



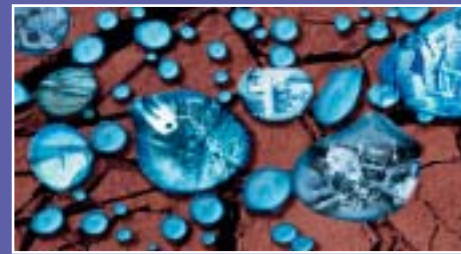
# water

for the **poor**



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# Foreword

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Water supply and sanitation are essential for poverty alleviation, health improvement and for sustainable development. The time for talking is long past. Action is needed now if solutions are to be found.

There is a broad consensus that involving all water stakeholders will be needed in order to provide water for all, especially the poor.

Private sector water providers are already entering into partnerships with governments and with other stakeholder groups to find new creative ways to provide essential water services.

The rate of introducing new public-private-partnerships must be accelerated if society is to meet the United Nations Millennium goal for water — reducing by one-half by the year 2015 the proportion of individuals without access to safe drinking water.

Creating enabling environments in developing countries will encourage new investment in water services. Both the 2<sup>nd</sup> World Water Forum in The Hague and the International Conference on Freshwater in Bonn recommended improved governance and capacity building at the local level to achieve water service goals.

The WBCSD welcomes these recommendations and challenges. Now it's time to move from words to action. The business community has a vested interest in providing water for the poor. The WBCSD wants poverty alleviation; wants the poor to be the productive employees of the future; and wants the poor to participate in the future markets for goods and services provided by business. Business prefers to operate in areas where its customers and employees are not at risk from hunger, poor health, and a lack of safe drinking water and basic sanitation.

*Water for the Poor* describes how using Overseas Development Assistance to establish framework and regulatory conditions would be more effective. These conditions would unleash the creative forces of business working to accelerate the introduction of water for the poor.

## Key messages

- > Accelerate the introduction of public-private-partnerships to improve and expand water service to the poor through an open and democratic process
- > Improve the basic framework conditions at local and national levels to encourage greater private sector investment in water services
- > Create regulatory mechanisms and good governance systems to (1) protect the public interest from excessive charges, (2) ensure that water service providers recover the full cost of providing the service, and (3) ensure service levels promised are delivered.

*Water for the Poor* provides an action-oriented roadmap for delivering water services for the poor. The business community cannot do the job by itself. It must be done through partnerships. To demonstrate what can be achieved, the paper provides a series of cases showing how business has already begun to provide water and the enabling environment needed to accelerate the process.

*Fresh water is key to sustainable development. Without adequate water supply food production declines, human health fails, the natural environment suffers and economic development is limited.*



Robert Walker  
CEO of Severn Trent  
Co-chair of the WBCSD Access to Freshwater Working Group



# Executive summary

At the Millennium Session of the UN General Assembly in 2000 in New York, 150 world leaders agreed that by 2015 they would reduce by one half the proportion of people without access to safe drinking water. In December 2001, governments and a wide range of water stakeholders – including the private sector – gathered in Bonn, Germany, to agree on a course of action to turn the Millennium goals into reality. The Bonn report was entitled, *Water – a Key to Sustainable Development*.

## The business case

Business cannot deliver water to the poor on its own but recognizes that it can and should be a partner with governments and other water stakeholders in meeting the challenging UN Millennium goal for water. Further, these partnerships need to be established at the local level where decisions about water service take place. The WBCSD believes that there is a strong business case for doing more to deliver fresh water and basic sanitation to those billions of poor surviving without access to this resource so vital to life.

- > Access to clean water is one prerequisite to poverty alleviation.
- > Access to basic water sanitation improves public health immediately.
- > Access to safe water supply and sanitation accelerates movement towards sustainable development.

The urban mega-cities of the developing countries will be the growth markets of the future. Most forecasted population growth will take place in these cities. It makes economic, environmental, and social sense that these urban centers be good places in which to work and conduct business. Water services for the poor will be crucial in assisting developing countries become part of the affluent world. Business cannot succeed in societies that fail. The potential for market expansion to serve the world's four billion poor should be viewed as a business opportunity.

Alleviating poverty has become an overarching theme for the World Summit and water is at the top of the public policy agenda priority list. The WBCSD has water high on its agenda too and will be contributing to the many discussions with the release of a new report in South Africa, *Water for the Poor*.

This report discusses several of the most important recommended actions of the Bonn conference along with business suggestions to move the agenda forward.

## Governance and capacity building

*Water for the Poor* starts with governance and capacity building, because without enabling framework conditions, many nations are doomed to continue the failed policies of the past. This means the status quo for the 1.2 billion people without access to fresh water.

Neither the public sector nor the private sector can deliver water services efficiently in the absence of an enabling framework. The argument whether water should be provided by the public or the private sector loses sight of the core problem. The issue is not public versus private. The issue is efficient versus inefficient. For something so basic as water, society cannot afford inefficiency. *Water for the Poor* puts forth the hypothesis that public-private-partnerships to deliver water services are the best — most efficient — way forward.

The three key messages from the Chapter on Governance and capacity building are:

- ① Business is advocating privatization of water delivery services but not private ownership of water! Governments must own and control water on behalf of all its citizens.
- ② Business is advocating the widest range of partnerships tailored to meet local needs and establishment of an enabling environment to foster those creative partnerships.
- ③ Business recognizes that leadership and “political will” is essential to permit all water stakeholders to work together to deliver water for the poor.

## Financial resources

The report addresses how to make sound financing changes to ensure that fresh water will be affordable for the poor.

*Water for the Poor* endorses the recommendation of the Bonn Conference and that from the 2<sup>nd</sup> World Water Forum (The Hague 2000) calling for full cost recovery pricing to be phased in as soon as possible. The WBCSD report proposes financing changes to ensure that fresh water will run towards the poor at prices that are affordable — or to use creative tariff charges that cross subsidize the poor through above-cost charges to affluent consumers and those using large quantities of water. The pricing issue is directly related to the governance and capacity building issues in chapter one. The public, both rich and poor, need assurance that they are obtaining water at fair

costs. An independent regulatory authority to protect the public interest and the investors as well is one way to provide this assurance. Only then will there be a degree of public confidence to support water prices needed to operate and maintain an efficient system and finance new infrastructure to serve the poor.

The single greatest myth preventing action is that the “poor cannot afford to pay for water service”. The poor who are not connected to a functioning water distribution system already over-pay for water.

The WBCSD report also makes four specific recommendations on how Overseas Development Assistance funds for water could be used most effectively.

The business community is in agreement with Bonn Action 16 to “make water attractive for private investment”. These three recommendations are repeated in the WBCSD report and conclude with an important quote from the Bonn Conference:

**[** *Water security for all is an achievable goal. There is enough water for everybody in the world, but only if we change the way we manage it. The responsibility to act is ours for the benefits of the present and future generations.* **]**



Concluding, *Water for the poor*, makes some vital recommendations for action. All stakeholders must agree to change, to innovate, and to find creative ways to meet the water needs of the poor. The status quo is not an acceptable answer.

