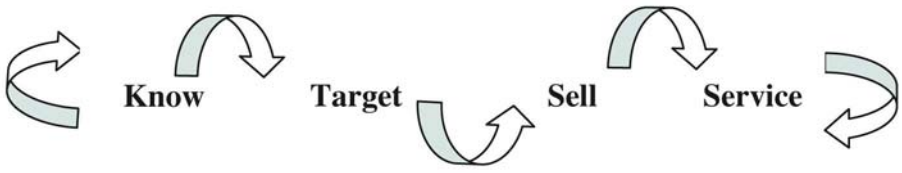
Customer orientation
A key to commercial success and service sustainability is having a clear customer focus underpinned by an ongoing commitment to raise standards and provide quality services. Competitive advantage can be achieved through customer-focused decision-making and carefully designed and implemented customer relations initiatives.

Why customer first
Satisfied customers are more willing to pay for the services that they receive than those customers who begin to pay, see little benefit, and consequently falter. But thinking 'customer first' is not just about securing consistent revenue. It is about demonstrating a commitment to serve. This has particular resonance in urban poor areas where services are inadequate and as a result service providers are mistrusted. More attention to the customer first in these areas could result in better decision-making about the type of service these consumers actually want and their ability and willingness to sustain payment.

Institutionalizing customer-orientated principles
Customer-orientated utilities structure internal communication, procedures and processes to meet the service needs of the customer. This is primarily about management approaches, organizational culture, and how on a day-to-day basis all departments, operations, systems and procedures are geared around the fundamental principle of *think customer first*.

The 'customer value chain' provides managers with a framework for introducing customer orientation into a utility.

Customer value chain



PREPP is a process. It involves water engineers, managers, facilitators (usually drawn from NGOs, local councils or specialist organizations) and low-income consumers. Together these people work through a mutually beneficial exercise based around a comparison of proposed service options with existing sources and supply. PREPP serves a number of purposes, not least demonstrating the decision-making process used to select 'best for purpose' water supply options by the utility and the consumer.

In focus groups, usually segregated by gender, the PREPP facilitator and engineer take the participants through a set of carefully prepared steps providing a framework for informed dialogue between the water utility and potential customers. Another person needs to document the responses of the focus group to questions raised by the facilitator. The whole process takes on average less than a couple of hours to facilitate and is proving to be an eye-opener for engineers and consumers alike.

3.2 Customer orientation

Innovation in demand-responsive service delivery undoubtedly requires technical expertise and organizational flexibility. As previously stated, if demand is to be adequately translated into relevant services there is a real need for timely knowledge of consumer needs, perspectives and preferences. All this has to be achieved against pressure to ensure sustained cost recovery.

International companies, including those in the water sector, have found that a key to commercial success and service sustainability is having a clear customer focus underpinned by an ongoing commitment to raise standards and provide quality services. These companies recognize that a competitive advantage can be achieved through customer-focused decision-making and carefully designed and implemented customer relations (Coates et al., 2001). In the water sector this requires an inherent change in the way all consumers are viewed. Dependent consumers can become valued paying customers and the relationship between the customer and the utility can be mutually beneficial (see Figure 3.1).

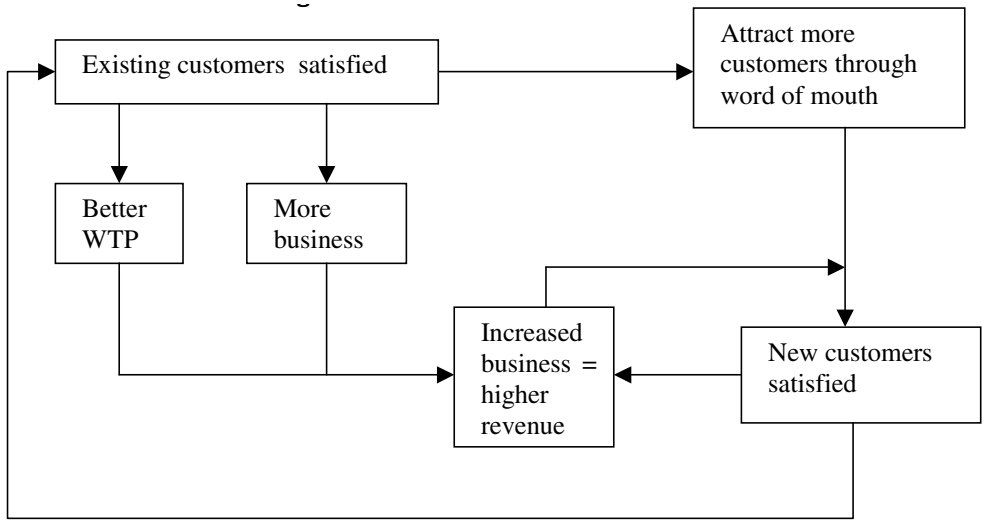


Figure 3.1. Benefits of customer orientation[1]

1. Source: Coates et al. (2001)

3.3 Why 'customer first'?

'Customer first' is increasingly the main message in company mission statements, for example:

Our mission is to make a positive contribution to improve the Chennai City environment and to enhance the health and quality of life for the citizens in Chennai City by providing them an adequate supply of safe, good quality water at a reasonable price and by providing customer service in a prompt and courteous manner.

Chennai Metropolitan Water Supply and Sewerage Board Corporate mission statement

Such mission statements are not based on altruistic values so much as on a realization that loyal and satisfied customers can assist to make public sector service companies successful. Satisfied customers are more willing to pay for the services that they receive than those customers who begin to pay, see little benefit and consequently falter. But thinking 'customer first' is not just about securing consistent revenue. It is about demonstrating a commitment to serve. This has particular resonance in urban poor areas where services are inadequate and as a result suppliers are mistrusted. More attention to customer first in these areas could result in better decision-making about the type of service consumers want and their ability and willingness to pay. Without this dialogue predicted revenues will not be guaranteed and investment in infrastructure is potentially wasted.

3.4 Institutionalizing customer-orientated principles

Customer-orientated utilities organize internal communication, procedures and processes to meet the service needs of the customer. This is primarily about management approaches, organizational culture, and how on a day-to-day basis all departments, operations, systems and procedures are geared around the fundamental principle of think customer first.

Managers in these organizations focus on developing core values, removing obstacles and providing the resources to allow others to implement policy. A greater emphasis is placed on the importance of skilled frontline staff (those meeting customers), for example customer service officers, meter readers, operation and maintenance teams and project engineers. Human resources are backed up by a commitment to customer-based philosophies, objectives and actions.

Box 3.1. Customer first philosophies at Durban Metro Water[1]

- Good governance and honest administration is the foundation of Metro Water.
- Customer care is the cornerstone of our organization.
- We provide a service that is central to every household and therefore go to great lengths to solve problems speedily and effectively.
- Our staff members are central to our organization and it is our responsibility to train, motivate and challenge them, so that each realizes their full potential.
- We promote innovation by continually questioning what we do with a view to improving our service.

1. Source: Durban Metro Water web-site, 2002

The customer value chain

Instilling the principle of 'customer first' among staff requires effort on the part of managers. A clear motivation to do this is economic survival. Economic survival is about standing the test of time and financial viability. This applies to the utility's relationship with its consumers as much as to the durability of its technology or the stability of its political-economic environment. The 'customer value chain' provides managers with a framework for introducing customer orientation into a utility.

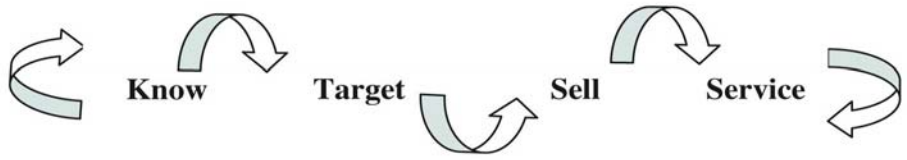


Figure 3.2. Customer value chain

The customer value chain is based on the principle of continuity in the relationship between a company, for example a water and sewerage utility, and its individual consumers. If the customer value chain is broken the relationship will be weakened or at worst will cease to exist. Therefore any weakness in the chain will result in eroded willingness to pay, poor services and ultimately a loss of revenue and sustainability. Box 3.2 below explains what is entailed at each stage of the customer value chain. The customer value chain also provides a good framework for obtaining new customers.

3.5 Key stages of PREPP

PREPP is a process involving water engineers or managers, facilitators (usually drawn from NGOs, local councils or specialist organizations) and low-income consumers. Together these people work through a mutually beneficial consultation exercise based around a comparison of proposed service options with existing sources and supply. PREPP serves a number of purposes, not least demonstrating how the decision-making process used to select 'best for purpose' water supply options can be improved.

In focus groups, usually segregated by gender, the PREPP facilitator and engineer take consumers through a set of carefully prepared steps providing a framework for informed dialogue between the water utility and potential customers. Another person needs to document the responses of the participants to questions raised by the facilitator. The whole process takes on average less than a couple of hours to facilitate and is proving to be an eye-opener for engineers and water users alike. The key steps are shown in the table below.

The purpose of Steps 1 to 3 is to learn about water use and water services from the perspective of the urban poor. These are important stages allowing the utility to understand the position of those consumers, how water services are perceived and how demand for new services is determined. The utility is given the opportunity to find out what is liked and disliked and which service has the most chance of sustainability.

Box 3.2. Customer value chain: principles

Know your customer

- Know the different customers and potential customer groups.
- Know their behaviours, attitudes, practices, perceptions and preferences.
- Know their water use and buying habits.

Remember that water supply and sanitation services are perceived as a social good as well as an economic good.

Target your customer

- Target specific customer groups (for example by segmenting domestic customers by housing type and density).
- Target each with appropriate service options (such as house connections, yard taps and water kiosks, with or without storage tanks).
- Target at appropriate price levels.

Remember to also target payment options (for example, local or zone offices, pay as you use, tokens) and management options (private sector or community-based management).

Sell to your customer

- Sell different service options using suitable promotion techniques.
- Sell only after careful research and planning.
- Sell at the right price.

Remember that consumer groups who use alternative water supplies, have unauthorized pipe connections or receive free water may require specific and sensitive targeting.

Service your customer

- Service by providing a consistent standard.
- Service through a balance of people, process and technology using knowledgeable staff.

Remember that this demands a commitment to continual operational and managerial improvement, particularly in relation to internal communication and collaboration (for example between customer relations, billing, operation and maintenance and finance departments).

The purpose of Step 4 is to determine which service options should be considered by the utility for future marketing in similar market segments or consumer groups. The consumers are informed that the utility wishes to find out local consumer preferences for potential future service options, compared with the existing water services and sources. The group is presented with pictures showing a mix of two types or categories of service option - potential options with estimated costs for the following year and the most popular existing sources determined during Step 2 of the PREPP process.

PREPP enables the utility to obtain information regarding first, second and third preferences for a range of service options as part of a negotiated process to establish demand.

Issues related to water storage, shared resources and sustained willingness to pay are explored via pictures and the sharing of experiences. The nature of water service competition in their area is also exposed, for example, access to supplies from illegal connections and reliance on water vendors.

What is clear is that consumers are acutely aware of the costs - financial and otherwise - incurred in coping with existing water supply options and are readily open about how these compare with the proposed unit and management costs of a utility supplied service. They are also able to explain their preferences for particular service levels, duration and timing and which management options seem most viable.

The PREPP process is described in detail in Part 2 of this book.

Table 3.1. PREPP - the basic steps

	Topic/research area	Tool used to facilitate
Step 1	Existing experiences (sources, supply and coping strategies)	Water ladder and group probing
Step 2	Existing preferences	Household voting, focus group probing and discussion
Step 3	Consumer perceptions (of the utility)	Questions and probing
Step 4	Service option preferences (existing options compared to new)	Costed option ranking Pocket chart voting

Chapter 4

Knowing low-income consumers

'I know everything' built a house without a door. (Skjonsberg 1989:189)

4.1 Summary - knowing low-income consumers

Vulnerability and poverty
All communities are made up of individuals who may or may not hold similar views or experience similar needs. Men and women, rich and poor, able-bodied and disabled, high and low status will all use water supply and sanitation services in differing ways, as their work, resources and opportunities vary (Reed ed. 2003). Some of these men - and especially women - are more vulnerable than their neighbours. The poor are most vulnerable because they lack shelter, tenure, possessions, security, education and health, and other basic services, including access to water and sanitation (Moser, 1996).

The reality of poverty and the higher risk of vulnerability that it imposes affects people's decision-making powers and reasoning. Therefore knowing people's perceptions of poverty and degrees of vulnerability is critically important to understanding their preferences, ability and willingness to pay for services including water and sanitation.

Consumer decision-making
People make many assumptions about the poor without checking the facts and therefore utilities are should learn to understand what it means to be a poor consumer from the perspective of those affected. This will allow appropriate decisions to be jointly made about realistic service levels and payment options.

Understanding the process people go through when they are deciding to buy a product or service is important. Ensuring that this understanding is in place and helping the most vulnerable people throughout the process will ensure that the impact of any decision will be more positive for the end users (mainly women) and ultimately the utility (responsible for sustaining the service).

Understanding what people want
PREPP works to gain an understanding of the different elements that together determine how a consumer will express his/her demand for water supply. The elements are the consumer's:

- Perceptions
- Experiences - including existing practices and coping strategies
- Preferences

The process of investigating these elements assists a utility to determine the criteria for the most suitable - and so acceptable - service option.

4.2 Vulnerability and poverty

All communities are made up of individuals who may or may not hold similar views or experience the same needs. Men and women, rich and poor, able-bodied and disabled, high and low status people will all use water supply and sanitation services in different ways, as their work, resources and opportunities vary (Reed, 2003). Some of these people especially women, are more vulnerable than their neighbours. The urban poor are extremely vulnerable because of their lack of shelter, tenure, possessions, security, education and health, and other basic services, including access to water and sanitation (Moser, 1996). This level of deprivation is associated with poverty, that is a poor quality of life combining low income, poor health and education, deprivation in knowledge and communications, and the inability to exercise human and political rights (ADB, 1999).

In addition to very low financial incomes the poor face three main types of constraint:

1. Access to opportunity (infrastructure, education, health)
2. Personal security (income, social protection, gender, natural disasters)
3. Personal empowerment (governance, participation) (Pathak 2000)

In any given community men and women will have their own measures of poverty; it may be sleeping without a mattress or not having a bed frame, lacking the privacy of a household latrine, being illiterate, eating one meal a day or having no access to water within walking distance.

The reality of poverty and the higher risk of vulnerability that it imposes affects people's decision-making. Therefore knowing people's perceptions of their status (what in their eyes makes them poor) is important to understanding their preferences, ability and willingness to pay for services including water and sanitation. At one level it sets the context for demand.

4.3 Consumer decision-making

In poorer communities social and economic decisions are often based on the views of those claiming to hold (but not always having) impartial views. Therefore when decisions are made about where to target urban services the vulnerable and less articulate are often not adequately represented. As a result investment steers toward either the more vocal or established and affluent areas. Although an increasing number of women (the main users of water) are now being heard, decision-making is still often male dominated at a city, ward, community and household level. In low-income areas especially, the fact remains that there is a high percentage of poor households headed by women, single parents, children, or people with disabilities - all of whom have very limited decision-making power.

