

Private Investment in Sanitation, a Contribution to Accelerating Progress

Presented by Jack Moss to

OECD Global Forum on International Investment VII - Paris March 27 & 28 2008

The purpose of this paper is to discuss the special challenges of private investment in sanitation. Contrary to what many people think, there is a great deal of private investment that goes into sanitation each year.

The size of this investment, either in monetary terms or as population served, is unknown, because of the way most of it is made. This is either as local "self-help" projects, by property developers, or by formal and informal service operators.

Even if the contribution to meeting peoples' needs is significant, it is not sufficient to meet the Millennium Development Goal for sanitation (MDG target 10). The contribution could be increased if conditions are right. We want to examine some of the things that need to be done to enable this potential to be realised.

Sanitation – Some Basics

- The "invisible" side of water – A very big issue – International Year of Sanitation
- The "matters" involved
 - *Faeces, Urine, Used water, Solids, Rainwater*
- Physical elements & processes
 - *Catch, Collect, Convey, Convert*
- The MDG target is only about "basic sanitation" (toilets). People need waste water collection, treatment, recycling and downstream protection as well

2

AquaFed

Sanitation is the neglected and invisible part of the water services cycle. It is probably the basic infrastructure service that suffers from the most serious under-investment and lack of attention.

At the global level it is a very big issue, because nearly half the world's population; some 2.6 billion people, do not enjoy access to adequate basic sanitation systems.

This MDG target is almost certain to be missed unless there is a step change in the rate of progress.

These are just some of the reasons why this year, 2008, has been declared the International Year of Sanitation by the United Nations. The object of this is to draw attention to the problem and encourage all stakeholders to make an effort to accelerate progress towards meeting the MDG.

Sanitation requires the proper safe management of a number of "matters". These include faeces and urine, but also other used water, solids mixed in water and rainwater. Dealing with excreta is only a small part of the whole problem.

Sanitation needs to be seen as a combination of behaviours, processes and physical systems. It requires physical infrastructure to catch, collect, convey and convert the various matters. Catch, means toilets, basins, sinks, and drains of various kinds. Collect means that these installations need to be connected together so that the various flows can be intercepted in a controlled way. (Note that this does not mean that the various matters should be mixed if this can be avoided.) Convey means the transport systems; be they pipes or other modes, that carry the matters that have been collected to places where they can be treated. Convert is the various processes that clean, disinfect, recover useful materials and return or recycle the water to useful purposes or to the environment.

There is a danger in the way the MDG interprets "Sanitation". The target refers to "basic sanitation", which most people interpret as the minimum of hygienically safe toilets. For the majority of people living in urban and peri-urban habitats, this is not sufficient. To be able to live healthy and dignified lives, people need more complete sanitation systems. As a minimum these involve the collection of all waste water. In addition, it is usually necessary for the waste water collected to be treated for the protection of downstream populations and environments. Water recycling and recovery of useful resources becomes more and more desirable as water stress increases.

People prefer not to live in unhealthy, unpleasant and undignified conditions. They therefore want and need good sanitation systems. Indeed, such systems are part of the essential underpinning of properly functioning societies. In all but the simplest settings, sanitation systems involve a collective approach to establishing, operating and maintaining the infrastructure that is needed.

Drivers vs. Barriers for change

- People want sanitation
- The real benefits are huge
- Sanitation is Taboo
- Politically Unattractive

AquaFed

People are usually ready to become involved in this because they realise that the real benefits to them are huge. Unfortunately as they grow accustomed to the systems being there and working they have a tendency to forget them. This is compounded by the fact that sanitation involves questions that are usually taboo.

The collective requirement means that sanitation is inevitably a political issue, but the taboo aspect makes it one that politicians do not always like to take up. It is often said that there are no votes in sanitation, but this is quite frequently a misconception.

An Investment Opportunity?

Country & Community benefits of investing in sanitation are enormous: between 1:5 & 1:46 in developing countries

Failed sanitation has huge:-

- Environment costs
- Social costs
- Economic costs

} These are almost entirely avoidable

But the balance between direct & externality benefits challenges investors returns

AquaFed

The benefits from investing in sanitation are very large for countries and for communities. A growing number of studies show how much

value effective sanitation systems can deliver. For example, Hutton, Haller and Bartram¹ have calculated a return on investment in developing country regions for US\$1 invested in the range of US\$5 to US\$46 depending on the type of intervention.

The converse is that failed or failing sanitation causes very significant environmental, social and economic costs for the societies concerned. The tragedy is that a large proportion of these costs can be avoided through installing, operating and maintaining appropriate sanitation systems and services.

One would think that these facts would lead to high levels of investment in sanitation systems. With returns like these how can countries or communities afford not to invest? The answer lies in the balance between the direct and the externality benefits. A very large proportion of the benefits come in the form of externalities that are hard to measure. It is hard for any investor, public or private, to justify the returns that can be expected under these circumstances. The real financial returns are nowhere near as great as the total value generated for the community. We are faced with a problem of perception that challenges all investors, but is disproportionately difficult for private investors. It is the kind of challenge that the OECD Investor Principles need to address.