This is the third in a series of WBCSD reports on fresh water.

In April 1998, the World Business Council for Sustainable Development (WBCSD) and the United Nations Environment Programme (UNEP) issued a joint report entitled *Industry, Fresh Water and Sustainable Development*. This report included twenty case studies – showing how progressive companies are protecting and using less water, re-cycling or re-using it and preventing pollution – demonstrating that individual companies are able to improve the efficiency with they use and manage water “inside the corporate fence line”.

In April 2000, WBCSD followed this report with *Partnerships in Practice* including six cases of companies entering into partnerships to address water issues outside the “corporate fence line”.



# Introduction

At the Millennium Session of the United Nations General Assembly in 2000, one hundred and fifty world leaders agreed to the goal of reducing by one-half by the year 2015 the proportion of individuals without access to safe drinking water. *This is the promise made!*

In December 2001, the German Government brought together in Bonn governments and a wide-range of water stakeholders including the private sector to discuss and agree on a course of action to turn the Millennium Session goal for Fresh Water into reality. *This was one step toward keeping the promise.*

This Conference demonstrated that when all stakeholders focus on the goal of water for the poor, a remarkable consensus emerges.

Business is convinced that bringing water supply to 1.2 billion and basic water sanitation to 2.5 billion poor people is the most practical way to:

- > Alleviate poverty
- > Improve public health immediately
- > Accelerate movement towards sustainable development

There is a business case for providing water services to the poor. People without access to safe drinking water and sanitation:

- > Are limited in their ability to take an active role in wealth creation
- > Simply cannot afford most of the goods and services generated by business and agriculture
- > Are more likely to be victims of poor health that, in turn, reduces their ability to be productive employees thereby imposing costs on society
- > Are unlikely to even understand, let alone support, sustainable development.

Providing water services to the poor presents a business opportunity. New pipes, pumps, measurement and monitoring devices, and billing and record keeping systems will be required to modernize and expand water infrastructure. Industry not directly related to the provision of water services will be able to enter new markets because water for production, and to sustain a productive workforce, will be available. Thus this program has the possibility of creating huge employment and sales opportunities for large and small businesses alike.

Further, there is a moral imperative for all of society, including the private sector to meet the challenge of providing safe drinking water to the poor. It is now time to turn from talk to action – and to turn political promises into reality.

*Water for the Poor* discusses several of the most important recommended actions of the Bonn Conference on Governance, Capacity Building and Mobilization of Financing to meet the challenging Millennium Session goal. The Conference report included 27 “recommended actions” in total.

*Water security for all is an achievable goal. There is enough water for everybody in the world, but only if we change the way we manage it. The responsibility to act is ours – for the benefits of the present and future generations.*

*Water – a Key to Sustainable Development, International Conference on Freshwater Bonn, December 2001*

## No water No sustainable development!

### CAVEATS

Please read the following carefully before proceeding in order to avoid falling into useless rhetorical dead-end arguments.

- > Business should not own or control fresh water required to meet the basic needs of society<sup>1</sup>. Governments should own, control and set basic policy for fresh water services to protect the public interest. Business can, of course, build, own and operate water infrastructure and water services under government supervision.
- > The issue is not about public versus private delivery of water services. Rather, it is about efficiency. What mix of public-private-partnerships can best deliver water at affordable prices to the poor?
- > Water is a free gift from God and nature. However, the collection, distribution and cleaning of water is not free. To be sustainable these man made structures must be paid for by someone. The legitimate costs of water services must be covered either by users through water charges or through taxes. The charges to those too poor to pay for the full cost of the service provided can be covered by cross-subsidies built into water rate structures or by direct government subsidies from taxpayers.



The Bonn Conference covered a wide range of water issues – but the one unifying theme was “water for the poor”. The three core sections in its final report addressed:

- > Governance
- > Capacity building
- > Financial resources

Bonn also stressed partnerships and the need to involve the private sector along with stakeholder participation and public education at all levels. All participants agreed on the need to move from words to **ACTION!**

*Water for the Poor* combines the governance and capacity building themes because they are so interrelated. Without reform, restructuring, and creation of an enabling environment many nations are doomed to continue the failed policies of the past and the status quo. The status quo or “business as usual” is a formula for disaster. It almost guarantees that governments will fail in their pledge to meet the Millennium goal for access to water.

There is an emerging consensus that new initiatives are required to reduce the huge backlog of those currently without access to safe drinking water and to meet the water needs of those millions born into these very areas where water services are already inadequate. Government promises must be turned into reality now.

Business is ready, willing and able to participate in meeting this enormous challenge. All stakeholders must assume their fair share of the enormous task of delivering water for the poor. There is a classic cartoon in India where a politician is promising village residents free water and a village elder responding, “We

don’t want your free water – it never arrives”. Whether governments attempt to deliver water services totally through the public sector or through some form of public-private-partnership agreement, the costs of these services must be financed. The more efficient the service, the lower the real cost to individuals and other users. At the same time the benefits to society as a whole increase.

Governments, especially developing countries, have recognized that they need private sector participation in order to improve water service efficiency and deliver value for the costs imposed on society. Individuals will pay for quality water service that industry can provide. However, without a sound enabling environment and intelligent regulation, business will be unable to enter into the long term partnerships that are essential to modernize existing systems and expand water service to those most in need.

*Water for the Poor* then addresses the inter-related financial resources issue. The law of gravity determines that water runs downhill, too often to where it is not needed. The basic law of economics implies that water can be made to run towards where humans need it. One reason so many in the world do not have adequate water service is that many political leaders have been unwilling to ask consumers to pay the costs of that service. Most consumers, even among the poor, have demonstrated a willingness to pay for the full costs of clean and safe drinking water. However, they want to be assured that they are not being overcharged and that the water service is safe and reliable. Creating independent regulatory mechanisms shielded

from political expediency is one way to protect the public.

The Bonn Conference and *Water for the Poor* both discuss how to make sound financing changes to ensure that fresh water will run towards the poor at prices that are affordable – or to use creative tariff charges that cross subsidize the poor. Government subsidies for the poorest members of each community are a last resort solution. The dream that governments will somehow be able to provide water free to everyone is a snare and a delusion. Without increased financing for water services from all providers – informal, public, private, or some mixed-partnership – the Millennium Session goal will remain a chimera.

This paper highlights in bold-faced type and discusses some of the key recommendations for action along with business suggestions to move the agenda forward.

All water stakeholders need to support those political leaders who are ready to demonstrate the “political-will” and courage to act on water supply for the poor.



# Governance and capacity building

Governments, at all levels, have the primary responsibility for the management and allocation of water resources. Governments, both national and local, must act to secure equitable access to water for all people (Bonn Action 1).

*The Bonn Conference acknowledged that governments have the primary responsibility for the 1.2 billion without adequate access to fresh water and for the over 2.5 billion without adequate water sanitation.*

They must oversee the development and maintenance of water infrastructure and services to poor people (Bonn Action 2).

*All businesses, large and small, in the water service industry or other activities, along with all communities and all water stakeholders have a vested interest in good water governance. A steady and reliable supply of fresh water and sanitation services is imperative for everyone including business.*

Governments must encourage – or insist upon – more efficient service provision (Bonn Action 10).