Many assumptions are made about the poor without checking the facts, for example in relation to paying for services. Rather than continue to be misled, utilities should learn to understand what it means to be a poor consumer from the perspective of those affected. This understanding of the constraints and opportunities will allow appropriate decisions to be made jointly about realistic service levels and payment options. These approaches are critical to begin to overcome issues of bad social relations and powerlessness, without

which environmental health improvements will not be achieved, however much pipe work is constructed (Franceys and Bos, 2002).

The buying decision process

When people buy something, or agree to enter into a contract, they go through a series of stages before making their final choice or decision to buy. As indicated in the case of water, men lead the majority of all decision-making. This bias affects the position of women and those vulnerable in the community and how they may, or may not, benefit from the purchase or service. Once again this means that dialogue about new service options, including payment, must take place with women as well as men. Ensuring that this happens means that the impact of any decision will be more positive for the end user (mainly women) and ultimately the utility (responsible for sustaining the service). If men take responsibility for the type of service that is required without taking in to account the views of women (the main users) it is questionable whether the service is viable or sustainable. This is especially the case when the service is operational and women inevitably play some part in its physical and financial upkeep.

Table 4.1 describes a typical buying process for water supply indicating the type of decisions made, the people involved and the impact this has on sustainability of the service.

4.4 Understanding what people want

PREPP works to gain an understanding of the different elements that together determine how a consumer will express his/her demand for water supply. The elements are the consumer's:

- Perceptions
- Experiences - including existing practices and coping strategies
- Preferences

The process of investigating these elements assists a utility to determine the criteria for the most suitable - and so acceptable - service option.

Perceptions

The way in which people perceive a situation usually determines how they will behave. This process extends to how people interpret messages and information, for example those promoted by utilities about water payment, interruptions to supply or disconnection. People also forget a lot of what they learn. They have difficulty distinguishing between fact and opinion and often trust their own 'reliable' sources of information, even if they are sometimes wrong.

People's perceptions are important in relation to demand-responsive and customer-orientated approaches. Understanding perception and being able to anticipate behaviour is an essential part of the right marketing mix.

Table 4.1. Typical consumer buying decision process [1]

Decision-making role	Probable predominant gender in low-income communities	Stakeholder(s) that influence the decision-maker	Impact when men (by role) dominate the decision-making process
The *initiator* - who first suggests the need for a different level of water supply	Men Women less so	NGOs, donors, CBOs Householders Utilities or municipal departments	Little consultation throughout Services may not reflect needs of all users
The *influencer* - whose comments and opinions affect the decision that is taken	Men Women less so	Traditional leaders, councillors, neighbours, engineers, women's representatives	Technical designs may not be suitable for users (such as women) Lack of equitable access Lack of sustainability
The *decider* - who ultimately makes all or part of the decision	Men Women less so	Male head of household, engineers, CBOs	Acceptance by women who may be concerned about their continuing water collection burden
The *buyer* - who physically makes the application and pays the bills	Men decide on new connection applications Women may pay a high proportion of the family budget to water, e.g. to vendors	Male heads of household, female head of household	If men decide that water should be collected from vendors, or traditional sources or standposts, women will have to suffer the inconvenience and burden. Women benefit if the water source is closer to home
The *user(s)* or collectors of water	Mainly women	Women and men	Women are left dealing with the costs of exclusive decision-making on their everyday lives, health, economic and social standing

1. Adapted from Wilson and Gilligan (1998)

Perceptions can also work for or against the utility because they are so closely linked to attitude. A consumer's attitude about payment for water, their immediate environment, responsibility for management and the role of government all affect how that person interacts with both those that provide the service and the service itself. While perceptions and attitudes are notoriously difficult to change, understanding the perspectives of consumers is vitally important if satisfactory services are to be provided in the long term (see Box 4.1).

If negative attitudes or incorrect perceptions persist the utility-consumer relationship will be weakened. It is important to establish and understand consumer perceptions. They affect the quality of consultation and dialogue, participation and ownership, and help to determine existing and future service, management and payment options (see Box 4.2).

Box 4.1. Consumer perceptions

The following comments reflect the perceptions of one community to the service provided by their local utility. Some are correct while others, according to the utility are not. Either way the relationship between the utility and the consumers may be damaged as a result.

- The utility is too slow in responding to breakdowns.
- There are not enough taps and the supply is erratic.
- They (the utility) have not realized the economic potential of our compound. They should be like the electricity company who has provided power lines within the compound.
- The residents are like orphans, they are very poor, we are charged too much.
- For the utility to improve the service they should bring chlorinated water to every home. Our water is not safe now.
- Some people are becoming darker in complexion (because of using dirty water) than the residents of X compound where the donor is providing clean water.

Box 4.2. Consumer attitudes toward two water and sanitation utilities in small towns in Uganda [1]

Consumer research into attitudes toward the local water and sanitation institution revealed that:

Institution A

- Current levels of water supply did not meet demand: 'there is always a struggle between customers and the water department' and 'before tendering water services in this town we used to pay USh50 but now we pay USh100 and worst of all there is no improvement in service'.
- Utility staff do not communicate with residents except through the town council.
- Utility activity is not formally publicized but picked up via hear-say.
- Little is known about what to do in cases of complaint.

Institution B

- The majority of those questioned said that the water office is performing fairly well but with limited water supply and so the services were generally rated as low.
- There is direct contact with the utility through the water staff, who do routine meter reading, repairs and reconnections.
- More women than men did not know where the utility is based nor how to become a customer.
- Communication between the users and the utility was highlighted as a major concern to all residents who believe that there should be a policy of informing customers of impending disconnections for unpaid bills.

1. Source: Eyatu Oriono et al. (2001)

Experiences

A lot can be learned too from consumers' ongoing experiences of accessing, using and paying for water supply. These 'existing practices' hold the key to understanding why certain consumers have particular perceptions and preferences for certain sources of supply. Knowing about existing practices also reveals a lot of information about coping strategies, that is, how different people manage in times of financial or resource

shortage.Three main factors influence why people's experiences lead them to use a particular water source, or a number of different water sources. These are: type(s) of source, how the source is managed, and how the supply is paid for. Pieced together, this information provides a profile of existing experiences that can be translated into:

- criteria that can be used to determine preferred utility service options; and
- consumer willingness to remain confident about a specific option and so be loyal to its use.

This investigation is similar to market research. As with market research for material goods, information is also learned about competing forces. Competing forces in this context are those that distract or divert the consumer from one source of water supply to another. The existence of competing forces could pose a problem for a utility, especially in retaining its customers (see the 'Coping strategies and competition' section later).

Existing practices

The urban poor have a range of practices related to water supply. For example in Mombasa, Kenya the following practices are common in low-income settlements:

- Ordinary water kiosk (considered good water - some of which comes from the utility)
- Kiosk without a structure (considered good water)
- Water collected from shallow well (considered to be too salty)
- Roof catchments (considered poor quality)
- Borehole or well with pump (considered to be too salty, often belongs to a mosque or similar institution)
- Vendor with handcart (taking water from a kiosk, wells and boreholes, generally considered to be lower quality but still used for drinking)
- Water tanker (free water only during severe shortages)
- Traditional sources (mainly puddles of muddy rain water, unprotected springs)

A similar situation is found elsewhere in developing countries. These options are largely non-utility-dependent with the utility only providing limited water through relatively few ordinary kiosks. Many of the practices are not guaranteed to be safe. Why people favour one practice over another depends on a number of inter-related factors including:

- cost;
- reliability;
- convenience;
- perceived quality and links to health and well-being;
- access (queuing times and availability);
- lack of faith in existing supplier;
- local disputes; and
- cultural beliefs and practices that prohibit certain use.

An additional and often overlooked factor is their overall choice or assessment of safe and adequate supply, or rather a lack of it.

PREPP field-testing revealed interesting and useful information about existing practices including those related to cost. In line with other studies, the use of PREPP confirmed that the poor pay high prices for their water in terms of both direct costs (e.g. bills, payments to vendors) and indirect costs (e.g. time, convenience, health). A complementary survey in Kampala, Uganda showed that consumers in low-income settlements who are not direct customers of the utility pay between three and seven times more than that paid by direct utility customers (Kayaga and Sansom, 2004).

Whichever options or practices are found in a particular community, only some will be preferred and there may or may not be consensus. Preferences can vary markedly between different communities in the same city. It is therefore important to conduct PREPP in each community where service improvements are being considered, to capture the particular mix of preferences in each area.

Coping strategies and competition

Rich and poor people have ways of coping with water shortages but for the poor especially these can be detrimental to health and well being (see Boxes 4.3 to 4.6). Having a better understanding of coping strategies provides two types of information that are useful to a utility. It shows what people will do to obtain water, and the limits of their tolerance and efforts. It can also explain why customers choose to leave a utility supply for an alternative. Together this information can help to predict the conditions and level of service that a utility must provide to obtain and keep customers. The following scenarios provide examples of typical coping strategies.

Box 4.3. Coping strategies - Scenario 1

Normally Mrs Phiri queues for her daily water at a utility-managed standpost. She pays for her water by the bucket and as such is a reliable customer. During the dry season the queues become longer and the conditions hotter. Many women leave their buckets and containers by the standpost in the early morning and return to their homes, expecting to be higher up the queue once the tap attendant opens the supply. However frequent arguments break out about who is first, suggestions of favours and the length of waiting times. Mrs Phiri has had enough and reverts to her traditional source, a pond that is some kilometers away. She knows the water is not as clean but this inconvenience is outweighed by the trouble of accessing the utility supply. Until her new supply runs completely dry the utility has lost a valuable customer. In the meantime Mrs Phiri's neighbour is extolling the benefits of obtaining an illegal connection which would ensure that the water is nearer to the house.

These scenarios illustrate 'coping strategies' but also highlight the threat to the utility's market base. In other words the pond, the reservoir and the open well are forms of competition. Even though such competition may be of inferior quality and no more reliable than the supply provided by the utility, consumers may prefer to stay with them. This type of competition could be called 'dormant competition'; it does not seek to attract use but consumers know it exists. Consumers only revert to these sources when an external factor or a specific utility performance failure triggers them to do so (see Box 4.5). Vendors and on-sellers are far more pro-active forms of competition.

Box 4.4. Coping strategies - Scenario 2

The Ghandi family is amongst the few living in their neighbourhood to have an individual house connection. They share their supply and payment of their water bills with a neighbouring family. The system works reasonably well and their water bills are generally paid on time. However, there is no storage tank for the supply, which is at best highly unreliable. When shortages become critical both families revert to a reservoir or an open well. Both of these alternatives provide them with free, and generally reliable water. This situation threatens the families' patronage of the utility's service.

Box 4.5. Triggers for reverting to non-utility supplies

- Reliability
- Convenience
- Perceived quality
- Access (queuing times and availability)
- Lack of faith in existing supplier
- Local disputes
- Cultural beliefs and practices that prohibit certain use

Box 4.6. Coping strategies: Peri-urban compounds, Lusaka[1]

Examples of coping strategies for water supply as reported by peri-urban residents of Lusaka, Zambia:

- Inflexible tap opening times by the utility tap attendant leads to friction in the community, long queues and allegations of corruption. This leads some users, particularly women, to resort to traditional sources (open wells and puddles) to avoid feeling vulnerable.
- All the residents were aware of the need for treated water and know that untreated water leads to sickness. However economic constraints regularly lead households to resort to unsafe supplies. Illegal connections are reported among those that the community see as being unsafe but a necessary source.
- Convenience is a key factor in determining which supply to use, and when. Untreated supplies are used to save collection time. In some cases these supplies are seen as being more reliable, i.e. they are 'open' and this overrides the issues about the safety of the water.
- Most houses use several sources of water supply on a regular basis; they differentiate between water used for drinking (which is often stored in jerry cans and buckets) and water used for cleaning and bathing.
- Water vendors and on-sellers are treated with mistrust but are used nevertheless.
- Community meetings are often focused on issues to do with water shortages.

1. Source: WUP/WSP/LWSC Peri-urban Section (2002)

Preferences

Engaging with consumers to find out about their preferences for particular service options is at the heart of the PREPP approach. Understanding and anticipating consumer preference for service options, rather than assuming knowledge, is an essential part of

getting the marketing mix right. Expressing a preference is closely connected to a consumer's concept of demand. In the context of PREPP, 'an expressed preference' is made for a particular water supply or service that is 'best for purpose' from the consumer's perspective. The problem is that 'best for purpose' means different things to different people and interpreting this can be difficult. The best way forward is to try and understand the preferences within the local context so that improvements are those seen to be good from the perspective of local people.

Box 4.7. Expressed preference and demand

- If the expressed preference is based on effective demand then this is likely to be based on an ability to weigh up the pros and cons of the service and pay for it. Effective demand is the result of good information about the option and its alternatives.
- If the expressed preference is based on latent demand then it is highly likely that the consumer has been influenced, perhaps by neighbours or through observation of the service (or another similar service) over a period of time. Thus the consumer has slowly become aware of the benefits of the improved service. The preference may only become apparent long after a community or household was first made aware of the options.

There is no blueprint for how this discussion is facilitated, particularly because what is already known about a certain group of consumers or market segment differs from one to the next. Establishing preferences can only be achieved through a step-by-step process of gauging the situation (understanding where the consumer is now), presenting the most likely scenario (realistic options), listening to the consumer (where does he/she want to be), acting upon this feedback (working out how to best satisfy desires) and then refining what is on offer. Likely determinants of preference, include:

- ability to pay and the frequency and form of payment (money or contributions through labour, volunteerism);
- preferred characteristics or features (convenience, reliability, design, location);
- price and relative costs (including personal/household gains made in return for payment);
- ability or option to upgrade;
- performance;
- sense of ownership;
- gender;
- level of education and access to information; and
- the influence of others.

Preferences may be expressed for existing water supply practices or future service options. The expression may be stated in positive terms (reasons for wanting the service) or negative (reasons for preferring a different service). The following case studies provide examples of expressed preference.

Box 4.8. Preference for service options offered to low-income consumers in Lusaka, Zambia[1]

'The most preferred option in all the communities spoken to is the communal tap with four taps. There are various consistent reasons for this choice including, security (the taps are locked); fairness (the taps are metered); lower cost per unit, and the fact that payment is 'as you go' rather than large amounts at one time. The number of taps was a key selling feature. Interestingly people equate this system as being the same as that in [another] compound, showing that people can be influenced by schemes that are around them and there is a desire to upgrade.'

1. Source: Banda et al. (2003a, 2003b)

Box 4.9. Preferences for existing water sources in Bushenyi, Uganda[1]

The existing water sources were ranked in order of preference and the result was: protected spring, yard tap and borehole.

Relative advantages of the **protected spring are**:

- Its water tastes better and is good for washing.
- It is free. No one pays to use it and it is always available.
- It is a good colour.
- It has clean water whose quality is assured all the time.