The Investors' Challenge

Benefit of Investing in sanitation depends on the quality of projects and contracts

There is no opportunity if:

- No secure and stable **revenue stream**
- Unmanageable risk profile
- No certainty of fair treatment

AquaFed

Private investors face a number of other challenges that arise from investing in local infrastructure. The success of their investment depends to a very large extent on the quality of

¹ Global cost-benefit analysis of water supply and sanitation interventions – Hutton Haller & Bartram – WHO Journal of water & health – 05.4 2007

the projects and the contracts that link them to their public sector clients.

Perhaps the most difficult challenge is for the investor to see, with an adequate degree of certainty, that it will have a secure and stable revenue stream that is sufficient to pay back its investment over the term of the project.

The investor will also need to be able to see that the risk profile of the project can be identified and managed. It will also want to be sure that if difficulties arise it will be fairly treated. In many instances the track record of public clients in these respects has left something to be desired. This is part of the often quoted "governance" challenge for the water and sanitation sector.

Revenue streams to compensate investors

- User fees (through water bills)
- Tax contributions
- ODA

Sustainable cost recovery

© Camdessus & Girma Reports

6 AquaFed

An absolutely crucial issue that faces public and private investors alike is the need to have revenue streams that are sufficient to pay back the investment. As is the case with water supply, sanitation can only be paid for in three ways. These are: through user fees (in the case of sanitation this is usually a component of the water bill), through contributions from taxpayers, and in certain circumstances through international aid.

All three of these revenue streams depend on political decisions. There is a natural unwillingness on the part of politicians to levy charges on their people. They may feel uncomfortable with the application of "full cost recovery". For this reason the concept of "sustainable cost recovery" has been developed.^{2 3} This allows for a mixing of

² Financing Water for All - Report of the World Panel on Financing Water Infrastructure - Chaired by M Camdessus report written by J. Winpenny – World Water Council & Global Water Partnership 2003

financial flows from user fees, predetermined and predictable subsidies from taxes, and ODA. These can be combined in ways that ensure adequate revenue streams.

Generally investments in sanitation need to be made over the long-term. They depend on infrastructure that is "captive" in the locality and that can not be reimbursed in any other way than from the local beneficiaries. These requirements are the same for the public and private sectors, and give rise to several points of tension between positions that are not easy to make compatible with each other.

Sustainable Financing for Sanitation Services

**Long-term business needs
Stable and Predictable long-term finance**

- Revenue streams sufficient and predictable
- User charges that are adequate, equitable and affordable
- Budget subsidies secured over long-term

Fundamentally political questions

7 AquaFed

As indicated revenue streams need to be stable and predictable. At the same time user charges need to be adequate to cover costs, be fair to all users and be affordable. Sanitation has the additional problem in that it is difficult to charge for the service directly and it is therefore usually charged as an addition to water supply charges.

Subsidies are frequently used to overcome this problem. Subsidies present problems of their own, and therefore need to be designed and applied with caution.

An important tenet of sustainable cost recovery is that subsidies should be planned and committed in advance with the aim of enabling the operator to engage in long-term and efficient investment planning. Post-loss subsidies do not provide any incentive for efficiency nor do they ensure perennity of service and therefore should be avoided.

³ Task Force on Financing Water For All - Report 1. Enhancing Access To Finance For Local Governments - Financing Water For Agriculture Chaired by: Angel Gurria Written by: Paul Van Hofwegen World Water Council

Setting user charges and determining subsidy policies are fundamentally political questions that do not always sit easily with the operational imperatives of investors and operators, irrespective of the sector they come from.

If in some respects the use of the private sector appears to add constraints for decision makers, it also has the advantage of making the issues more transparent.

In spite of all these challenges, the private sector has and continues to invest in all parts of the sanitation value chain. Investors take many forms and provide their investments in a wide variety of different ways.

Private sector can & does invest

Private sector has invested in development & management of all parts of sanitation systems & services

- Individual sanitation – Manila, Nairobi, Accra, Jakarta, Bangkok, etc...
- W-Water Networks – Brazil, Bolivia, France, Germany, Spain, etc...
- W-Water treatment
 - New Works – Mexico, Jordan, China, Netherlands, Scotland, Belgium, Spain, etc...
 - Operations – Canada, France, Panama, S. Africa, Spain, USA, etc...
- Complete systems – Chile, Argentina, Brazil, Hungary, France, UK, Spain, etc...
- W-Water reuse – Saudi Arabia, Mexico, Namibia, Spain, USA, etc...

AquaFed

Private householders often invest in their own individual systems (domestic installations, septic tanks etc.). They also use the services of private operators to provide services to support their own investment. These may range from pit latrine emptiers in slums to septage service operators.

Property developers usually install sewers and often collective treatment facilities on their developments. They frequently make financial contributions to "offsite" infrastructure and treatment.

Private service operators also invest in and operate sanitation systems for towns on behalf of public clients.

Many waste water treatment plants have been financed under BOT type contracts and others are operated and maintained by private contractors.

Contracts for private operation of fully integrated complete systems are found in a number of countries. They have often been set up to overcome severe investment or performance

shortfalls, as was the case in the UK in the late 1980s.