*All kinds of water service providers, informal, private, public or mixed – partnerships should be subject to effective regulation, performance evaluation and monitoring.*

Water service, the quality and reliability of the service and its cost, should be regulated. Drinking water must be clean and ensure public health and safety. Service levels should be clearly enunciated and met. Prices should be controlled to protect the public interest from exploitation but also to give investors and providers a fair return for the investment of their time, expertise, ingenuity, and capital. “Getting the price right” ensures economic sustainability of water resources and infrastructure. Intelligent regulation should be light not bureaucratic; it should be flexible, democratic and transparent not dogmatic; it should provide a framework encouraging innovation and efficiency rather than rigid and static rules. Regulation should reward efficiency and encourage the inefficient to improve. That is why performance evaluation is so important.

How can the public know whether their water service provider is efficient? The answer can be found by measuring performance between services provided by others in similar circumstances. This is not a simple task. But everyone must make a start and best effort. Performance evaluation provides all interested parties with ways of objectively assessing the effectiveness of local service providers. For something so basic as access to safe drinking water, the public, including non-governmental organizations (NGOs), should demand a high level of efficiency. The final piece of this puzzle is monitoring. It is monitoring that checks to make certain the water is safe; compares the level of service with the contractual promises made; and ensures accountability. Thus regulation, performance evaluation and monitoring are an essential government oversight responsibility.

## Bonn Action 2

**The Bonn Conference also recommended adding water sanitation to the Millennium Session goal of water supply.**

The business community strongly supports both water supply and sanitation services. It is lack of sanitation that accounts for the lion’s share of the health damages to the poor — both premature death and morbidity effects. Further lack of sanitation can have devastating

effects on the natural environment. Safe drinking water and basic water sanitation are a prerequisite for good public health. Good public health is a prerequisite for sustainable development. Safe drinking water and improved health are preconditions for poverty alleviation.

## Bonn Action 11

**Governments have a fundamental responsibility to create an enabling environment if there is to be any hope of achieving this ambitious Millennium Session goal. This enabling environment begins with a national water policy, a basic water law, adequate commercial legal systems, and a governance and regulatory framework that is flexible and encourages devolution to the lowest**

This regulatory framework must include quality control systems and avoid the trap of rigid and complex rules. We need to encourage a wide range of creative new approaches. There is no one model that fits every case and circumstance. In some cases local governments may be able to build capacity and manage their own water service system. In

other cases they may need to contract out some or all of the water service activities to local entrepreneurs, to non-governmental organizations, or to multinational companies. In each case the local stakeholders will need to participate in the process of selecting the system that best meets their needs on a cost-effective basis.

## Bonn Action 11

**Water must be managed at the lowest level capable of handling the task.**

In most cases it will be the local government that makes the crucial water decisions within the appropriate policy framework established by the national government. This may require new capacity building to ensure that local officials are trained to manage and

regulate water service providers (see section on financing below for recommendations on how to build this capacity). Local governments are closest to the people and the most likely to provide a people centred approach taking into account the hopes and desires of individuals.

## Bonn Action 20

**It is clear that Integrated Water Resource Management (IWRM) evaluating a total river basin is the correct technical approach to water management.**

However, IWRM must involve local governments as well as all the primary water users – farmers, businesses and individuals – as well as those NGOs representing the water needs of natural ecosystems. The process is

made more complex because political boundaries do not always coincide with hydrological systems. Business is increasingly playing a major role in river basin planning where they have major investments<sup>2</sup>.

## Bonn Action 18

**This will require education and training, both formal and informal, on a continuing basis.**

All sectors of civil society, including NGOs, must be able to participate in an open and transparent water decision-making process.

Governments must take the lead in facilitating a more open process. This will require capacity building so that government and regulators have the competence to negotiate contracts and establish appropriate guidelines from a position of equality with entrepreneurs of all types.

There is a wide array of options available to local governments including full concession agreements or more limited contractual arrangements to provide one part of the water delivery system. Ultimately, there must be the widest range of new partnerships between water stakeholders including the poor. The poor must be consulted and involved in the process of deciding what level of service can be provided at affordable costs.

## Bonn Action 8

**All parties must protect water quality and ecosystems.**

Pollution prevention can make an important contribution to this goal. Multinational corporations are committed to pollution prevention and constantly reducing the amount of pollution per unit of output no matter where they operate. Many of these companies are moving towards zero discharge – they take in water and then constantly recycle and reuse that water with zero discharge back into

rivers, streams or lakes. Business needs to put pressure on all companies not already using or committed to best water practices. Industry is prepared to do its full share. But it is up to cities and farmers to control and manage their water discharges along with business. It is not effective to require industry to reduce further its water pollution levels if everyone else continues to pollute.

## Bonn Action 7

**Governments must improve water management policies.**

“Subsidies that inhibit water use efficiency or cause negative effects on the environment should be reduced”. Water subsidies that encourage over consumption, inefficiency or divert water from crucial ecosystem support are disastrous public policy. In urban areas, subsidized water benefits often accrue to the affluent and do nothing for those beyond the reach of existing water distribution systems. Worse these hidden subsidies, in the form of below cost service, often guarantee that water infrastructure is not properly maintained or replaced because the governments fail to reimburse the legitimate water service provider.

This leads, inevitably, to declining levels of water distribution and sanitation collection services, customer dissatisfaction and a downward spiral that results in the decline of the water distribution system, whether public or private.

The worst thing for a poor city or country is to allow expensive capital water infrastructure to decay. Replacement will be more expensive than the original capital investment thereby making expanded service to the poor almost impossible. It is necessary to break this downward spiral and move towards an upward spiral of better operation and maintenance leading to better customer satisfaction, to more willingness to pay for valuable service received and more ability to expand water service networks to poor neighborhoods that do not have access to safe drinking water.

#### Bonn Action 4

### **Governments must assume responsibility for appropriate allocation of water among competing demands.**

The Bonn Conference made the point that “water should be treated as a valuable and finite resource. Water demand should be more actively managed, and water use efficiency increased in all its uses”. The business community would endorse this concept and its logical corollary that realistic pricing for water is one of the best ways to moderate demand. The business community is prepared to pay its fair share of the full cost of water supply and service. When water is free, it has a low value to

users. When water is cheap, it is wasted. When water is fairly priced, it will be used most efficiently. There is a clear distinction between the value of water and the cost of water service. The cost of water service is normally limited to costs of pumps, pipes, power and administration of the water service system. However, water has value for recreation, biodiversity, aesthetics, culture, social purposes and the quality of life that far exceed the narrow costs of delivery services.

#### Bonn Action 4

### **“Irrigated agriculture is the world’s largest user of water, and therefore offers the largest potential in terms of water savings, the benefits of which can be shared with other sectors.”**

In many developing countries agriculture accounts for over 90% of all of man’s use of water. Improving the efficiency with which this water is used would free up an enormous quantity of water. Water for agriculture remains a contentious area. But in the long run subsidized water or subsidized energy to move the water for irrigation is a self-defeating and non-sustainable action. There are huge opportunities

for modest capital investments that conserve water in the agricultural sector. However, when the water is distributed to farmers for free or below cost, there is virtually no economic incentive to invest in these water saving technologies. The net result is that we waste valuable and scarce water resources on systems that fail to meet the needs of the poor for food.