Disadvantage included quality during the wet season; contamination and colour changesRelative advantages of the second choice, the yard tap are:

- Convenience (saves time) as it is near home.

Disadvantages included the high cost of connecting the house to the system; expense; unreliability; and low pressure.

The least preferred source was a borehole because:

- It is unsafe, especially in towns due to underground contamination with sewage.
- The technology is not user friendly because one has to pump for a long time and much human energy is required.
- Lack of technicians for maintenance.
- The quality is low
- It is expensive to maintain.

1. Source: Eyatu Oriono(2001)

Table 4.2. Preference for service options in informal settlements in Mombasa, Kenya[1]

Brief description of service option	Market segment	Percentage of respondents within market segment who bid for the stated service option
Continuous supply with storage tank at shared yard connection (about 10 dwellings)	People living in dwellings in informal settlements (slums)	98%
12-hour supply at shared yard connection (about 10 dwellings), rationing		95%
4-hour supply at shared yard connection (about 10 dwellings), rationing		63%
Privately managed kiosk with shelter and tank		54%
Community managed kiosk with shelter and tank		48%
Privately managed kiosk, no shelter or tank		10%

1. Source based on a willingness to pay survey, Njiru and Sansom (2004)

Chapter 5

Targeting, selling to and servicing low-income customers

'The one who rides the donkey does not know that the ground is hot'
(Holland and Blackburn 1998:97)

5.1 Summary: targeting, selling to and servicing low-income consumers

Locating low-income customers
The urban poor are complex and diverse from a social (cultural, religious, legal), financial (amount of money, wage security, access to credit), human (educational levels, health status), and especially from a geographical (location) perspective. Locating them is not always straightforward. One city may find its poorer communities huddled between richer residential areas while in another they are on the periphery of town. Increasingly cities are unable to say where low-income areas stop or start, as once-contained areas spill across invisible boundaries and neighbourhoods. Utilities looking to provide services to all consumers must think strategically about how and where to target resources. Such strategic thinking requires the establishment of different criteria to identify different types of consumer.

Providing a choice
Communities alone cannot decide which service options are best for their situation, they require information and technical expertise. A utility needs to be prepared to negotiate by discussing with the community the feasible service options, including an estimate of the price per unit to the consumer.

Choices of service, management and payment options in low-income communities
In using PREPP the development of a range of potentially viable service options for water services to low-income consumers is important. These basic service options become more sustainable if correctly matched with suitable management systems and, where appropriate, payment mechanisms. Assuming technical feasibility is ensured, the final decision must take into account the elements of demand discussed earlier in Section 2, and the communities' perceptions, experiences (existing services and coping strategies) and preferences.

Ensuring that a combination of service, management and payment alternatives results in an adequate and sustainable service requires a sustained effort on the part of everyone involved. Stimulating demand is also a process that may involve raising awareness of what is feasible; returning to demonstrate these options, and perhaps piloting preferred options in selected areas before scaling up. The whole process takes time and requires a team of people with a mix of skills, knowledge, experience and perspectives.

Tri-sector partnerships
The benefits of tri-sector partnerships between public, private and civil society groups, including NGOs, are becoming more apparent in relation to service delivery. Tri-sector partnerships bring together skills, knowledge, experience and perspectives. Such partnerships work to achieve complementary aims in pursuit of one goal, for example water services for low-income customers. Partnerships are context driven and require time to form and develop and few, if any, are perfect.

Consumer participation, consultation and dialogue
Effective consultation requires effective methods of participation. Communication must be inclusive, that is upward, downward and sideways, and consistent. Besides generating valuable information the act of participating can also serve to foster ownership and responsibility. In the complex business of providing urban services, the participation of stakeholders is the main mechanism for agreeing the roles, responsibilities and actions that result in improved situations. Gaining the participation of different stakeholders is an ongoing challenge, particularly for utilities that have so far worked in isolation. For this reason participation in the context of PREPP is closely linked to partnership development.

Delivering that service in a consistently acceptable manner and finding ways to incrementally improve it is a huge challenge for service providers. Servicing is an essential part of the ongoing loop that is the 'customer value chain'. In practice finding ways to keep dialogue open with new consumers can be difficult, but once a service is provided PREPP can help to make the process of maintaining dialogue easier.

Using and adapting the same basic PREPP steps, engineers and social teams can return to consumer groups to continue the development of long-term partnerships while also stimulating demand for new or incrementally improved services.

5.2 Locating low-income customers

The urban poor are complex and diverse from a social (cultural, religious, legal), financial (amount of money, wage security, access to credit), human (educational levels, health status), and especially a geographical (location) perspective. Locating them is not always straightforward. In one city the poorer communities may be huddled between richer residential areas while in another they are on the periphery of town. Increasingly cities are unable to say where low-income areas stop or start as once-contained areas spill across invisible boundaries and neighbourhoods.

The poor cannot be appropriately targeted unless their location, demographic profile and social behaviour are known. This is an obvious statement but deciding which low-income area to work in and how to relate efforts there to citywide investment planning will not be so obvious. It is true that in every city people can point to where they typically consider poor people to be. It is also true that certain slums are legitimate target areas for repeated project money and upgrading programmes. However a utility looking to provide services to all consumers must think more strategically about how and where to target resources.

Establishing criteria and using data sources

Such strategic thinking means establishing different criteria to identify different types of consumer. Whichever way this exercise is approached it is important to ensure that the data is verified to ensure trustworthiness of the information. There are different sources of information and data that may be used including:

- Maps and city plans (see Figure 5.1)
- Housing (density, types, population and land ownership)
- Census and socio-economic data (household income, family size, employment patterns)
- Health data (monthly clinic returns for recurrent top five diseases, reported diarrhoea, cholera, typhoid, malnutrition, maternal-related health, child morbidity and mortality, malaria, acute respiratory infections (ARIs)
- Donor-funded activity and poverty-focused work (concentration of donors, active NGOs)
- Knowledge of existing services and supply options (customer billing databases, service maps, distribution reports, willingness to pay surveys)

The following examples show (a) how consumers in Guntur, India were targeted for a water survey through the mapping of housing type (Table 5.1) and (b) how social maps in La Paz and El Alto, Bolivia were used to locate the proportion of poor households (Figure 5.1). The information from social mapping can be used to plan consumer surveys of all consumers, ensuring all groups are covered, developing and implementing marketing strategies for each segment, and acting as the basis for supporting plans for service improvements to poorly served areas and informal settlements.

To develop a more thorough understanding of where different consumer groups are located, an area-based approach should be used. Figure 5.1 shows a market segmentation map for La Paz and El Alto, in Bolivia. Effective mapping ensures that decision-making and resource allocation is based on needs and the distinct characteristics of each area and its residents. When conducting surveys it is necessary to sample each area to understand the differences in perceptions and demand. It is unlikely to be sufficient to survey one area in depth and assume exactly the same results from its neighbours.

5.3 Providing a choice

Participatory wish lists

Arriving in a community with a blank sheet of paper and asking 'what do you want?' does not make sense. The consequences of these approaches and unfortunately those of much so-called participatory work in urban communities is unrealistic expectation, participation fatigue and ultimately disappointment.

Over the years it has been common to see as the outcome of participatory approaches a 'wish list' or of desired community services: school, water supply, roads, latrines, electricity. While there is no denying that these services are basic requirements for human development, the wish list is at best a starting point that confirms a crude expression of demand. What the water supply might look like and who might manage it, or which latrine design is most appropriate, still has to be defined. The community alone cannot reach these decisions. They require information, technical expertise and facilitators to ensure that everyone has a voice and time to digest ideas before reaching decisions. It is therefore better that a utility is prepared to negotiate by entering into dialogue with an informed idea of feasible service options, including an estimate of the price per unit to the consumer.

Table 5.1. Social mapping of areas for organization of a water survey in Guntur, India

Type of dwelling	Example areas for each market		Ward no./broad area
Bungalows	Ring Road Nalanda Nagar Vidya Nagar	Siddhartha Nagar Krishna Nagar	3, 4 New Guntur
Independent houses in planned area	SVN Colony New Pattabhipuram	Shyamala Nagar Venugopalanagar Colony	1, 50, 2 New Guntur
Independent houses in unplanned area	Old Guntur Main Road Nandivelugu Road SVN Colony Extension	Shyamalanagar Extension Housing Board Colony	30, 31, 25, 24, 2, 1 Old Guntur Periphery
Flats in planned area	Brindavan Gardens	Laxmipuram	4, 5 New Guntur
Flats in unplanned area	Pandaipuram Cobaltpeta	Ashok Nagar	9, 6 New Guntur Periphery
Slums having some/ full water supply coverage	A.T. Agraharam Nallacheruvu Israelpet	Venkatraopet Suddapalli Dunka Pond	50, 41, 23, 37 New Guntur Old Guntur
Slums having no water supply coverage	Nallakunta KB Colony Shashanka Goyal Colony,	Balajinagar Extension, Laxminagar Extension	50, 47, 31, 32 Pheriphery

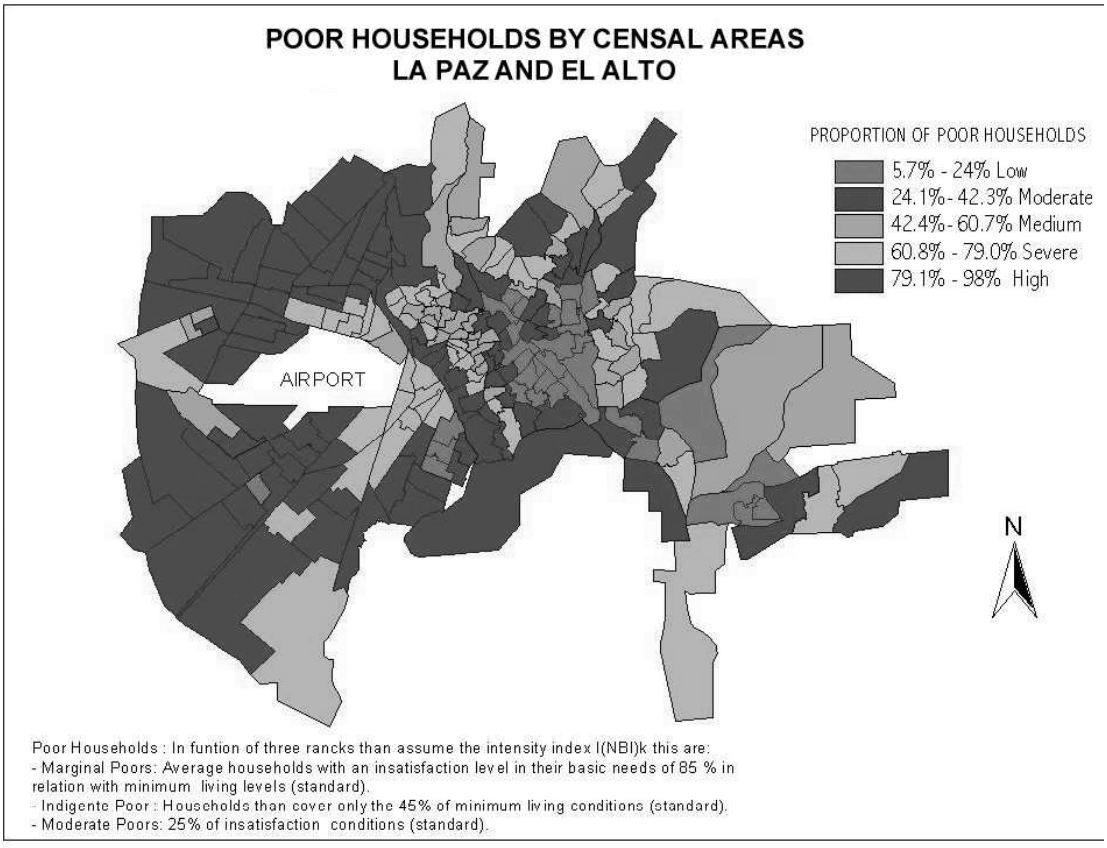


Figure 5.1. Segmentation map of La Paz and El Alto, Bolivia

Option development

Determining and calculating which service, management and payment options are appropriate for each situation is a complex process. The service option has ultimately to sell at a price the consumer is willing to pay and be financially viable for the service providers. The process for calculating this is not discussed here apart from (a) to say that good water utilities seek to develop and introduce viable options whenever they can and (b) to present an overview of the types of option that might be considered. However it is worth illustrating the likely process for option development, as it relates to the use of PREPP (see Figure 5.2). PREPP provides a sound basis for developing, testing and providing feasible options that are valued by users.

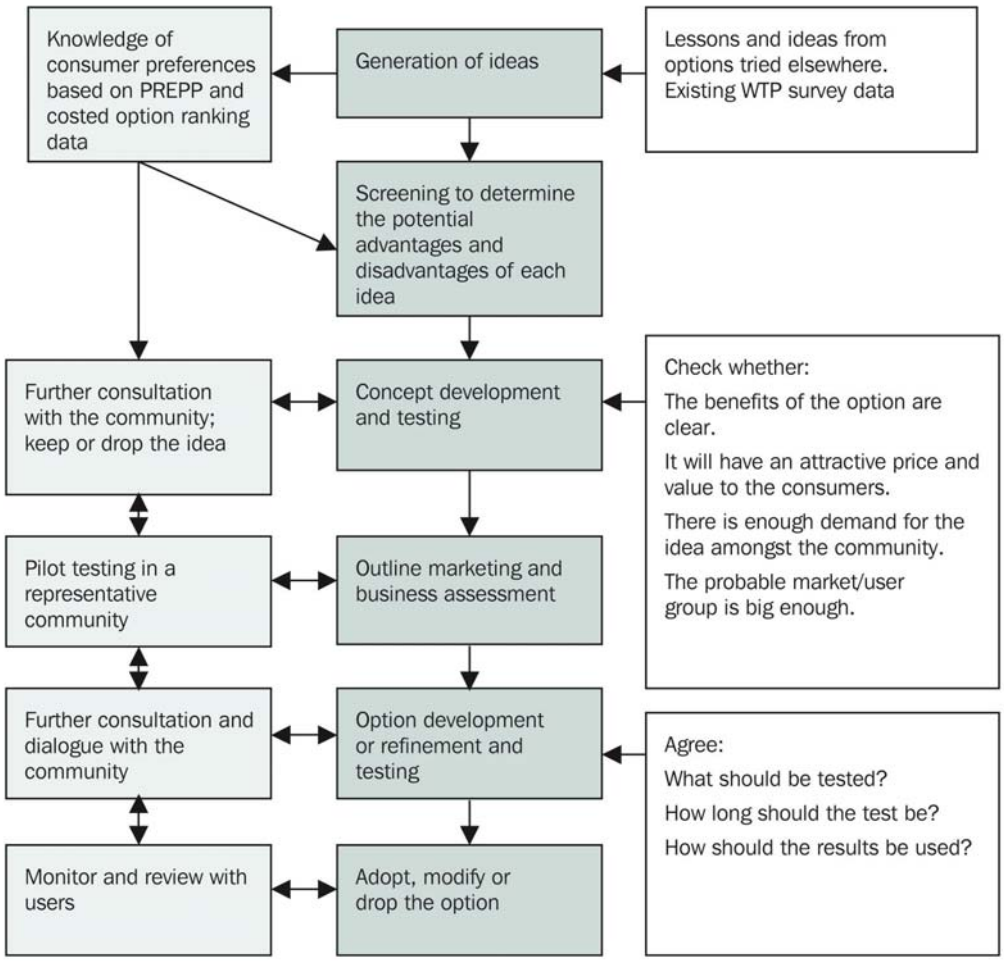


Figure 5.2. Outline process for developing new options in low-income communities[1]

1. Source: Adapted from Sansom at al (2004), based on Wilson & Gilligan, p.413 (1998)

5.4 Choices of service, management and payment options in low-income communities

During the development of PREPP the following seven utility-provided service options for water services to low-income consumers were identified.

Individual house connections with various pressure regimes and frequency of water supply. Water is usually obtained from a tap in the house.

Individual yard connections at various pressure regimes and frequency of supply, where water is obtained from a tap outside the house. The house may not have internal plumbing.

Shared (yard) connections at various pressure regimes and frequency of supply (with a few households sharing one connection), or on-selling from one household to their neighbours.

Standposts communal/public points where many people collect water. Standposts are usually without an attendant and water is usually provided for free (particularly in South Asia).

Water kiosks communal/public water points, technically similar to standposts where people buy water from the person who sells it from the kiosk. A water kiosk may be sheltered (with a structure) or open. A utility, a private operator or a community group may manage the water kiosk and sell water at a predetermined price per container, although different payment methods may be adopted.

Supply by vendors using various modes of transport such as bicycles, hand carts, animal-pulled carts and motorized delivery vehicles (trucks) to deliver water to consumers.

Supply by water tankers by the utility or a private provider especially in cases of water shortages.

These basic service options become more sustainable if adapted to suit local situations and if they are correctly matched with suitable management systems and, where appropriate, payment mechanisms. Assuming technical feasibility is ensured the decision must above all take in to account the elements of demand discussed earlier in Section 2; and the communities' perceptions, experiences (existing services and coping strategies) and preferences. An example of the classification of existing and potential service options in Kampala is shown in Table 5.2.

Obviously the choice of service option, as stated above, is determined by many factors, but the management and payment option has until now not been given the same level of consideration. Management options that might improve compliance and so sustainability include:

- Utility managed (e.g. contracted tap attendants, kiosk operators)
- Shared management (e.g. water point committees, community-contracted tap attendants, community-managed kiosks with payment for bulk supply)
- On selling (e.g. household connection where the house owner pays the utility water bills but takes revenue from sales of water to neighbours)
- Privately managed kiosk (e.g. small water enterprises)
- Community management (e.g. handpumps)

Examples of shared management options are included in Box 5.1.

Table 5.2. Indication of likely service level options in Kampala, Uganda

Customer categories	Definition	Service option
Utility direct	HH billed direct by utility *Note: Member of household (HH) collect water from a utility tap*	HH connection Private yard tap Communal yard tap Public standpipe managed by utility Public standpipe managed by private operator Individual ground tank Pre-paid meter (smart card)
Utility indirect	HH receives supply from the utility through a third party (i.e. HH not a direct customer of utility water but a consumer of utility water) *Note: Water believed to be from the utility, delivered to the HH by an agent*	Private vendors Utility supported vendors HH connection through on-selling Private yard tap through on-selling Communal yard tap Public standpipe through community Public yard tap through private operator
Non-utility	HH receives supply other than from the utility either by self or through a small operator *Note: HH receives supply from sources other than from the utility either by self or through a small operator*	River Stream Bend and fetch Unprotected spring Rainwater harvest Protected spring Borehole Shallow wells

Box 5.1. Shared management options

In Dakar, (Senegal), Haiti and Kibera (Nairobi, Kenya):

- Community groups manage small tertiary water distribution systems and pay the utility or municipal council for the bulk water supply.

In Arusha (Tanzania), and Dhaka (Bangladesh):

- Community groups manage water kiosks that are supplied with water by the utility and payment is based on meter readings.

There is also flexibility (where to pay, how to pay, when to pay, who to pay) in payment mechanisms:

- pay as you use (e.g. by the bucket at the water point);
- pre-paid (e.g. purchase of tokens); and
- billing (e.g. where bills can be paid in installments, at local offices, by collection, to groups or individuals).

Ensuring that a combination of service, management and payment alternatives results in an adequate and sustainable service, requires a sustained effort on the part of everyone involved. Stimulating demand is also a process that may involve raising awareness of what is feasible; returning to demonstrate these and perhaps piloting preferred options in selected areas before scaling up one or more. The whole process takes time and requires a team of people with a mix of skills, knowledge, experience and perspectives.

Table 5.3. Payment option summary

Dimension	Payment choices	
Method of payment	By cash By cheque By bank debits	By prepayment cards or tokens By water stamps A combination of methods
Where to pay	Pay at a cash point at utility head office Pay at a cash point at utility zone office Pay at a cash point at utility zone and head offices Deposit cash or cheque onto a bank account Through direct debit of your accountPay to a water vendor Pay to a private operator of a standpipe or kiosk	Buy a pre-payment card/token from a water cash office, chainstore, or bank Pay to a community water- user committee Pay to a landlord Pay as part of a local tax rateA combination of places
When to pay	Per month, per quarter, half-yearly, annually, etc. in arrear Per day Every time one draws water	Per month, per quarter, half-yearly, annually etc. in advance Whenever convenient but with a time limit A combination of these
Basis of payment	Fixed charge Volumetric charge, basing on metered rates Per house value	Per plot value Estimated consumption A combination
Who to bill?	Collective community billing using a bulk meter Street billing	Landlord billing Household billing

5.5 Tri-sector partnerships

The benefit of tri-sector partnerships between public, private and civil society groups, including NGOs to service delivery improvement is becoming more apparent. Tri-sector partnerships bring together skills, knowledge, experience and perspectives of key stakeholders. Such partnerships work jointly to achieve complementary aims in pursuit of one goal, for example water services for low-income customers. Partnerships are context driven and require time to form and develop, and few, if any, are perfect. Partnerships can also be developed with other capable organizations that could include: university departments, multi-disciplinary consultancy companies, or with trained staff in specialist utility/municipality sections that focus on services to poor areas.

Partnerships with NGOs and civil society groups

NGOs are key actors with the skills, approach and knowledge to help a utility make sense of the urban poor and their demands. The need for prolonged dialogue and joint decision-making with the consumer group (men, women; those with status, those without) needs the skilled use of participatory approaches to stimulate effective communication.

Such partnerships need both parties to be aware of the other's needs, perceptions and objectives, the careful selection of partners, clear contractual obligations, and terms of reference. These criteria are best backed up with a commitment to well-targeted capacity

strengthening. Perceptions of the benefits and requirements of partnership are captured in Box 5.2.

Box 5.2. Perceptions of partnerships[1]

- The three sectors of society - government, private and civil - can no longer afford to promote separate agendas (Lydia Marshall, CARE US).
- Across the board, the most challenging aspect of any partnership is that of managing the expectations of both partner and beneficiary groups (Workshop Synthesis, BPD).
- …multi-sector partnerships promote innovation and ensure greater accountability because of their continuous 'cross checking' of each other (BPD).
- ..thought needs to be given to what each partner will regard as success, how to measure such success, and how to 'share' the credit between parties (BPD).

1. Source: Caplan (2001) and Jones (2002)

5.6 Consumer participation, consultation and dialogue

Effective consultation requires effective methods of participation. Communication must be inclusive, that is upward, downward and sideways, and consistent. Besides generating valuable information the act of participating in decision-making about service options can also foster ownership and responsibility. In the complex business of providing urban services, the participation of stakeholders is the main mechanism for agreeing the roles, responsibilities and actions that result in improved chances of sustainability. Gaining the participation of different stakeholders is an ongoing challenge, particularly for utilities that have so far worked in isolation. For this reason participation in the context of PREPP is closely linked to partnership development.

Consultation is about partnership development and relationship building and it is a process that ideally lasts the lifetime of the service. Effective consultation is about opening up the design of the service to include the perceptions and preferences of those most directly affected by its presence. Figure 5.3 illustrates where stakeholder, and primarily consumer participation is useful in the process of developing new service options.

Consumers and utilities may have very different perceptions about the value of consultation and whether problems have been adequately dealt with (see Box 5.3). A number of things can go wrong during a consultation process, including:

- unrealistic or unstated expectations - *which can cause frustration and cynicism*;
- insufficient time - *allowed for proper dialogue*;
- inadequate dissemination - *of information, or providing it in an inaccessible style or language;*
- representation - *lack of transparency over the criteria for selecting people to be consulted, and a failure to represent the poorest, most marginalized groups*; and
- lack of follow-up and feedback - *and failure to follow the process through to its conclusion.*

Refer to Figure 5.3 for a typical process showing where consumer consultation can fit into utility service option development.

5.7 Servicing low-income consumers

Maintaining and improving agreed service levels

Agreeing a preferred service option with low-income consumers is in many respects only the beginning of the story. Delivering that service in a consistently acceptable manner and finding ways to incrementally improve it is a huge challenge for service providers.

Servicing is an essential part of the ongoing loop that is the 'customer value chain'. Finding ways in practice to keep dialogue open with new consumers can be difficult as once a service is initially provided utilities divert attention to revenue collection or to establishing services with other consumer groups. PREPP can help to make the process of maintaining dialogue easier.

By using and adapting the same basic PREPP steps engineers and social teams can return to consumer groups to continue the development of long-term partnerships while also stimulating demand for new or incrementally improved services.

Continually developing services

Dynamic utilities are continually improving services by refining their marketing mix and finding innovative ways to keep in touch with customers. PREPP allows utilities to assess consumer perceptions and satisfaction, as well as providing a relatively rapid means of promoting service options and assessing demand. Following the use of PREPP, more detailed issues can be pursued by the utility with communities in their service areas using similar focus group discussion methods. Such issues could include:

- Promoting new payment options
- Negotiating tariff increases
- Introducing new procedures for obtaining pipe connections or complaints and redressal procedures
- Promoting water conservation
- Explaining customer charters
- Assessing community based management

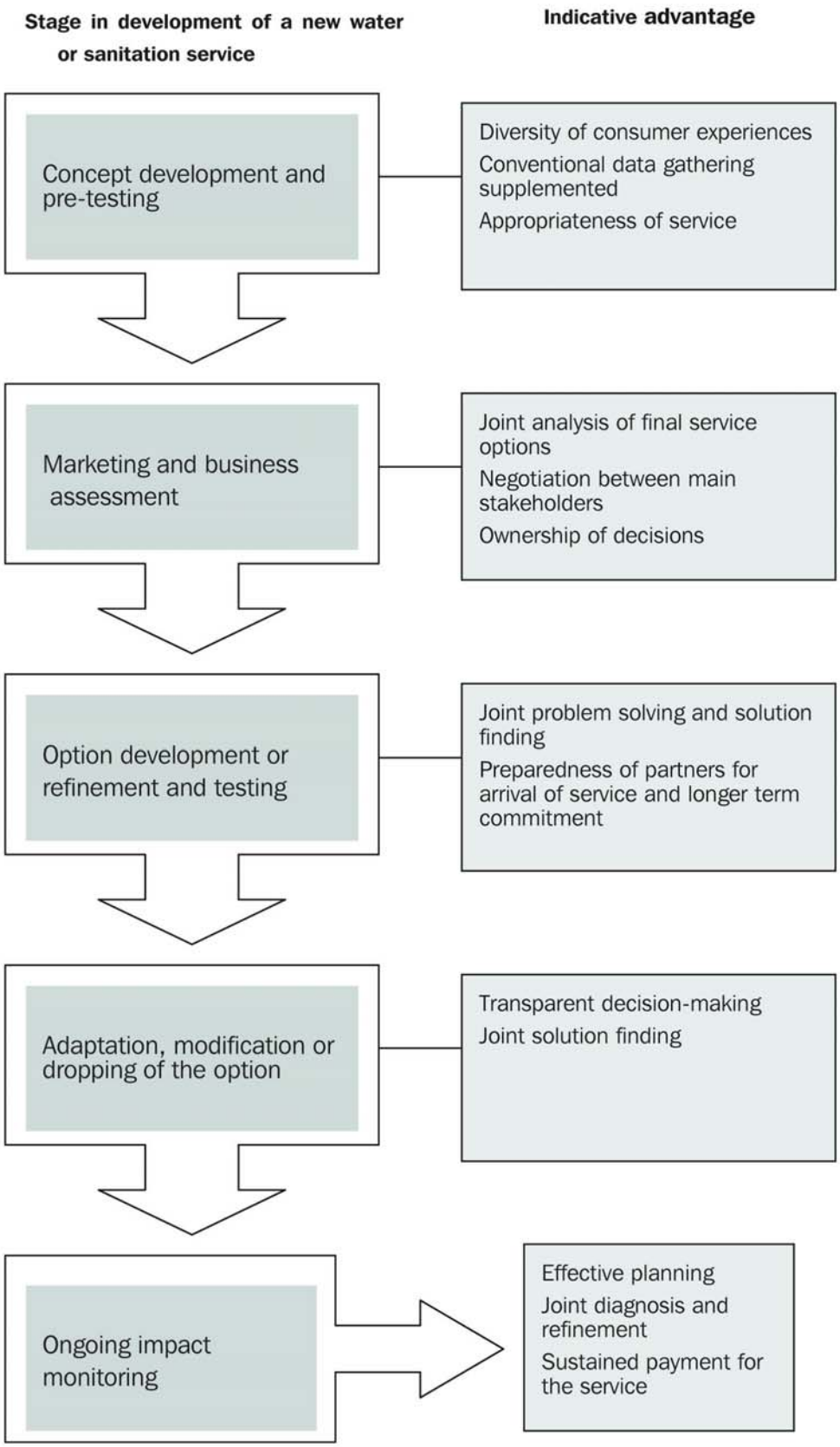


Figure 5.3. Where consumer participation fits in a utility service development process

Box 5.3. Consumer attitudes towards consultation

During focus group discussions held by an African water and sewerage utility to explore what low-income consumers thought about the services provided by the utility, staff were told that:'

We will not see you [the utility] again. If you are serious we need to know who is responsible for what. If you get your plan together then the community will know what to do. You should return.....';
'.....if you stay in touch with us we will be more willing to co-operate - we want to see results - we have been contributing for a long time'.

Prior to the survey staff thought that their dialogue with the community was satisfactory and meaningful.

Part 2

PREPP

PREPP: summary

Introduction and overview
PREPP - Participation-Ranking-Experience-Perception-Partnership is a consumer consultation process primarily developed for use with low-income residents in informal settlements. PREPP provides a rapid means of getting information about these consumer's experience and perceptions about water services, together with an expression of their preferences for new or alternative service options.