#### Bonn Action 12

### **Finally, Bonn Action 12 addressed the need to combat corruption effectively.**

Many businesses have already adopted strict codes of conduct. All are opposed to corruption. Therefore, it is vital that the entire decision-making process for water management be

open, transparent and accountable to the public. “All actions, whether initiated by International Financial Institutions, countries or others, to fight corruption are welcomed.”

## Three key messages

- ① Business is advocating privatization of water delivery services but not private ownership of water! Governments must own and control water on behalf of all its citizens.
- ② Business is advocating the widest range of partnerships tailored to meet local needs and establishment of an enabling environment to foster those creative partnerships.
- ③ Business recognizes that leadership and “political will” is essential to permit all water stakeholders to work together to deliver water for the poor.



# Financial resources

All sources of funding in developing countries – public funding from general budget revenues, water tariffs and charges, external assistance, and private investment – must be strengthened (Bonn Action 13).

*Delivering water to over 800 million individuals<sup>3</sup> currently not served will require enormous amounts of investment capital. Existing and new water infrastructure must be maintained and constantly modernized. Then there are daily operating costs. Investment, maintenance and operations all require cash – someone has to pay or nothing good happens. Due to lack of revenues water service infrastructure deteriorates and service to the poor cannot take place. Dublin Principle number 4 adopted at the International Conference on Water and the Environment in 1992 was clear and correct when it said, “Water has an economic value in all its competing uses and should be recognized as an economic good.”<sup>4</sup>*

## Bonn Action 15

### “Water service providers should aim for financing sustainability through receiving sufficient income from their customers to finance operation, maintenance and capital costs.”

This recommendation is deceptively short and requires amplification.

First it implies that individuals, even the poor, will pay for reliable clean water service. No one is without water. If they were, they would be dead! The poor who are not connected to a functioning water distribution system, over-pay for water in one of three ways:

- ① They buy water from an unregulated vendor for a very high price – some studies indicate that they pay 20 to 40 times more per unit of water than do those fortunate enough to be connected. Further this water has an uncertain provenance.
- ② They send women and children long distances to fetch and carry water. This prevents women from engaging in other more productive activity and denies girls access to education.
- ③ They drink water from nearby contaminated sources and pay for the water through impaired health that in turn prevents them from working their way out of poverty.

Too often, those fortunate enough to be connected to a functioning water system pay a price that does not cover the cost of the service. This sets in motion a disastrous chain of events. Water quality or the quality of service deteriorates because the water provider does not have adequate revenue to operate and maintain the system. People then stop paying their water bills and the service becomes progressively worse. Worst of all, the expensive infrastructure deteriorates and cannot be replaced due to insufficient funds. Then there is absolutely no hope of expanding water to those neighborhoods currently not connected to the water system.

Finally, this makes it almost impossible for private sector companies to enter the water business and for commercial banks to grant new loans for needed investment.

Thus many developing countries and cities find themselves trapped in a desperate “catch 22” situation. Customers are dissatisfied with their water service and resist or refuse to pay the full cost of service. The service declines and dissatisfaction

increases. Willingness to pay decreases further. Governments then find it difficult to increase prices to levels required and thus the revenue to make the improvements never arrives. People are willing to pay for good service, but resist paying more during the period when investments are required for future benefit. In any case it is always a difficult task for politicians to raise prices on any commodity so basic as water. Stakeholders at the local level need to unite and find ways to break this impasse. Politicians have a duty to their constituents to ensure that water is priced to ensure that both water service and water resource management is sustainable.

## Bonn Action 15

### “Efforts to recover costs should focus on those who use the most water.”

The business community endorses this concept wholeheartedly. It is classic demand side management. The more you use the higher the tariff per unit. One system, known as rising block rate tariff – one form of a “progressive rate structure”, tries to protect the poor by providing the first basic unit of water at the lowest price, usually below cost. The “subsidized water” of the first block tends to go to the rich as well as the poor. So this system is not perfect. However, the rates increase with usage to encourage all to conserve the valuable resource. Those who use largest amounts pay the most, usually above the cost of service. This allows for cross-

subsidization within the tariff structure. Those who use the most water pay the highest rates and subsidize the low use consumers. The service provider receives enough revenue to cover all costs. Such a system requires metering and more complex billing structures. However, the cost of meters continues to drop and billing procedures can be automated using readily available computer technology.

There is a variation on this concept to take into account those too poor to pay even the below cost tariff. These individuals should receive a bill so that they can see the costs involved but

the local government would reimburse the service provider for these “unpaid” services. These subsidies to the poor should be transparent. Subsidies should not be an automatic right and should end when ability to pay increases. Subsidies should always be designed to discourage inefficient use of water or harm to the environment.

Demand side management through higher prices can also be used to ensure that natural ecosystems obtain their fair share of the finite water resource. Higher prices send both a conservation signal to all users and an investment signal to the private sector.

## Bonn Action 17

### “The international donor and lending community should aim to raise the priority that it gives to water in the developing and transition countries.”

This is a noble goal. However, it is highly unlikely that Overseas Development Assistance (ODA) funds available for water will ever match needs. Therefore, these limited funds must be used wisely to help the poor. The business community has four suggested priorities for using limited ODA funds:

① Use ODA first to build capacity and improve governance. These funds should go towards building the enabling environment including a regulatory regime that will encourage efficient use of water resources as described in the first section of this paper. This capacity building must include the education process so that consumers are brought into the decision making process and accept the plans for bringing water to the poor. NGO groups can play an important role in establishing those links to the poor.

② Secondly, use ODA funds to provide subsidies for those least able to pay in those communities that have adopted a “progressive rate structure” designed to ensure full cost recovery for the water service provider. The one-time connection fees are often more than many of the poor can afford. Limited ODA funds could be used productively to defray these one time costs.

③ Use ODA funds for emergency restorations of basic water infrastructure to prevent collapse of valuable assets.

④ Finally, use ODA funds to leverage additional private sector investment by making programs that expand water to the poor economically viable.

The primary objective should be to make universal water service as efficient, sustainable and low cost as

possible. Even if the service provider is 100% public sector, it must adopt sound business practice and prove that it is at least as efficient as the private sector. Service outputs are the key. Water users want clean water at affordable prices. The public is less interested in who delivers the water than they are in reliable delivery of safe drinking water. This then becomes a prerequisite for mobilizing private commercial capital. If the revenue base is secure, private lenders will compete for the business. There is no shortage of capital when the amortization of that capital is secure. However, local communities and national governments should strive to optimize the use of capital, especially since there are always competing demands for limited government resources. Democratically elected governments at the community level are best placed to make these economic balancing decisions.