PREPP techniques and tools

Topic area	Tool used to facilitate
Knowledge of local low-income area(s)	Observation walk
Existing experiences (sources, supply and coping strategies)	Water ladder & probing
Existing preferences (exploration by type)	Household voting, group probing and discussion
Consumer perceptions (of the utility)	Questions and probing
Service option preferences (existing options compared to new)	Costed option ranking Pocket chart voting
Self-assessed household expenditure	Household income charts

Facilitating PREPP
Guidelines are based on a single PREPP session comprising one female and one male focus group facilitated by the suggested team
Under each step there is:

- A summary of the topic area and tools used
- Indication of who is involved
- Indication of timing
- A list of required resources
- A step-by-step guide to facilitation
- Examples of recording formats
- An indicative list of questions

Planning PREPP focus group sessions
Planning is an essential part of PREPP and its importance cannot be over-emphasized. Planning will ensure that the decision to use PREPP is clear. The number and location of PREPP sessions need to be agreed and planned in advance with relevant stakeholders.

Analysing PREPP
PREPP data has to be analysed and interpreted. This is an essential stage that requires management. The process will involve some basic quantitative analysis and qualitative interpretation. Although PREPP provides data that can be presented in a statistical way its main reporting value is found in combining this with its unique qualitative information.

Presenting and using PREPP data
At the planning stage thought will have been given to why PREPP is being used and what is hoped for as a result. Once the data has been recorded and analysed it can be presented in the form of tables, graphs and commentary. This information can then be used during presentations to management, to support proposals and investment plans and as part of strategic decision-making exercises. Above all, the information should not be used in isolation - the strength of PREPP is that the data can provide evidence of demand and this must be addressed in the context of business planning and forecasting.

Training of PREPP teams
PREPP facilitation requires good communication and organization skills. The PREPP team has to be both familiar with the use of participatory tools and techniques and able to understand the reasons for using PREPP. For this reason choosing and training the right team is important. It is also useful to have clear terms of reference (TOR) for the team.

As a minimum training should include:
- An overview of the utility's strategy for water supply in low-income areas
- A discussion about low-income consumers: poverty and vulnerability
- PREPP tools and techniques: theory and application
- The PREPP process and focus group facilitation
- Working in a team
- Reporting and analysis requirements

Chapter 6

PREPP overview

6.1 Introduction and overview

PREPP — Participation-Ranking-Experience-Perception-Partnership is a consumer consultation process primarily developed for use with low-income residents in informal settlements. PREPP provides **a rapid means** of getting information about these consumers' experience and perceptions about their water services, together with an expression of their preferences for new or alternative service options.

The PREPP menu

PREPP takes place in focus groups with small groups of consumers. A series of questions are asked to find out what consumers think about various aspects of their existing water supply and the range of future services that the service provider, usually a utility, wishes to introduce. The different topics are discussed with the help of visual and participatory tools. Table 6.1 shows the topics and tools that form the PREPP menu. This menu is *the minimum framework* for effective PREPP work. The menu can be adapted to suit different situations and consumer groups.

Table 6.1. PREPP - the menu

Topic area	Tool used to facilitate
Knowledge of local low-income area(s)	Observation walk
Existing experiences (sources, supply and coping strategies)	Water ladder, group probing and discussion
Existing preferences (exploration by type)	Household voting, group probing and discussion
Consumer perceptions (of the utility)	Questions and probing
Service option preferences (existing options compared to new)	Costed option ranking Pocket chart voting

PREPP and marketing

The market segment that PREPP is developed for is the urban poor. As discussed earlier, PREPP can assist the development of the right marketing mix for this customer group. Here the 7Ps marketing tool is useful and Table 6.2 provides an overview of possible outputs.

Table 6.2. PREPP outputs in relation to the 7Ps

	Potential outputs of PREPP
Product	Knowledge of existing provision - from all suppliers (vendors, small-scale operators) and traditional sourcesKnowledge of type of service and payment options preferred by consumers and the comparative advantages to existing sources
Price	Knowledge of existing informal and formal tariff structures and seasonal fluctuations Cost of provision for storage, queuing, treatment and scarcity (coping costs) The relative preferences of community groups for costed service options Knowledge of attitudes toward connection schemes and payment options
Promotion	Knowledge of existing communication patterns between utility and consumers, and potential marketing opportunities that exist Potential for active on-going customer-utility dialogue Enables the development of future targeted promotion strategies for each area
Place	Knowledge of where alternative providers operate, where new potential markets exist Better sense of specific local problems and living conditions, to enable the development of realistic solutions Improved estimates for service option take up in each area
People	Knowledge of present and potential customers, income distribution, behaviours and practices, resistance to change. Knowledge of community groups who are interested in collaborating in shared management arrangements
Process	Establishes the beginning of a consultative planning process between utility and the communities, as part of realistic negotiated demand
Presence	Establishes a means for future mutually beneficial exchanges Improved utility corporate identity and image

6.2 PREPP techniques

Focus groups

A focus group is a small group of individuals (8-10) with a similar social, cultural or economic background. They are brought together to work with a trained facilitator to explore a particular issue. The facilitator asks about attitudes, experiences and perceptions. The technique is inexpensive and relatively quick, lasting between one and two hours.

The facilitator probes the group based on their initial answers to semi-structured questions that have been worked out beforehand. This allows the facilitator to gain an insight into the participants' preferences, knowledge and understanding. Specific reasons why a utility should consider using focus groups are given in Box 6.1.

As with all participatory approaches focus groups have benefits and limitations (see Table 6.3). However with good planning and preparation a focus group is a positive way to conduct consumer consultation. A good facilitator can minimize the limitations.

Focus group composition

Ideally each PREPP focus group should involve two concurrent groups: one of women and one of men. Each group should have no more than 8 or 10 members. The women and men should be picked randomly, usually on a first come, first served basis, amongst people who live within the area under consideration. However a men's group that is

Box 6.1. Reasons why a utility might use focus groups

Focus groups help a utility to be actively 'customer orientated', more 'demand responsive' and innovative. Using focus groups can also help to reduce the risks associated with having insufficient baseline data prior to making investment decisions. Focus groups provide potential and existing customers with a voice, and importantly the utility with an opportunity to listen. The technique is particularly appropriate when communicating with residents in informal settlement areas and low-income communities, for example when:

- new or improved service options are being developed and new market segments are being investigated;
- shared and community management options are being planned, monitored and evaluated;
- the views of specific water users, especially women, are not sufficiently heard through the use of conventional survey methods;
- involving civil society and other stakeholders, for example NGOs, in new and on-going project collaboration;
- feedback is required about a recent element of improved service provision, for example local utility payment offices;
- specific supply problems or technical considerations that cannot be easily explained;
- previous communication between the utility and its customers has been closed or problematic, for example following extensive disconnection activity;
- new ideas are being planned or promoted, for example the introduction of an illegal connection amnesty;·used in conjunction with other customer survey methods, for example household questionnaires, to validate data and confirm trends or preferences; and when
- literacy levels prohibit and alienate people from participating in questionnaire surveys.

Table 6.3. Benefits and limitations of focus groups

Benefits of using focus groups	Limitations of focus groups
Customer perspectives can be gathered quickly, cheaply and effectively.	The discussion becomes side-tracked or dominated by a few.
The utility is able to assume a 'human face' and present itself away from the traditional office environment.	Participants may be suspicious of the reason behind the discussion, particularly if service payment is being explored.
Shared information provides the consumer and the utility with power to jointly act, improve and find sustainable solutions.	There may be a risk of 'hearing what you want to hear' or making inappropriate generalizations for a whole population.
Barriers, misunderstanding and poor communication can be challenged and improved.	The information can be difficult to analyse and the comments must be interpreted in the context of the group.
Unanticipated issues can be explored.	
Extreme and false assumptions can be openly challenged.	

heavily dominated by younger males may not be as successful in generating relevant information as one that has a mixed age range. This is not necessarily the case in a female group as women, the main users of water regardless of age, are more able to express demand.

The reason male and female groups are used in PREPP is to enable women in particular to express their opinions and preferences free from cultural and social norms that often inhibit participation. This does not prohibit the use of mixed gender groups in PREPP, however the decision to do so should be based on knowledge of the likely participation rates of women.

Drawings

Drawings to show different aspects of water supply are used throughout PREPP. Drawings are an unthreatening way of focusing group interest in a specific topic. When a group of people collectively looks at a drawing there is not a concentration on one speaker. People are less intimidated and more likely to contribute to the discussion and are generally more relaxed and less inhibited. Drawings do not require literacy skills, are cheap to produce and easily made relevant to different situations. They can also be adapted on the spot if necessary.

The use of drawings should be approached carefully. Visual literacy (how we see things) is different from one group, one culture and one society to the next. A picture of a woman lifting the keystone plug from a Sanplat squat hole in a VIP latrine in Zimbabwe may be interpreted as a woman lifting a heavy iron in another country!

Drawings should always be pre-tested. For advice on how to work with an artist and conduct pre-testing see Annex 1.

Guided questioning and probing

During a PREPP focus group the facilitator uses a prepared list of questions and topic areas to ensure that the discussion retains a useful structure. This is important to:

- enable the discussion to be systematically recorded;
- make best use of limited time;
- keep the participants focused on the issues;
- help the facilitator to keep the discussion going;
- make sure all the main topics are adequately covered;
- ensure that the information generated in one focus group can be meaningfully compared with others; and
- enable easy analysis.

In addition to the questions the facilitator also 'probes' the group. This involves exploring in more depth interesting issues or asking for the clarification of statements that are either unclear or which do not agree with the general consensus expressed by the group.

Multi-disciplinary facilitation

A small team of people with different skills and professional backgrounds facilitates PREPP. The typical PREPP team comprises:

- one or two engineers
- two social scientist or community development workers
- one local artist
- two assistants

Each team member has a different role to play in PREPP facilitation. The engineer is responsible for the presentation of technology and management choices and for explaining the form these service options may take, including the predicted cost. The social scientist or community development worker is responsible for managing the whole process, facilitating the discussion and interpreting the results. The local artist is useful for on-the-spot material development and refining the use of drawings. The assistants are responsible for recording the discussion in a format that can be easily understood and analysed. In addition to having clear roles and responsibilities there are a number of other reasons for bringing this team together, including:

- Providing engineers with the opportunity to understand water supply from the perspective of the users. This can have significant benefit on the future design of technical options, the management and operation of community schemes and ultimately service sustainability.
- Providing social scientists and community development workers with an opportunity to apply their skills to a utility-led process. This enables them to see community issues from a different perspective - that of a commercial asset.
- Allowing key professions to pool their expertise and experience, share skills and understand each other's perspective so that effective problem solving can take place and ultimately a more demand-responsive service can be delivered.

Facilitation logistics

As stated it is usual that two focus groups, one male and one female, will run concurrently. It is advisable to plan for each group to have a main facilitator, usually the social scientist or community development worker and one assistant to record the proceedings. The engineer, if only one is available, and artist can work between the groups.

Chapter 7

PREPP tools

7.1 The water ladder

The water ladder is a set of drawings, (between six and 10) each showing a different water source, point or service option/level depending on its intended purpose. The drawings are presented in random order without explanation. The group is asked to sort them into an order that illustrates what they consider to be 'poor', 'acceptable' and 'good' existing water supply, or alternatively to prioritize preferences for new service options. The 'ladder' is created on the floor or a flat surface so that the drawings can be easily moved to create different ladders until a consensus is reached.

In PREPP the water ladder specifically looks at **existing water sources and practices** that are used in the local area. Each PREPP water ladder MUST reflect the local situation. Deciding which sources to represent will require research and local knowledge of existing water sources and practices in low-income areas. Below in Figure 7.1 is an example of an existing source water ladder from Uganda. Here photographs have been taken so that the artist can then make a series of drawings from these.

7.2 Voting

Two types of voting are used in PREPP - 'Bean or pebble' voting and 'pocket chart' voting. During the PREPP focus group voting is used in conjunction with the water ladder and costed option ranking. The results of individual and group votes comprise the main quantitative data.

Bean or pebble voting involves each person having a designated number of counters to place against an option, usually on a one person - one vote basis. The voting in this system is open for all to see and people usually vote simultaneously. Pocket chart voting is a system of secret voting. Each person takes a turn at placing his or her counter inside a pocket which is usually placed behind an option. The votes are counted in public after the last person has placed his/her vote.

7.3 Costed option ranking (COR)

Costed option ranking or 'COR' is a simple tool designed to determine a consumer's relative preferences for different water service options. The tool takes consumers through a participatory cost-benefit analysis exercise that imitates the buying decision process described earlier. COR uses simplified elements of willingness to pay surveys, in particular ranking against associated price.

Bicycle vendor

Protected spring

'Bend and fetch' (puddle water)

Traditional shallow well

Figure 7.1. Ugandan water ladder photos

Box 7.1. Water ladder development

The first water ladder was developed for use with rural communities to:

- assist the process of upgrading current supply;
- understand perceptions of 'adequate' supply;
- promote the concept of 'incremental steps' to improve supply;
- promote community ownership and management;
- assist a community to make realistic decisions concerning its water supply;
- discuss the merits and impact of different technology options; and
- link water to community health and environment issues.

Water ladders are always situation specific. For example the ladder developed for use with Zambian communities was found to be inappropriate for use with Zimbabwean communities. This is mainly to do with local practice associated with traditional source collection, technology options and perceptions of the picture representing 'us'. Drawings used in the Caprivi Region of Namibia were found to be inappropriate for use with Namibian communities in the Erongo Region. This was due to differences in culture, dress and technology practices. Drawings used in Southern Asia cannot be used without adaptation in Africa or Central Asia. This means that all drawings must be pre-tested and adapted to suit the environment in which they are being used.

Like the water ladder, COR is based on a series of drawings, this time on service options that the utility is proposing to market to a particular group of consumers. However unlike the water ladder the engineer first presents each drawing to the group describing the service option and its cost implications. These options are visually compared and discussed. Some are familiar while others may be new. The preferred existing options that emerge from the previous water ladder exercise are included with the list of proposed options in order to reveal the relative demand for existing and proposed options. The drawings are then given to the group to rank in order of preference. This participatory ranking exercise takes a number of factors into account:

- the price to receive the service option by unit, which is usually based on 20 litres or other convenient measure;
- the management implications to the individual or community;
- the technology type;
- the frequency of the supply (hours per day), ease of access and reliability;
- the perceived ownership of the proposed service option ('communal', 'household', 'public', 'shared')
- peer and individual influence; and
- the 'value' of the proposed service option to the consumer when compared to their preferred existing water sources and practices (taken from the earlier completed water ladder).

Note that the quoted price of each service option presented should correspond with the likely charge for that service option assuming it is to be provided in the near future. So the costing could be based on the expected water tariff and connection charge (where appropriate) that is likely to be charged in the next one or two years. Figure 7.2 shows an engineer facilitating discussing of service options for costed option ranking (COR) in Kampala and Box 7.2 highlights the benefits of using COR.

Refer to Figure 7.4 for examples of drawings used for a costed option ranking exercise in Kampala. Note that in some cases more than one drawing is used for each option to convey the process of that service option, for example water vending.