## Bonn Action 16

### Finally, the Bonn Conference wished to “make water attractive for private investment.”

In view of the importance of this action we repeat verbatim the three recommendations as follows:

> “In view of the high capital demand for water infrastructure investment, it is necessary to augment public funding by mobilizing private funding for water utilities, wastewater treatment, irrigation and other water-related programmes. These could take the form of public-private partnerships, noting that privately managed service delivery does not imply private ownership of the resources.”

> “Investors seek confidence that their legal and financial interests are protected for the full contract duration, and that they can recover their investment over time. This implies appropriate regulatory arrangements, transparent contracting procedures, reliable cost recovery mechanism, and public acceptance of such arrangements. Where there is no track record of successful private investment, pilot projects require additional attention by governments, stakeholders and the international community to ensure that the interests of the water

consumers, the environment, and the investors are safeguarded.”

> “The self-help potential of local communities should be used more widely to reduce the financial requirements of rural and urban projects for poverty alleviation. Support should be given to NGOs and others who assist local communities to develop micro-finance capabilities.”

## **The business community agrees wholeheartedly!**

**The business community believes that it is difficult to improve on these three Bonn statements.**



# Conclusion

There is a close linkage between water for the poor, poverty alleviation and improved public health. It is abundantly clear that a reliable source of safe drinking water and basic water sanitation is an essential requirement for sustainable development in many parts of the developing world.

The challenge is daunting. The Millennium Session goal for Fresh Water is achievable. The members of WBCSD are committed to doing their fair share to attain that goal. Further these companies believe they can make a valuable contribution with their skilled personnel, their technical know-how, and their financial resources. Business cannot shoot its way into the water business. It can only help when invited to do so in a partnership arrangement tailored to meet local needs. That is why the business community stresses the need for an enabling framework, a competent regulatory mechanism and a transparent and democratic decision-making process – and above all strong “political will”.

“Business as usual” will not meet the Millennium Session goal for

Fresh Water. Business, as a full partner, can make a difference in the water sector. While most water service remains in the public sector, many communities and nations have already begun to encourage and experiment with private partnerships. Governments should encourage more public-private-partnerships in the water sector immediately. Further governments should act to improve framework conditions that would provide greater incentives for business to bring its resources to bear on perhaps the most crucial test for sustainable development and poverty alleviation.

All stakeholders must agree to change, to innovate, and to find creative ways to meet the water needs of the poor. The status quo is not an acceptable answer.

**Water security for all is an achievable goal.**  
*There is enough water for everybody in the world, only if we change the way we manage it.*  
 The responsibility to act is ours for the benefits of the present and future generations.



# Case studies

The following case studies demonstrate some of the initiatives that private industry is taking to play its role in a better water future for all.

- > Perth, Australia – *Kwinana refinery: Good for business, the community and the environment*
- > El Alto, Bolivia – *Innovative approaches and partnerships*
- > Jambangan, Indonesia – *Brantas river*
- > Dar es Salaam, Tanzania – *Water and sewerage authority*
- > Manila, Philippines – *Bayan Tubig project*
- > Lusaka, Zambia – *Private sector participation (PSP)*

## Perth, Australia

Kwinana refinery: Good for business, the community and the environment



### Situation

BP operates a major refinery south of Perth in Western Australia. This region suffers from severe seasonal water shortages and domestic water restrictions. The refinery was the largest user of potable water in Western Australia in 1996.

Beginning in 1997, BP began a water minimization program to optimize its water supply, to reduce its consumption of high quality drinking water and to minimize its treated wastewater discharge to the environment.

The refinery processes 138 thousand barrels of crude per day into a wide range of finished products. In this process the refinery was using 7,250 cubic metres of water every day, with the majority of this being purchased from the local Water Authority. Boiler feed water for waste heat steam generation is the largest single use of fresh water in the complex refining process, with water for cooling purposes as the next largest use. BP recognises the value of water and the refinery was aware of the need to conserve this valuable resource by becoming more water conscious and water efficient.

### Targets

Initially BP carried out a site water balance to pinpoint the main areas of water use to create a baseline. Three main strategies were followed:

- > *Deliver water of a quality “fit for purpose” at the lowest possible cost – the economic benefit*
- > *Reduce the consumption of high quality drinking water from the local Water Authority, thereby leaving more available for public use – the community benefit*
- > *Minimize any potential environmental risks from water discharges – the environmental benefit*

BP pays the local Water Authority for each cubic meter of drinking quality water entering the refinery from community supply. Reducing water consumption at the refinery reduces costs. Recycling water or substituting lower quality water also has an immediate economic benefit to the company. Both actions make more of the scarce water resource available for individual consumers, and ease the burden on water supplies during drought periods. Reducing water use

and recycling wastewater means less waste to run through the company water treatment facility. Treatment costs reduce and residual discharges to the environment decline.

### Activities

Training sessions were implemented throughout the refinery to emphasize the need to conserve water and the associated cost savings as part of an operational excellence campaign. This resulted in a number of initiatives and actions being taken including:

- > *Recycling of CO burner seal pot water, saving water make-up*
- > *Reuse of stripped sour water, replacing process water for washing crude*
- > *Steam trap program, reducing leakage and returning condensate*
- > *Improved piping system, for returning process water for reuse*
- > *Replacing municipal water with groundwater, for cooling make-up*
- > *Increased attention to reducing spills, and the water used for cleaning up*

After completing the water conservation program “inside the corporate fence line”, BP started working with the Water Corporation to develop plans for treating wastewater for industrial re-use. A new \$AUS 20 million Water Corporation filtration plant will be built at Kwinana to produce 5 million cubic meters of “recycled” municipal wastewater per year for industrial use and free up that amount of potable water for public use. This plant will be located on the BP Refinery site and it is due to be commissioned in early 2004.



# El Alto, Bolivia

## Innovative approaches and partnerships

### ... Perth, Australia

In addition, there will be a marked reduction in treated industrial wastewater discharged into the sensitive Cockburn Sound, and treated municipal wastewater into the ocean. As Geoff Gallop, the Premier of Western Australia, said, "The decision to go ahead with this project represents a triple win for Western Australia, bringing with it significant benefits for Perth's water supply, the environment and Kwinana industry."

#### Results

BP Kwinana Refinery has achieved the following:

- > *Reduction of total water consumption by over 20%*
- > *Reduction of use of drinking water from municipal supply by over 70%*
- > *Saving in water costs of approximately \$ AUS 950 thousand per year*
- > *Minimisation of discharges from its wastewater treatment plant by 20% and reduced its costs by \$ AUS 300 thousand per year*
- > *Working in partnership with government and other industry toward BP's long-term goals of zero wastewater discharge to the ecologically sensitive Cockburn Sound and zero use of drinking water for industrial purposes*

#### Situation

In August 1997, the Bolivian government granted Aguas del Illimani (a consortium headed by *Ondeo Services*) a concession to operate and expand the La Paz – El Alto water distribution and sanitation services. Aguas del Illimani committed itself to supply water to all households in the city by 31 December 2001, and to gradually extend wastewater services to 90% of households by 2021. La Paz and El Alto are twin cities on the Bolivian Altiplano. The proportion of population living under the poverty line is quite high especially in El Alto with 73% for 45 % in La Paz. Providing water and sanitation for a predominantly poor population is a major challenge. In order to meet this challenge Aguas del Illimani worked in partnership with national and local authorities and development institutions, World Bank and the Swedish Agency for International Development. They launched innovative and sustainable approaches with starting with the implementation of a pilot project in El Alto.