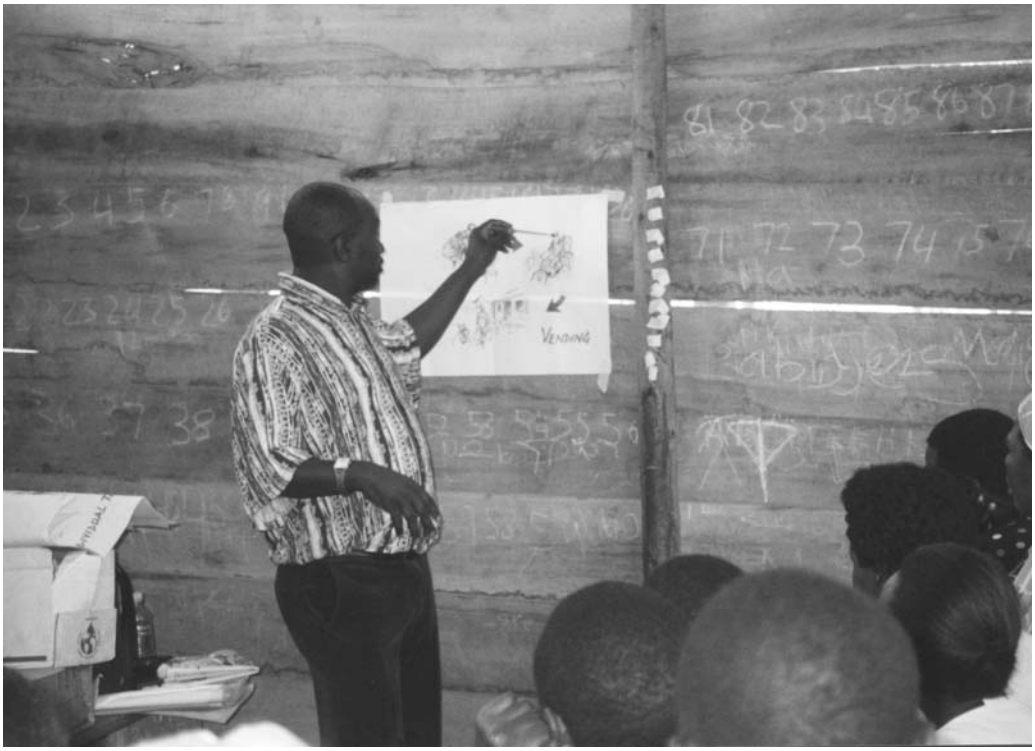


Figure 7.2. Engineer facilitating COR, Kampala Uganda

Box 7.2. Benefits of using Costed Option Ranking

- The utility can determine consumer preferences for different potential service options that it is considering offering based on realistic water charges;
- The utility can improve its understanding of user preferences for their existing sources and coping strategies;
- The utility can improve its relationship with existing and potential customers;
- The ranking exercise includes costs - which are a key determining factor in people's choices for services. The tool is less complicated to use than other methods, for example Willingness to Pay Surveys.
- PREPP is participatory throughout and this provokes a great deal of debate with every participant offering an opinion of the pros and cons of the proposed options.
- The use of visual aids (pictures) to present water supply options greatly simplified the complex work of explaining to participants of varied literacy levels.
- The exercises enable participants to be confident and women especially are able to express opinions and make decisions on improved water supply options.
- The combination of individual and group action in PREPP is very successful in soliciting views of those who cannot speak during group meetings.

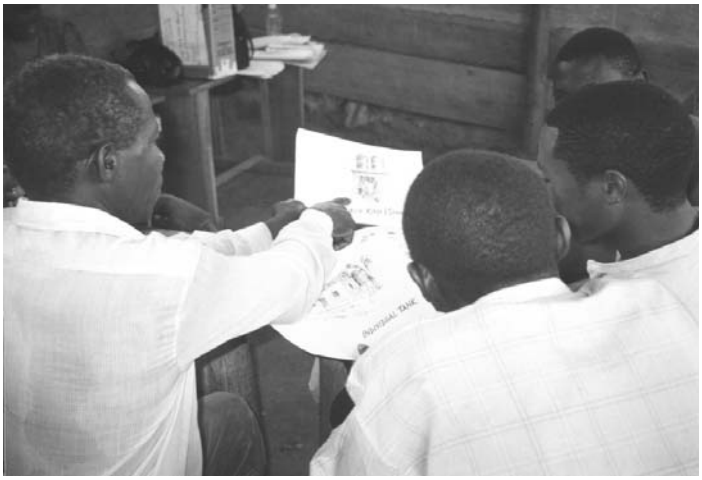


Figure 7.3. Men and women discussing service options (COR)

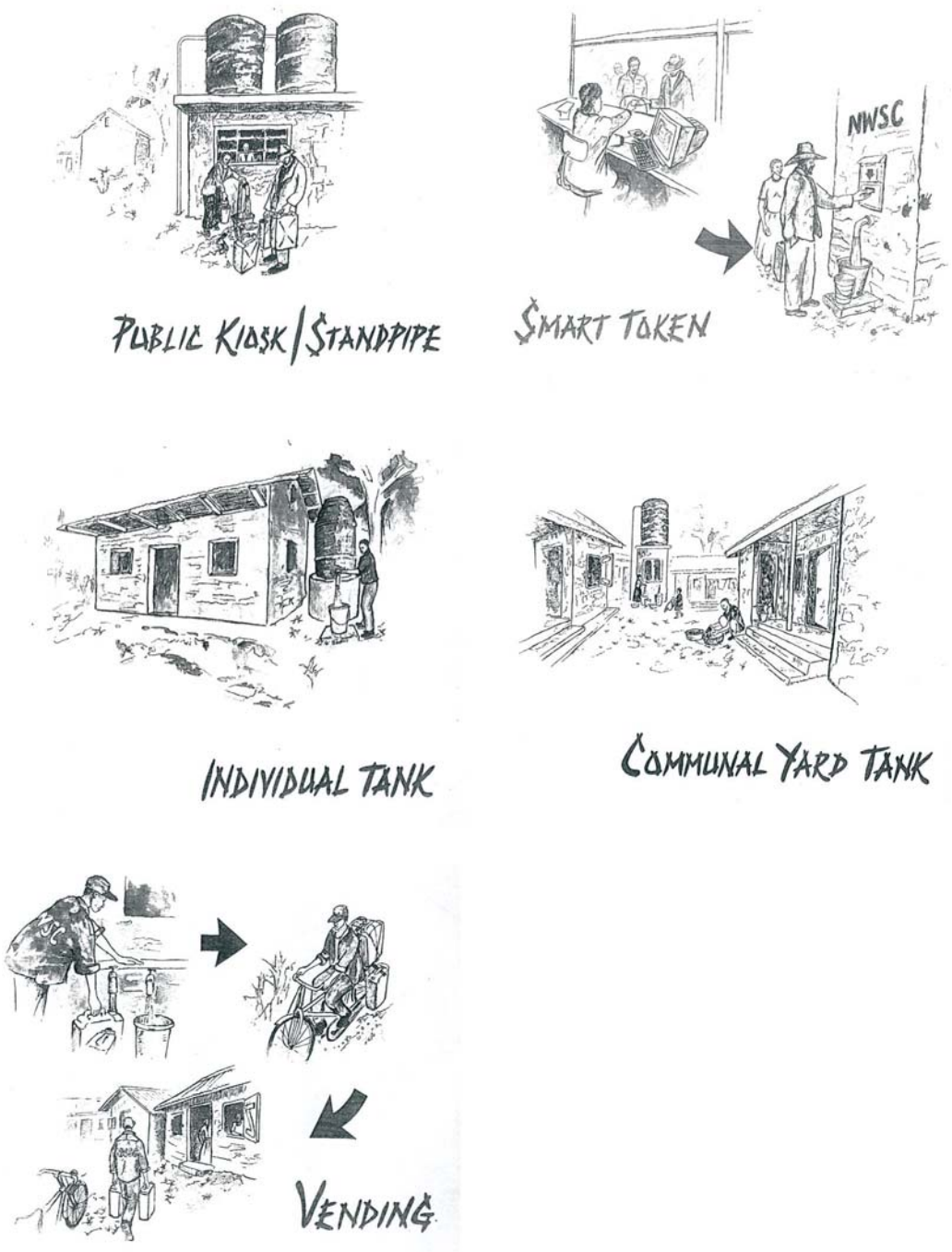


Figure 7.4. Examples of drawings used for costed option exercises in Kampala

Chapter 8

Facilitating PREPP

This chapter looks at two things, how to plan the number and location of PREPP sessions and how to facilitate a session. As already indicated it is possible to adapt the approach but here the minimum framework for effective PREPP work is presented. The guidelines for facilitating a PREPP session are based on a single event comprising of one female and one male focus group facilitated by the suggested team.

Under each step there is

- A summary of the topic area and tools used
- An indication of who is involved
- An indication of timing
- A list of required resources
- A step-by-step guide to facilitation
- Examples of recording formats
- An indicative list of questions

8.1 Planning a PREPP programme

Sample population and number of sessions

As with all types of survey a first step in using PREPP is to work out how many people to include. Selecting a sample, or select people from the population based on criteria related to what the survey is trying to find out is the normal approach. Once this is agreed the research team applies a mathematical technique to working out how many people to survey and who these people will be. Realistically this approach is very difficult to predetermine when using PREPP. This is because the session is likely to be set up through an intermediary, for example a community leader or an NGO rather than a deliberate random sampling exercise. PREPP is also looking for trends and common preferences rather than precise measures. This means that it is important to explain to the intermediary the purpose of the session, the kind of people it is aimed at and the approximate numbers needed. It is equally important to state the need both for men and women to participate. As with all community development work, who participates on the day will inevitably be subject to the availability of community members. People may say yes but have other pressing things to do, they may change their minds or may want to participate at short

notice because they are curious about the subject. Sensitivity and common sense is required.

The following guidelines will help to get PREPP sampling right:

Sample population
Water consumers, preferably though not exclusively heads of households (often a man) and the main water collector (often a woman) living at least semi-permanently in an identified low-income area. This does not include community leaders or other people with wide influence.

Number of participants
8-10 men and 8-10 women (per session)

Number of sessions
At least two sessions per community or ward.
This means two women's groups and two men's groups.

Experience in using PREPP has shown that people's perceptions, priorities and preferences often vary significantly between one informal settlement and the next. This is because of the variability in socio-economic characteristics of the residents, differences in the service levels and the level of development activities either with NGOs, the utility or municipality. If the information is to be used for planning services for more than one informal settlement, then at least two PREPP sessions are needed in each settlement.

More sessions will be required in larger informal settlements to capture the diversity of the groups, experiences and perceptions within that area. Experienced local social scientists will be able to advise on the precise number and location of the PREPP sessions that will be needed in the proposed research areas, in order to capture the diversity of groups and experiences. Good quality market segmentation plans can assist in defining where the target consumer groups are located.

If a number of PREPP sessions are envisaged in different parts of a city, it is preferable to arrange for the assembled multi-disciplinary PREPP team(s) to complete all the surveys as part of the same assignment. This should ensure continuity of approach, effective data collation and analysis to inform strategic and investment planning.

Duration
As a guide if 10 PREPP sessions are proposed in different parts of a city, then these should be completed in one four week period. Typical time requirements for the key PREPP activities are as follows:

- five days to arrange for the production of drawings, liaison with the identified community and completion of PREPP team training
- one day per PREPP session (male and female). Although a session usually only takes two to three hours, the rest of the day is required for logistics, arranging the next session and writing up the results.
- three to five days (depending on sample size) at the end of the session schedule to analyse and document the findings.

Task durations will of course vary depending on the capacities of the teams and local logistical issues. Additional time should be allowed (prior to commencing the PREPP training) for research into feasible options and the costing of those options. This will involve the utility engineer and perhaps other managers.

8.2 Planning a PREPP session

Planning is an essential part of every PREPP session and its importance cannot be over emphasised. Effective planning can ensure that:

- good use is made of time - a focus group session should last no more than two hours;
- the PREPP team works well together, is familiar with the tools and drawings and that each member is fully aware of his/her roles and responsibilities;
- the relevant community leaders have been informed and the purpose of PREPP has been fully explained;
- the group is ready when the PREPP team arrives, that the venue is adequate and that the group composition is representative of the local community (men and women);
- transport is available, materials and drawings are ready and photocopied.

Most importantly planning extends to being ready for the activities that will take place after the session; writing up the data, undertaking the analysis and conducting any necessary follow up. It is suggested that a 'lead facilitator' is designated with responsibility for overall coordination, delegation of activities, logistical planning and pre-session team training.

The following checklist in Box 8.1will assist effective planning.

8.3 Step by step guide to facilitating a PREPP session

Preliminary activity: Getting to know the local area

One way to orientate the PREPP team is to conduct an observation walk either before or soon after the focus group session. This serves a number of purposes including

- familiarizing the team with the local area;
- showing them first hand the existing water sources and coping strategies;
- building a relationship with local the community;
- presence of the utility other than in a vehicle or office; and
- providing an opportunity for fact-finding and verification or triangulation of information gained during the PREPP process.

Following orientation the team is ready to facilitate a session.

Box 8.1. PREPP planning checklist

1. Form PREPP team

Hire or secure participation of two facilitators bearing in mind the following criteria:

- able to fulfil ToR
- local language skills·good spoken and written English
- community development and or NGO background
- excellent communication skills·social development perspective
- willing and able to commit required time during research period
- flexible and open
- willing to learn quickly about the water sector/area of research
- able and willing to work in a team

Hire or secure the participation of two assistants bearing in mind the following criteria:

- able to fulfil ToR
- local language skills
- good spoken and written English skills
- willing and able to commit required time during research period
- able and willing to work in a team
- good listening skills

Secure participation of a utility based Engineer and request that he/she does the following:

- Agree the service options that the utility is proposing to introduce in low-income areas. This will involve working out the price for receiving the option and any management requirements. This information will form the COR.
- Agree the most commonly used existing sources in conjunction with the facilitators based on local knowledge.

Hire local artist to:

- Prepare water ladder: separate A4 black and white drawings of existing water sources
- Prepare costed option ranking (COR): separate A3 black and white drawings of proposed utility provided service options

2. Prepare sessions and training
Agree questions, probes and recording formats

- An overview of the utility's strategy for water supply in low-income areas
- A discussion about low-income consumers: poverty and vulnerability
- PREPP tools and techniques: theory and application
- The PREPP process and focus group facilitation
- Working in a team
- Reporting and analysis requirements

Box 8.1 continued

Make contact with a credible intermediary

- who is familiar with the community (NGO representative, Council Officer, Zonal Water Officer, school teacher) and ask her/him to arrange the meeting and let people know the time to attend and the venue

Obtain materials required for the focus groups:

- Flip chart pad x 1
- Marker pens x 4
- Masking tape x 2 rolls·
- Note pads for assistants and facilitators
- Pens for assistants and facilitators
- A4 envelopes for filing materials

Organize transport
Arrange access to photocopying

Figure 8.1. Conducting an observation walk, India[1]

1. Photo: Rajahmundry Municipal Corporation AP, India 2002

Session step one: existing experiences

Timing	Topic area	Tool used to facilitate	Resources	Facilitated by
20 minutes	Existing experiences (sources, supply and coping strategies)	Water ladder	4 copies A4 water ladder	The main facilitator

Facilitating the water ladder

Divide the focus group in to two smaller groups. Ensure that each has sufficient space to work easily with the drawings. Give one set of water ladder drawings to each group. These should be in random order. Ask the groups to identify each drawing, removing any that are not recognized at all. Ask the groups to sort or rank the drawings in order of preference for what is a 'poor', 'acceptable' and 'good' practice or water source, so making a ladder. Allow the group sufficient time to change the order of their ladder until a consensus is reached. Note that each group may have a different ladder.