#### Project description

The project had a budget of 5.4 million US dollars and has been financed by:

- > Aguas del Illimani (4.4 million US dollars) for extending existing infrastructures and handling the social work aspects.
- > The Swedish International Development Agency (US\$ 903,500) and WSP-AND (US\$ 160,000) for technical assistance, institutional development, documentation and dissemination.

For the service to be sustainable, the project aimed to make the community financially independent: no outside

subsidies, total cost recovery. In the end, investments being financed by those connected to the network, by adjusting water prices.



#### Targets

Aguas del Illimani's solution to low-income areas of El Alto relies on an innovative concept, known as the condominium approach. It has developed by Brazilian engineers in the early 80s, and was then implemented throughout South America. Condominial system aims at :

- > Reducing significantly the investments by implementing appropriate technological solutions. However, the level of service remains the same as conventional systems.
- > Promoting community participation, from the design to the maintenance phases. This provides stronger identification with the project, better knowledge of the system and allows reductions of connection fees.

#### Approach

The condominium water supply and sanitation systems considerably reduce house connection and sanitation costs by using fewer pipes, of smaller diameter than usual, buried in shallower trenches. As the pipes would be damaged by heavy vehicles if buried under roads, several alternatives are proposed: laying the pipes under sidewalks, under neighborhood blocks or running along the backs of blocks where there is no vehicular





traffic. Each neighborhood chooses the system it prefers, for both water supply and sanitation.

To make sure the system is sustainable, the project is designed to involve the members of the community in designing and installing the system. It is essential that the services offered match local demand. Aguas del Illimani offers to reduce network connection costs for households taking part in the connection work and 80% of households have taken this option. Aguas del Illimani also allows households to spread the cost of network connection over five years, free of interest.

The population needs educating and training because every household must help maintain the system. Members of the community will be responsible for maintaining pipes running under private lots, and Aguas del Illimani for main collectors. Along with the construction work, the project takes part in neighborhood life, offers hygiene education programs and grants micro-credit for house plumbing features.

### Pricing and billing

Each lot can choose between three forms of payment:

- > based on individual meter readings
- > based on collective meter readings
- > flat rate with no meter

At first, the latter option was implemented in most neighborhoods. Then communities expressed the wish to link water bills to actual consumption, even if this increases the price paid. Individual meters have thus been installed by Aguas del Illimani.

### Results and comments

The project has given 4000 households access to the drinking water supply and 5500 households access to sanitation. It has also enabled the families involved to improve their standard of living by providing support for the bathroom construction and hygiene awareness.

By June 2000, 100% of the 10,000 low-income households in La Paz - El Alto have been connected to the water supply networks. This surpassed

contractual objectives, which targeted such a result for 2003. Three years after its inception a vast investment program has resulted in the connection of 57,000 households to the water supply and 35,000 households to the sanitation system.

Involving and coordinating a number of institutions has proved fruitful: gaining the support of local and national authorities aroused the interest of other communities in Bolivia. One of the great impacts of this initiative is the inclusion of the condominial system in the Bolivian Technical Standards NB 688-01.

# Jambangan, Indonesia

## Brantas river



### Situation

The Brantas River in the Jambangan district of Indonesia is highly polluted with industrial and community waste. The water is unsafe to drink and poses a health threat to those living along its banks. Cleaning up a polluted river is an interesting experiment in social engineering. You can scoop out the floating debris and you can dredge up the pollution on the riverbed. Fresh water from the mountains and natural rainfall can flush away dirty water. But if the residents along the banks of the river – individuals, factories and farms – continue to dump waste into the river, natural systems never have a fair chance to clean up the mess.

A program to clean up the river would be a first step. But in the longer term businesses and the community had to change its basic attitude towards the river so that it would no longer be regarded as a convenient waste disposal site. Otherwise the cleanup efforts would be overwhelmed by bad practice. A bottom-up education and self-help program would be essential to change attitudes. If local communities were not involved, continuous improvement of Brantas River water quality would be very difficult.

### Targets

Unilever Indonesia wanted to be a part of the solution so it took the initiative to adopt four villages with over 32,000 residents along the edge of the river. Unilever, in cooperation with government organizations and NGOs then began a community education program in parallel with actions to rehabilitate all public sanitation units, school facilities and waste collection systems. New collection carts and bins were provided – and school children and villagers were reminded that everyone needed to use the systems and stop adding waste in the river.

### Approach

One of the first collective decisions was to turn riverside houses around so that the front of the houses faced the river. When the river was the “back yard”, there was a tendency to throw waste directly into the river. People wanted to keep their “front yard” – the river clean. Trash goes out the “new” back of the houses away from the river. Cart men collect waste from the new bins. New composting units now produce soil supplements for local farmers. Government organized a new road and restoration of the riverbank to encourage villagers to “turn their houses around” and redesign their homes.

Social economic development projects were an integral part of the program. “Morinda” fruit trees were introduced to provide a new income stream for villagers. Morinda fruit has good market value. Local fishing has become more productive as river water quality began to improve. Villagers needed economic opportunity as a companion to changing their life style to protect the river and the health of their families.

### Results

For the first year (first phase) of the Brantas River project, Unilever Indonesia gave priority to establishing the model Village Adoption Program in 4 villages and is focusing efforts on this until end 2002. The results are already visible in the form healthier living conditions and environment as well as improved incomes. This is motivating the community to take ownership in creating environment friendly self-sufficiency. Unilever is actively documenting the process of the Brantas River project – disbursements, milestones, issues and lessons learned – to produce a sound model and guidelines for other industries.







When Unilever adopted these four villages, the company knew that their “adoption model” must be replicated by other industries up and down the Brantas River. Thus Unilever and its partners attempted to keep costs low and demonstrate benefits. Unilever Indonesia has signed an MOU with the East Java Government to gain the support of government to encourage other industries in buying the concept of the Village Adoption Program. The company is also in the process of establishing a dissemination centre as a learning facility to conduct dissemination activities as well as a visitor point and as the Village Adoption Program’s office. The centre also displays and stores all project materials (video, brochures, posters, flyers, etc) for learning purposes.

Unilever has received a personal award from Indonesian Minister of Environment for its pioneering work in the clean river program and in promoting the formation of the Clean River Brantas Forum. The Minister has publicly stated his view that the Village Adoption Program developed by Unilever could be implemented through various environmental programs in Indonesia.

“Brantas Bersih (Clean Brantas) is on its way to success”, says Silvi Tirawaty from ULI Peduli Foundation – Unilever Indonesia.

For further information visit the Virtual Exhibition web site:  
[www.virtualexhibit.net/index.php](http://www.virtualexhibit.net/index.php) and then click on Brantas River.