Recording the water ladder

Each water ladder should be recorded at this stage. Below is an example of a water ladder results table.

Table 8.1. Water Ladder Results

Date:Location:	GROUP ONE		GROUP TWO	
Drawing description *For example*	**Group ranking order**	**Individual / Household votes**	**Group ranking order**	**Individual / Householdvotes**
water collected from a shallow well				
Borehole with hand pump at Mosque				
Kiosk with a structure				
Handcart vendor				
Kiosk without a structure				
Other as identified by group				

Session step two: existing preferences

Timing	Topic area	Tool used to facilitate	Resources	Facilitated by
10 minutes	Existing preferences (exploration by type)	Household voting, group probing and discussion	4 copies A4 water ladder Voting counters (eg. beans, pebbles)	The main facilitator

Facilitating exploration of existing preferences

Using the water ladders constructed above ask each individual to indicate which of the existing sources on the ladder his/her household currently uses (it may be more than one) by placing markers ('votes' - using pebbles or beans) against each relevant picture, including any additional sources that the group has identified.

Record the final votes on the water ladder results table above.

Next ask the whole group to consider and discuss their reasons for each of the indicated preferences.

Make notes of the discussion using the following guide.

Brief summary of key points	Notable quotes
Comments and observations	

Questioning and Probing

Probe the group about existing water source and practice areas that have not been covered in the discussion so far. Below are examples of probes and questions.

Probes for water collected from a **shallow well or traditional source** may include the following questions:

- How do you collect the water? When?
- How much water do you usually collect? (quantity)
- What do you use to collect it in? (jerry can, bucket etc.)
- What is the quality like?
- Who usually collects it?
- What do you think of this source?
- How far away from your house is the source?
- How reliable is this supply? Wet season? Dry season?
- How long does it take to collect your water?
- What is your main reason for using this source?
- Do you store the water? How?

Example of probes for water collected from a **handcart vendor**

Service probes

- Who supplies your water?
- What is the quality like?
- How do you receive/collect it?
- How much water do you get?
- When do you get your water?
- What do you think of your supply?
- How often and how reliable is this supply?
- What is your main reason for using this supply
- Where does the vendor get the water

Payment probes

- How often do you pay?
- How much do you pay for your water (based on a 20 litre jerry can)?
- Who do you pay?

Examples of probes for water collected from a Kiosk **without a structure**

Service probes

- Who supplies your water?
- How often and how reliable is this supply?
- How do you receive/collect it?
- How is the pressure?
- What distance do you go to get the water?
- How is the quality?
- How long does it take to get your water?
- How much water do you get?
- When do you get your water?
- What do you think of your supply?
- What is the main reason for using this source?

Payment probes

- How much do you pay for your water (based on a 20 litre jerry can)?
- Who do you pay?

- How often do you pay?
- Is there a metre?
- If yes, is it working?

Session step three: consumer perceptions

Timing	Topic area	Tool used to facilitate	Resources	Facilitated by
15 - 20 minutes	Consumer perceptions (of the utility)	Questions and probing	-	The main facilitator

Facilitating consumer perceptions of the utility
Ask the group to describe their perceptions of the utility. While the group members may or may not receive water from the utility they may still have views about it. Adapt the questioning as appropriate to the group's situation.

Questioning and probing
Examples of probes

- What do you think about the utility?
- Do you ever have direct contact with the utility?
- How do you make contact with the utility?
- Where is the utility based?
- How do you know about what the utility is doing?
- How can you become a customer of the utility?
- How do you rate the services that the utility provides (dealing with complaints, re-connecting etc.)?
- How should the utility improve?

Record the discussion using the following guide.

Brief summary of key points	Notable quotes
Comments and observations	

Session step four: service option preferences

Timing	Topic area	Tool used to facilitate	Resources	Facilitated by
45 - 50 minutes	Service option preferences (existing options compared to new)	Costed option ranking Pocket chart voting	1 copy A3 COR drawings 4 copies COR A4 drawings	The engineer The main facilitator

Note: the easiest way to facilitate this part of the session is to bring the men's group and the women's group together. This way the Engineer can make one presentation. When the Engineer has completed his/her presentation the group can split and work as before.

Facilitating service option preferences - the Engineer's role

Explain to the group that you wish to find out what their preferences are for possible future service options, compared with their existing water services and sources.

Show and describe by **technology type, management and price** the following drawings in *random order*. (Note: it is important to avoid the impression at this stage that the new utility promoted options are necessarily better than the existing water supplies or that the utility/engineer itself has a preference).

a) Potential options for future supply through the utility (with estimated costs based on prices that could be charged in the following year). These are the COR drawings.

together with

b) The most popular existing sources (select and use only the 2 or 3 pictures that have the most votes). These are taken from the Water Ladder.

Answer any questions.

Note: Group members will have an appreciation of the 'coping costs' they already incur for existing sources, for example the payments to vendors, time spent in collection, health costs. This knowledge will enable them to compare their existing situation with the new COR options.

Facilitating service option preferences - the facilitator's role

When the engineer has finished the presentation return to the two separate groups, one men and one women. Give the group the COR drawings and the most popular existing source drawings taken from the water ladder. Ask the members to discuss the relative advantages and disadvantages (including the technology, management arrangements and relevant health issues) of each option. (This enables the group to compare existing costs - financial and non-financial with the proposed costs that may at first sight seem more expensive.)

Split the group in to two smaller groups. Ask each group to rank the options in order of 'least preferred' to 'most preferred' based on the presentation and group discussion, so making a second ladder. (The group should be given a little time to digest what they have heard and discuss the options further amongst themselves).

Compare the ranking from the two groups and ask for comments. Reach a consensus if possible.

When the ranking is complete ask each individual to vote (using the pocket chart) for their own top three options based on what they think their household would prefer. (Note that this may well include votes for their existing sources as well as votes for possible future utility promoted options).

Record the results and make notes of the discussion as suggested above. Below is an example of a COR results table.

	Option least preferred	Option	Option	Option	Option	Option most preferred
Ranking Group 1						
Ranking Group 2						
Voting Group 1						
Voting Group 2						

Chapter 9

PREPP analysis and findings

9.1 Dealing with the data

After the PREPP sessions have taken place the data has to be analysed and interpreted. This is an essential stage that requires management. The process will involve some basic quantitative analysis and qualitative interpretation. Although PREPP provides data that can be presented in a statistical way its main reporting value is found in combining this with its unique qualitative information. This is because PREPP is looking to draw together the following factors that influence a willingness to sustain an eventual customer relationship between the consumer and the utility,

- willingness to pay, couples with
- reference for service, based on
- knowledge and experience of existing options weighed against the perceived value of newly proposed services.

The overall purpose is to draw out this key data from each of the PREPP steps (existing practices/coping skills, perceptions and preferences) and document them in a way that is clear and precise.

Quantitative data - ranking

As the sample size is likely to be manageable collating the quantitative data can be done using a commercial spreadsheet package, for example Microsoft Excel, that can assist with data presentation as is shown in Figure 9.1. The collated results should be looked at sensitively involving a process of 'weighing up' the emerging picture. Where it is difficult to tell if the information is sufficiently rigorous the data should be crosschecked.

Qualitative data - participant's answers to questioning

There is no set way of interpreting qualitative data but the following guidelines are helpful.

- Analysis should take place as soon as possible by the PREPP team who did the field work;
- Good organization and indexing is important;

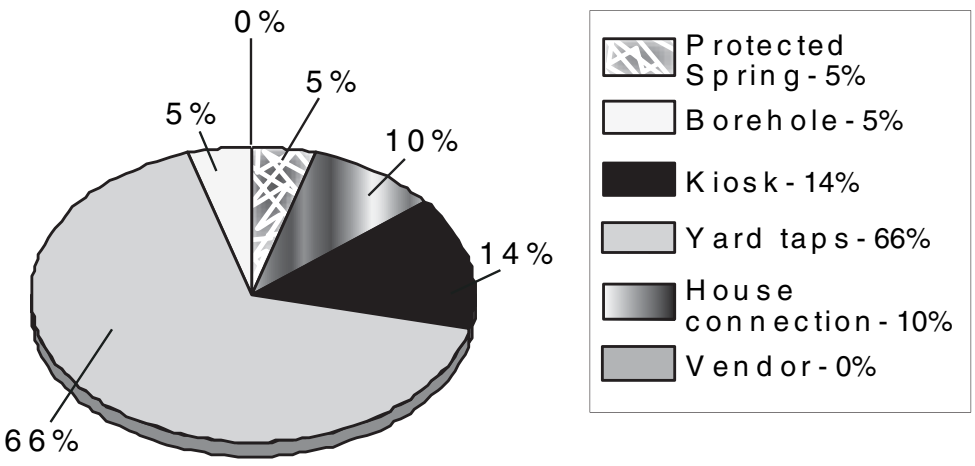


Figure 9.1. Example of simple quantitative data reporting

- It is useful to place the comments of the focus groups under broad headings that are relevant, such as: utility water services, non-utility water services, coping practices, preferred options, perceptions of water connection procedures, etc.
- Work systematically and complete the analysis of each session by community or ward before comparing the data; and
- Work towards taking the data apart and then rebuilding a picture using comparison. Look for trends, common statements, statements of particular relevance or interest to the purpose of the PREPP programme.

In addition the team should avoid working mechanically. It is better to constantly reflect and think about what is being read and suggested taking in to account,

- Its truth-value -is what was said credible based on what is already known or checked?
- Its applicability - in the situation or like communities
- Its consistency - is it likely that the same group would give the same type of information a second time?
- Its neutrality - did the team lead the answers?

Source: adapted from Robson 1998

9.2 Cross-checking and verification of PREPP findings

Research has indicated that there is good correlation between PREPP results and other data collection techniques that rely on a greater number of interviews, such as household semi-structured interviews and consumer surveys. It is important however, to verify the PREPP results. This can be done in a number of ways,

- Check and confirm local water supply coping strategies in the specified areas to check for correlation with PREPP results, this can be done through observation walks and site visits.
- Conduct a minimum of two PREPP sessions within different parts of the same residential area, more will be required in larger communities.
- Consult experienced local social scientists on the required number and location of PREPP sessions in the defined research area(s).
- Crosscheck results with other data sets available such as household consumer surveys.
- Revisit the research areas to verify the results with community groups.

9.3 Presenting PREPP data

PREPP data, particularly the ranking exercises for existing and proposed options, is more valuable to utilities if presented clearly and is more likely to influence effective decision-making. Common formats include concise text descriptions, tables, matrices and pie charts. It is advisable to keep formats simple and uncluttered

Using consumer perception information

Data on consumer perceptions is valuable for determining future utility marketing and communication strategies. Table 9.1 sets out typical consumer perceptions (column 1) and potential utility marketing or communication strategies (column 2) that can address those perceptions and thereby increase the prospects of increased numbers of satisfied customers.

Presenting option ranking data

Option ranking data is most conveniently presented in table form with a brief description. Two examples are shown below in Table 9.2 and Table 9.3.

Costed option ranking research results obtained in Guntur, India are in Table 9.3. The preferred proposed option is for shared or group connections, as can be seen in the table, followed by community managed public standposts and individual connections. This preference is probably motivated by the perceived affordability of the group connections and public standposts, compared to the individual connections.

When a number of PREPP sesions have been carried out throughout an urban area, average ranking values for all results can be included in summary tables. Because a utility would generally be looking for around three or four service options to promote, it does not matter if some areas have slighting different ranking orders compared to other areas where PREPP sessions have been conducted. If however, there are large discrepencies between the preferred options between two low income areas, the results should be checked, perhaps with further surveys. If large discrepencies are confirmed, then the utility should consider offering different options in different informal settlements, or reach some compromise menu of options to be offered.

Table 9.1. Typical consumer perceptions and potential utility strategies

Typical response	Possible utility strategy
Disconnections happen unfairly	Issue bills on time State clearly through different routes (leaflet, radio, door to door contact) what will happen if bills are not paid and why
Price rises do not mean a better service	Explain price rises before they happen Develop a meaningful Customer Charter that outlines what the utility will do when, how and why Negotiate price - rather than imposing it
Traditional sources (shallow wells, scoop holes) are more convenient than public stand posts	Market stand posts as safe and reliable sources of water (quality, security for women collecting) Market at a price that minimizes a return to traditional sources at financially difficult times of the year Monitor use and non use and re-market appropriately
Utility staff do not spend enough time in the community	Hold regular consultation forums in community buildings Publicize new initiatives and success stories on the radio Develop community liaison roles for engineers and operation and maintenance teams and make time for this new responsibility Open and publicize ward/zonal offices with customer service counters
The utility office is too difficult to get to and is always closed	Decentralize customer services to local offices Work through intermediaries (NGOs, local leaders, teachers) to tell households how to access the utility Negotiate opening times of local offices and trial different schemes

Linking PREPP data to strategic and investment planning

By using a rapid and efficient demand assessment approach such as PREPP, a good picture of initial demand in informal settlements and potential service options emerges. The PREPP data can also contribute to answering the question 'Where are we now? in terms of consumer preceptions of utility performance and consumer water service experiences and coping strategies. As a utility gains better knowledge and understanding of consumer experiences and perceptions, it is better able to adapt its marketing and service provision so it can attract more customers and then keep them satisfied. Improved customer satisfaction then provides better opportunities for increasing revenues that can in turn be invested in better service provision. In addition, PREPP provides a good basis for ongoing dialogue between a utility and community groups as part of a beneficial partnership.

The costed option ranking results give a clear indication of user preferences. This information is valuable for a utility considering which service and payment options to promote and offer in different areas of a city. PREPP can be carried out in a number of informal settlement locations in an urban area, so the varying patterns of demand emerges. This data can then be used to estimate future option take up and hence inform the utility's financial projections and investment planning. This process is discussed further in chapter 7 of Book 2.

Table 9.2. Example of PREPP results and commentary, Soroti, Uganda[1]

	1st choice		2nd choice		3rd Choice	
Option	**Core**	**Fringe**	**Core**	**Fringe**	**Core**	**Fringe**
Protected spring	1	1	1	5	2	5
Borehole	0	2	11	5	4	10
Kiosk	0	3	2	3	7	3
Yard tap	6	14	0	3	1	5
House connection	1	1	3	2	0	0
Vendor	0	0	1	0	4	0

NB: The core and fringe headings represent the different locations of the focus groups

Option one is protected spring, option two borehole, option three kiosk, option four yard tap and option five house connection. The results of the private voting show that most participants preferred the yard tap to any other option. The second choice option for most of the people was borehole while the new improved kiosk came third.