## Dar es Salaam, Tanzania

### Water and sewerage authority

The *Severn Trent Plc* is a leading environmental services group providing water, waste and utility services. It generates revenues of £1.8 billion and employs more than 14,000 across the UK, rest of Europe and the US.

Severn Trent Water International (STWI) is the division of the Severn Trent Group and offers services in water and wastewater management and operating contracts to specific target markets, and focuses on providing consultancy services world-wide.

#### Situation

Covering an area of 945,000 square kilometres with a population of 33 million growing at approximately 3 percent a year, Tanzania is one of the poorest countries in the world. Situated on the east coast with a population of approximately 3 million, Dar es Salaam is the largest city in Tanzania.

The basic water supply and sewage infrastructure in Dar es Salaam was installed during the colonial era, with major additions in the 1970’s. However, due to poor maintenance and lack of investment much of the infrastructure fell into a state of decay and collapse. Problems with payment collection were

encountered, with the Dar es Salaam Water and Sewerage Authority (DAWASA) recovering less than 25 per cent of the cost of supply in 1998. This unacceptably low recovery level can be linked directly to the poor quality and unreliability of service provided, coupled with the customers’ failure to pay. In addition to this, severe financial operating losses were incurred due to unidentified water losses, illegal connections and poor billing & collection systems.

In order to tackle the problems being experienced by DAWASA, the Government of Tanzania adopted a policy to attract Private Sector Participation in the urban water supply and sewerage sectors. By this arrangement it is planned that an internationally qualified and experienced private water operator will provide the much needed management expertise necessary to transform DAWASA into a commercially sustainable organisation.

In 1998 Severn Trent Water International were appointed as Divestiture Advisor to the Government of Tanzania for Private Sector Participation (PSP) in the Dar es Salaam water and wastewater system.





## Targets

In introducing PSP into the water sector, the principle aims were:

- > To significantly improve the water supply and sewerage services in the Dar es Salaam designated area
- > To improve and extend service provision whilst promoting efficiency in service delivery
- > To ensure affordability of tariffs
- > To reduce the financial burden of service operation on the Government of Tanzania
- > For DAWASA to become commercially viable on a sustainable basis

## Actions taken

The Government of Tanzania entered into discussions with the World Bank (WB) and other funding agencies to secure funding for a capital investment program. The WB agreed to make available limited funds for essential improvements, subject to an International Water Operator (IWO) being appointed to manage DAWASA under a ten year lease contract arrangement. STWI were invited to advise the Government of Tanzania on the divestiture process, produce all

relevant contract documentation for the lease contract and assist in the transformation process.

STWI's primary advice included:

- > Review of the existing water sector law
- > Proposals for the establishment of a water sector regulatory arrangement
- > Establishment of appropriate levels of service, performance standards and assessment management
- > Production of indicative financial projections
- > Development of a capital investment program and asset management
- > Demand forecasting
- > Tariff structures and charges
- > Risk assessment and mitigation measures
- > Production of contract documents
- > Establishment of tender evaluation procedures
- > Review, evaluation and assessment of the bidders proposals
- > Establishment of contract monitoring and utility regulation agencies

## Problems and difficulties

The process of introducing PSP into water utilities in developing countries is a complex and time-consuming exercise. To date, the process has taken almost five years. Such time periods are not uncommon in

developing countries where there is a need to not only award a contract to a private operator but also secure financing of a major capital investment program.

The implementation of a major rehabilitation investment program is key in attracting a private operator, as without the investment, a private operator would not be interested in operating assets that are currently in a state of decay and collapse.

## Results

STWI and the Government of Tanzania are optimistic that the revised arrangements as contained in the latest tender documents will lead to the successful award of a ten year Lease Contract to one of the pre-qualified IWOs.

With the anticipated award, and the implementation of the major capital investment program, the main objectives of the project, stated above, will be delivered over the contract period.

## Lessons learned

- > The introduction of a lease contract may take several years to deliver, particularly when base data is limited in both content and quality.
- > There is a need to manage Government expectation as the introduction of PSP does not guarantee improvements all round.
- > There is a need to get the right balance of risks between the Government and IWOs. If the risks are seen as too high by IWOs this will inevitably lead to qualified bids together with higher prices.

## Manila, Philippines

### Bayan Tubig project

ONDEO Services is present in Manila through Manylad Water Service Incorporated (MWSI), a joint venture between ONDEO Services and Benpres Holdings Corporation. MWSI has a 25-year concession contract on Manila West, the city being divided into two concessions. The population of West Manila is 7.4 millions inhabitants. One third (2.5 millions inhabitants) live in low-income areas, representing 2.5 millions inhabitants. The blighted areas of Manila are shantytowns characterised by a very high population density. Most of the time these areas do not have legal recognition and the level of services are very low. The average income is 130 Euro per month with 80% of this income spent on food and water. Before the concession contract, the people living in these districts were not connected to the drinking water system. They obtained water either from black market vendors at a price ten times higher than that of public service, or from highly polluted shallow wells.

#### Situation

To address the problem of access to water in shantytowns the consortium launched in 1997 a dynamic development scheme: the Bayan Tubig projects (“Water for communities” in Tagalog) closely associating the communities with the planning of projects for their neighbourhoods. The projects aimed at providing individual water connections to households in the slums of West Manila through appropriate technological, organisational, and pricing strategies. The concession contract specifies communal standpipes to be provided in these neighbourhoods. However MWSI chose to provide individual connections to urban poor thereby



going beyond contract standards. MWSI to propose different payment alternatives allowing the inhabitants to choose the solutions best adapted to their situation.

#### Technical choices

The high density of population in Manila’s shantytowns and the irregularity of the urban pattern (very narrow alleys) are major obstacles for the implementation of a water network in these areas. To overcome this challenge the Bayan Tubig team developed an innovative, specially designed, network. From the existing main water line an underground line was laid to the area’s border.

Then a tertiary main runs along the major alley (This could be above ground or buried, even fixed on a wall) of the neighbourhood that lead to a battery of meters; one meter is allocated per household; a plastic pipe is fixed to provide individual connections.

Sites for the meters are selected with the community to make sure they are protected, easy to read and maintain, and do not hinder the passage of people in the alley. The local authorities are also closely involved in the implementation of these schemes.

#### Pricing and billing

The connection fee charged to the low-income customers is the same as for other residential areas as defined in the concession contract. However, Bayan Tubig customers can have access to a system of free-of-interest payment instalments. This allows payment to be staggered, over a period of 6 to 24 months. Without these easy terms of payment customers would have to pay

twice or three times the initial connection charge, the interest rate in the Philippines being 20%.

In general, billing is made by MWSI branches on a monthly basis. However, in one of the slum areas, Parola, an agreement has been signed with the neighbourhood association. This agreement specifies that the association is responsible for collecting water bills in return MWSI pay a fee to the association based on the period between the collection and the period of issue.



# Lusaka, Zambia

## Private sector participation (PSP)

### ... Manila, Philippines

#### Community involvement

Working with political leaders, community organisation and NGOs is crucial to the success of the Bayan Tubig project. All the partners work together to organise information campaigns and registration sessions. The local organisation plays an important role on education campaign and monitoring system. As mentioned above, in Parola the neighbourhood association is responsible for bill collection and helps with meter reading. The fee collected for this participation is used for Day care and Health care projects.

Since the concession began, the Bayan Tubig programs have connected more than 58,000 households, approximately 400,000 people, representing 42% of the total new connections realised by MWSI. On average, the monthly bill for each household has declined by one-third and consumption has increased by a factor of three, when compared to what they were before. This has a direct impact on public health. Saving time, energy and money have also led to significant improvements on the community's environment: housing quality improvement, land tenure legalisation process speeded up. Few of these benefits could have been realised if the standpipe approach proposed in the contract has been adopted.



Severn Trent Water International (STWI) undertook this project supported by an international law firm and local technical and financial consultants. The project was funded by the World Bank.



> A social/ consumer assessment including updating of willingness-to-pay surveys and the circumstances that would encourage the poorer sections of the community to connect to LWSC services

The objective of the project is to start the process of strengthening and expanding the water sector serving the city of Lusaka by establishing Lusaka Water and Sewerage Company (LWSC) on a sustainable, commercial basis through the participation of the private sector in the provision of water & wastewater services. A specific Steering Committee was established consisting of members from the Ministry of Local Government and Housing, LWSC, Ministry of Finance and Economic Development, Lusaka City Council, Zambia Privatization Agency, National Water and Sanitation Council and Ministry of Trade & Commerce to oversee the project.

The project has included consultations with a wide variety of stakeholders culminating in a 'Stakeholders' Workshop' at which consensus was sought regarding the most appropriate form of PSP to be adopted.

In selecting the best option for PSP in LWSC the following tasks were undertaken:

- > A review of all existing reports, studies and documentation relating to LWSC
- > A water supply demand assessment including a forecast of demand and water sales up to 2020 together with requirements for associated sewerage and wastewater facilities

- > An assessment of water supply and sanitation services standards and the establishment of procedures and standards for an efficient and effective provision of water and sanitation services
- > An analysis of existing solid waste management arrangements in relation to underground water sources and recommended rules and regulations to safeguard underground water sources
- > A review of existing and proposed outline investment program for the next ten years taking into account the demand assessment above
- > Determination of realistic financing instruments and sources of finance to fund the investment program including possible private sector and donor funding together with internally generated financing by LWSC
- > Establishing the financial, labour and environmental obligations and liabilities of LWSC
- > A review of the legal structure of LWSC in relation to its establishment statutes, its shareholder Lusaka City Council and the preferred institutional arrangement



- > A review of the existing legislation relating to: surface water resource management and abstraction; groundwater resource management and abstraction; setting of tariffs, and tax regimes
- > A financial analysis including: recent financial reports; creditor liabilities including debt; inventory of physical assets and their value; staff profile; tax and investment incentives, and fiscal and environmental liabilities
- > Production of opening Balance Sheet for the new arrangements
- > Formulate a pricing policy based on the financial analysis (in line with the principle of sustainable commercial operations) having due regard to the poorer sections of the community
- > Devise a full cost recovery strategy in line with the pricing policy including subsidy mechanism, tariff structure and rates
- > Develop a financial model for the chosen PSP option together with the proposed investment program

### Project deliverables

The project has delivered:

- > An assessment of LWSC's current performance
- > A presentation of the various types of PSP in the water sector over the short, medium and long term
- > A recommendation of the options for change having undertaken
  - market testing
  - demand forecasting
  - development of an infrastructure improvement program
  - technical analysis
  - financial analysis
  - risk assessment
  - stakeholder analysis
- > The recommendation of a preferred PSP option for LWSC
- > The identification of the necessary institutional arrangements
- > The identification of the necessary legal amendments
- > The formulation of a realistic timetable for implementation

### Next steps

Following this assignment, it will be necessary to appoint Transaction Advisors to undertake a short-term feasibility study and produce a more robust Immediate Capital Investment Program and prepare Transaction Documentation for the award of a PSP Contract.

#### *Production of short-term feasibility study*

It is estimated that following the appointment of Transaction Advisors, this study can be undertaken within a period of 6 months.

#### *Production of transaction documentation*

In order to give bidders confidence that the Immediate CIP will be delivered on time it may be preferable to sign both relevant Lease and Development Contracts at the same time as going out to tender for the construction elements of the Immediate CIP. The production of Transaction Documentation has therefore been based upon this time-scale, which is estimated will take 18 months following the appointment of advisors.

#### *Appointment of an international water operator*

Once Transaction Advisors have been appointed, it will take around 18-24 months to prepare bidding documentation and appoint an International Water Operator.



## Endnotes

- 1 There is an obvious exception to this rule. Historically the private sector has owned, managed and operated unique underground aquifers and springs providing bottled mineral water highly valued by society. These privately owned water sources do not impede or interfere with water for other societal needs. In fact, these private water resources are highly protected and managed in a sustainable manner because they are an essential source of resources for a continuing business enterprise.
- 2 For example, Unilever Ltd. has already initiated comprehensive river basin management systems in one major river basin where they have a major industrial facility.
- 3 The 800 million is derived from two parts. First one half of the 1.2 billion or 600 million plus one half of the 400 million new individuals expected to be born between now and 2015 or 200 million.
- 4 Dublin Principles of 1992 – There were 4 principles approved in 1992 as follows:
  1. *Freshwater is a finite and vulnerable resource, essential to sustain life, development and the environment.*
  2. *Water development and management should be based on a participatory approach, involving users, planners and policy makers at all levels.*
  3. *Women play a central part in the provision, management and safeguarding of water.*
  4. *Water has an economic value in all its competing uses and should be recognized as an economic good.*

### Photo credit

Page 10: CICR, Paul Grabhorn, 1995  
Burundi, Gihanga. Kids at the water  
distribution point installed by the ICRC.

Page 25: CICR, Thierry Gassmann, 1996  
Soudan, Awaarial. Water supply.

## About the WBCSD

The World Business Council for Sustainable Development (WBCSD) is a coalition of 160 international companies united by a shared commitment to sustainable development via the three pillars of economic growth, ecological balance and social progress. Our members are drawn from more than 30 countries and 20 major industrial sectors. We also benefit from a Global Network of 40 national and regional business councils and partner organizations involving more than 1,000 business leaders globally.

### Our mission

To provide business leadership as a catalyst for change toward sustainable development, and to promote the role of eco-efficiency, innovation and corporate social responsibility.

### Our aims

Our objectives and strategic directions, based on this dedication, include:

**Business leadership** – to be the leading business advocate on issues connected with sustainable development.

**Policy development** – to participate in policy development in order to create a framework that allows business to contribute effectively to sustainable development.

**Best practice** – to demonstrate business progress in environmental and resource management and corporate social responsibility and to share leading-edge practices among our members.

**Global outreach** – to contribute to a sustainable future for developing nations and nations in transition.

### Disclaimer

This report is released in the name of the WBCSD. Like other WBCSD reports, it is the result of a collaborative effort by members of the secretariat and executives from several member companies. The views expressed do not necessarily represent the views of every WBCSD member.

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