The results show a strong demand for yard taps among the participants mainly because the tap are installed in their compounds and so are very convenient. A yard tap would be shared among six or so families with each family contributing Ush 11,100 per month.

A borehole fitted with a hand pump was second choice because it is near homes and according to the participants it yields good quality water. The improved kiosk came third because of its low cost. The cost of Ushs 40 per 20-litre jerry can was perceived by the participants to be very low.

Overall, the results show that participants were mainly influenced by the convenience of the water source in voting for their preferred option. However, house connection would be even more convenient than yard taps but were too expensive at UShs 22,100.

1. Source: Eyatu Oriono et al (2000)

Well designed WTP studies also provide data on the maximum WTP values for service options, which is very useful for investment planning. Where the main objective is to inform future tariff policy to pay for substantial new investments, willingness to pay surveys are appropriate (Wedgwood and Sansom, 2003). But where the focus is on developing an understanding of user perceptions and preferences in informal settlements, then PREPP is particularly suitable.

The selection of the preferred list of service, payment and management options to be offered in which locations, should be done to seek to maximize consumer satisfaction, but also be feasible for the utility to provide or support on a sustainable basis. Refer to Part III of Book 2 - (guidance notes for managers) for more discussion of strategic marketing and sustainable service provision.

Table 9.3. Example of PREPP results from Guntur, India[1]

Proposed Options (Women)	I		II		III		IV		V	
	K.B. Colony		A.T.Agraharam		Nallakunta		Anandpet		Nallacheruvu	
	Group	Ind	Group	Ind	Group	Ind	Group	Ind	Group	Ind
Community managed PSP	3	-	5	-	1	1	2	1		-
Shared connection	1		1	3	2	5	1	7	2	3
Individual connection *[2]	2*		3	1	-		-	-	1	7
Ground tank connected to municipal line	-		2	-	-		-	-	-	-
Ground tank connected to bore well	-	-	-	-	-		-	-	-	-
Ground tank connected to water tanker	-	-	-	-	-		-	-	-	-
Ground tank connected to open well	-	-	-	-	-		-	-	-	-
Water kiosk (Municipal water)	-	-	4	-	3		-	-	-	3
Open wells	-	-	-	-	-		-	-	-	-

1. Source: Narender, Chary and Coates, 'Testing PREPP methodology in Guntur', April 2002
2. Note - *If connection fee is spread over instalments

Chapter 10

Training of PREPP Teams

10.1 Selecting PREPP teams.

PREPP facilitation requires good communication and organization skills. The PREPP team should be familiar with the use of participatory tools and techniques and also able to understand the utility's objectives for using PREPP. For this reason choosing and training the right team is important.

Table 10.1. Useful team attributes and finding team members

Team member	Skills, knowledge and experience	Attitudes	Possible team members
Water supply technical specialist	Low-income water supply Informal settlements Multi-agency implemented projects Appropriate language skills	Open to community-based work and development of informal settlements Able to see low-income consumers as potential valuable customers	Utility engineer who has worked on a pro-poor project
Lead facilitator and co-facilitator	Participatory approaches to community-based development Applied research and analytical skills Water supply in low-income areas Working in multi-disciplinary teams Team management Appropriate language skills	Open to working toward utility goals, including commercial approaches to service delivery in low-income areas	Utility employed sociologist NGO staff member External agency project officer
Assistants	Able to pick up key points and translate these to notes for later use Water supply in low-income areas (either as worker or resident) Good listening skills Flexibility to adapt to different roles	Open to working toward utility goals, including commercial approaches to service delivery in low-income areas Willing to finish a job (e.g. post-session write up of notes)	Local graduates or final-year students NGO staff
Artist	Able to follow verbal brief and instructions Water supply in low-income areas (either as worker or resident)	Open to constructive criticism and able and willing to adapt work	Local graduates or final-year students NGO staff

The table above highlights some useful team attributes and indicates where good PREPP team members might be found.

10.2 Terms of reference

It is useful to have clear terms of reference (TOR) for the team. Examples of the type of things that might be included in a TOR for the role of facilitator and assistant are provided below.

The facilitator

1. To work with the utility to undertake planning and preparation activities for the focus group discussions. For example this may include meeting community representatives who can mobilize the community and help to set up the focus group meetings, agreeing times and venues.

2. To attend preparation meeting(s) and PREPP training sessions with the PREPP team OR to conduct PREPP training on behalf of the utility.

3. To conduct the focus group discussions in line with the methods developed.

4. To ensure that the FGD is adequately analysed, reported and documented in the format agreed with the utility.

5. To work with the PREPP team at all times.

6. To take responsibility for reporting the PREPP data after each session in the format agreed and in consultation with the PREPP assistant.

7. To conduct, with the PREPP team, an observation walk in each location.

The assistant

1. To attend preparation meeting(s) and PREPP training session.

2. To record the focus group discussions as agreed with the facilitator.

3. To work with and assist as necessary, the facilitator at all times.

4. To work with the facilitator after each session to record the PREPP data.

5. To record the observation walk conducted with the facilitator in each location.

10.3 Training PREPP teams

It is advisable to conduct a training session to make sure that the PREPP team understands what is expected of them.

At a minimum training should include:

- An overview of the utility's strategy for water supply in low-income areas
- A discussion about low-income consumers: poverty and vulnerability
- PREPP tools and techniques: theory and application
- The PREPP process and focus group facilitation
- Working in a team
- Reporting and analysis requirements

Glossary[3]

7ps	Product, Price, Promotion, Place, People, Process and Presence.
Buying decision process	The conscious and unconscious thinking process a consumer goes through before deciding to buy a product or service.
CBO	Community based organisations who may take an active part in decision making or management of water and sanitation services in their area.
Competition	In this document any water source or provider of supply that tempts a consumer away from using a utility provided source or which deters the consumer from buying water from the utility.
Consumer demand	An expression of desire for a particular service, assessed by the investments people are prepared to make, over the lifetime of the service to receive and sustain it.
Contingent valuation	A demand assessment technique. Several options (each associated with a range of prices) are described to a sample of potential users who then indicate their preferences. It can be used to assess people's maximum willingness to pay for services that are not currently available. The technique requires specialist skills and is more cost effective in high-density urban and peri-urban areas.
Coping strategy	A behaviour or practice used to sustain or improve a livelihood.
Customer orientation	Turning attention to the needs of the customer and using the organisations resources to satisfy those needs.
Customer value chain	The process of knowing, targeting, selling and servicing customers.

3. The definitions of many of the terms described here agree with those found in the WEDC series 'Designing to Meet Demand' , Deverill et al. (2002)

Demand	An expression of desire for a particular service, assessed by the investments people are prepared to make, over the lifetime of the service to receive and sustain it.
Effective demand	Demand for a good or service expressed by a user's willingness to pay in terms of a monetary or economic contribution.
Existing practices	How people obtain, pay and use water now.
Experiences	Accumulated knowledge, feelings and occurrences. Familiarity and know-how.
Focus group	A small group of individuals with a similar social, cultural or economic background, brought together with a facilitator to explore a particular issue.
Informal settlements	In this document it is a generic term used to describe the unplanned areas where the urban poor generally reside. It includes illegal slums, informal settlements, unplanned areas, compounds, low -income areas, townships, peri-urban areas, unplanned zones and shanty towns.
Latent demand	Demand that is only revealed after it has been stimulated (that is open to techniques that unlock demand).
Level of service	(Or service level) describes the quality of the service provided. It refers to the physical infrastructure or technology used: stand post, communal tap, a yard tap, or a house connection. It may also include other factors such as provision of a storage tank or the agreed utility water supply hours each day.
Low-income area	In this document it is a generic term used to describe where the urban poor reside. It includes illegal slums, informal settlements, compounds, townships, peri-urban areas, unplanned zones and shanty towns.
Marketing	There are a number of definitions for marketing including: 'The management process responsible for identifying, anticipating and satisfying customer requirements profitably'.
Market segmentation	The process of identifying groups of consumers in to groups defined by common characteristics, for example social status or housing type for the purposes of understanding the main consumer groups and targeting service options.

Marketing mix	The way a competitive position relative to other options is achieved.
NGOs	Non-governmental organisations typically work with community groups in low income areas, while liasing with government and service providers with a view to improving services and reducing poverty. They usually have good facilitation skills and experience of working in informal settlements.
Non-revenue water	The difference between water produced and water sold to customers expressed as a percentage of water produced.
Non-utility water sources	Including protected and unprotected springs, rainwater collected in buckets/cooking pots, shallow wells.
On-selling	Water sold from an individual house connection to neighbours. The utility charges one person only.
Perceptions	The way in which people see a situation determining how they are likely to behave.
Poverty	Poor quality of life combining low income, poor health and education, deprivation in knowledge and communications, and the inability to exercise human and political rights.
Preferences	Judgment that something is 'best for purpose' from the user's perspective.
Price & service differentiation	Process of developing appropriate service options (technology and management) at appropriate prices based on the needs of different market segments - customer groups, on a sustainable basis.
Small water enterprises	SWEs are also called small scale independent providers and are part of the informal private sector who provide water services to consumers, particularly in areas where complete water services are not provided by a utility.
Social marketing	The application of marketing techniques to stimulate demand. The underlying motivation is to reduce exposure to environmental health risks rather than a profit motive.
Strategic marketing	Marketing as a management process whereby the resources of the organization are used to satisfy the needs of selected consumer groups in order to achieve the objectives of both parties. Strategic city-wide planning is usually required in the urban water context.
Tri-sector partnerships	In this document partnerships between government, the private sector and civil society.

Unplanned areas	Refer to 'informal settlements' definition.
Utility-direct sources	Including public stand post, kiosk, communal yard taps and house connections.
Utility-indirect sources	Including handcart vendors and bicycle vendors who get their water from a utility source.
Want	A desire for a good or service that goes beyond a felt need in that it may satisfy a person's longer term needs or aspirations, but may not be price sensitive, hence the need to consider consumer demand.
Willingness to charge	The low willingness of key stakeholders such as politicians to increase tariffs to adequate levels is common, hence the need to encourage an increased 'willingness to charge' using appropriate advocacy strategies.
Willingness to pay	The financial or economic contribution that people are willing to make to receive and sustain a particular service.
Willingness to pay surveys	A variety of survey techniques such as the contingent valuation method (CVM) that can be used to illicit the maximum amount that respondents are willing to pay for a given service level.

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Annex 1

Developing drawings

Introduction

The following notes may be useful during the development and design of drawings for use with PREPP focus groups.

Selecting the artist

- One community artist should be used throughout the process to ensure continuity of style.
- Selecting an artist can be difficult - ask around - for example has another similar donor/ NGO used one, can s/he be used here? Try and avoid 'over technical' graphic designers - look for someone known locally who can draw from a local perspective.
- Ideally the artist should be given the opportunity to become involved in the process beyond 'drawing in the office'. S/he should visit the field during the pre-testing stage to observe the reactions of the community to the drawings and gather first-hand information about the changes/adaptations that will inevitably be required. The emphasis throughout is 'what do you (the customer) see in this picture?' not 'what do I (the engineer/artist) see?'
- The artist, particularly if he/she hasn't done this type of work before, should be supervised through the initial stages to ensure that s/he is working to the brief.

The materials

To ensure that a high quality product is produced the following materials are required:

- A4 good quality paper - photocopying paper is ideal.
- Graphic design pens or good black ink pens.
- BLACK ink should be used.
- The use of colour does not necessarily mean a better picture. If the eventual guidelines are to be adopted the cost of colour is often beyond the budget. Access to colour copying is not always easy and black and white top copies are required in any case. Also colour top copies result in poor quality photocopying limiting dissemination and access and motivation to bother using the drawings.
- Encourage the artist to follow the following process: consult - draft/sketch in pencil - consult - redraft/sketch as required - ink ready for pre-testing - RECORD with the correct reference number.

Filing and storage

It is important to establish a good filing and storage system for the development of the work.

- Use A4 ring-binders with plastic wallets wherever possible
- Label all wallets and folders systematically using the reference numbers already given to the drawings.
- Note on the front when the drawings were made, i.e. 'Draft 1 - April 1998', so that up-dating and the process of development can be monitored.
- Keep 'top-copies' (the original ink drawing) in the office - do not take to the field.
- Keep all roughs/drafts as you may need to go back to these.
- Ideally scan the 'top copies' and save on the computer creating a database or library of drawings. These graphics files should be saved in a tif -format if possible.
- During and after pre-testing exercises document the changes made to each drawing and the reasons for this. Retain the original for reference.

Pre-testing

- The importance of systematic pre-testing cannot be over emphasized. Pre-testing should include as wide an audience as possible. The drawings should be tested in pilot communities.
- RECORDING the information is very important.

The recording procedure should include; the peri-urban/low-income area, the date, the observer's name, the name of the community (if different to the geographical location name), the type of group (including the split between men and women), the number of participants, the drawings that were looked at, how they were used/introduced and, most importantly, the comments made about the content.

A simple but standard recording format should be developed and agreed by the facilitators and researchers.

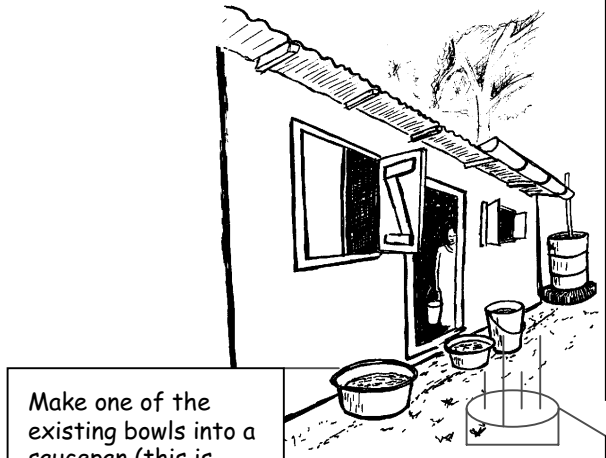
Pre-testing should be as open as possible. Leading questions must be avoided. Work in small groups and each group should observe and record their comments against specific drawing reference numbers.

Upon presentation of the drawings to the community the only question that should be asked is 'What do you see in the picture?'.

The most important advice to facilitators is that they remain as quiet as possible throughout the process, recording what is seen rather than what is expected to be seen.

The task of the facilitator is to listen, observe and record, always reassuring the participants that the exercise is not a test and that there is no right or wrong answer.

If a particular drawing is not understood it should be removed and a note made of what was said.



This picture is very much improved! BUT two concerns:

- showing bowls, bucket and tank may suggest additional expenditure over and above what the HH already has that it can use therefore the addition of saucepans may help this – ie people probably use what they have to hand BUT could also progress to a tank
- at the moment the picture could suggest storage rather than collection – therefore add a saucepan that shows water being collected

Make one of the existing bowls into a saucepan (this is what the community said they use)

Add another saucepan, slightly away from the house and show that rain is falling in to it.

Example of a drawing as it is being developed for rainwater harvesting