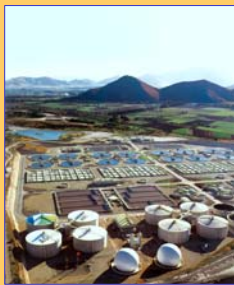
As the pressure grows to reuse waste water, private companies are developing new technologies and innovative waste water recovery offers.

All these ways of contributing to providing sanitation to people are useful and improve living conditions and the environment.

Let us look very briefly at a few examples.

Case study 1 Chile

Since private operators started work in Chile in 1998 the proportion of wastewater treated has increased from **16% to 84%**

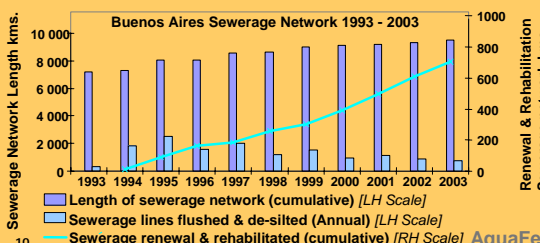


La Fanfana Wastewater Treatment Works - Santiago
AquaFed

Chile privatised its water and sanitation services in 1998. At the time when the private operators started work only 16% of all waste water was treated. The operators have invested heavily in treatment plants. In 1990, there were a total of 10 wastewater treatment plants in the country. By 2007, the number reached 252 and 84% of effluents are treated. The target is to reach 99% by 2010.⁴

Case study 2 Buenos Aires

Between 1993 & 2003 Aguas Argentinas **connected over 1M people** to the sewage system, and **extended the network by 755 kms.**



AquaFed

During the period of effective activity of the private concession in Buenos Aires, the

⁴ Ministerial statement reported in Business News Americas Today - March 25, 2008

concessionaire, Aguas Argentinas, extended the coverage of sanitation services to over a million people. It extended the sewerage network by 755 kilometres. It also cleaned, flushed and de-silted 15,000 kilometres of existing sewers and repaired and rehabilitated a further 706 kilometres.

When Manila Water started its concession in East Manila it had to take over from a very low starting point. In 1997 there were only 21,769 sewer connections in its sector. This represented less than 5% coverage. There was only one sewage treatment plant.

By the end of 2006 coverage had been extended to 10% of the concession area and 31 sewage treatment plants were in operation.

For the majority of Manila Water's contract area, the main form of sanitation is septic tanks. When the contract started there was virtually no facility for emptying these and treating the septage. Only 94 households had their tanks de-sludged in 1997. Today the company operates two purpose-built septage treatment plants and runs a fleet of 92 de-sludging tankers. It has now de-sludged a total of 267,180 septic tanks.

and deliver services effectively. They show what can be done and give good indications of how to achieve meaningful results. The Buenos Aires case shows that political and economic stability are essential to long term sustainability.

Conclusions

- For half the world's population access to sanitation is a big issue
- As population density increases sanitation becomes more and more critical for the whole of society
- The challenge is political organisation more than technical or financial
- Sustainable financing is essential
- Politics, Politics, Politics

12

AquaFed

To conclude, it has to be recognised that lack of adequate sanitation is a major issue for about half the population of the world. It brings with it much more than ill health and inconvenience. It also brings economic loss and environmental degradation, much of which could be avoided.

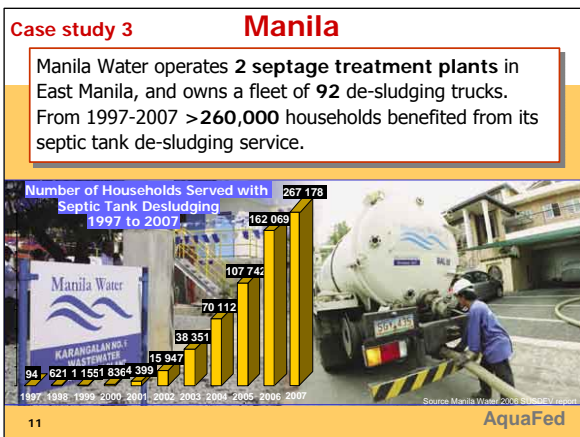
The problem becomes ever more pressing as population density increases and people live more and more in urban and peri-urban environments where sanitation is both more important, but also more expensive. The challenge becomes one for the whole of society and not just for those who do not benefit from sanitation systems and services.

Whilst there are considerable technical problems to be faced, these are not the principal difficulties. The real challenges are the long term political organisation that is required to give the stability and predictability to investors and operators from both public and private sectors. If these political challenges can be met it is almost certain that the money needed will be found.

The principles of sustainable financing are an essential element. For this reason the work being done by OECD on the economics of water and sanitation is important.

The challenge facing politicians is considerable, and users, the private sector, labour and NGOs all need to make their contribution to easing the politicians' task.

Simplistically, one can say that all it takes is "Politics, Politics, Politics". In reality it needs good politics at the Global level, the Country level and the Local level.



In all these cases, the investors and operators have made significant improvements in short periods. These have benefitted the populations, economies and environments of the cities concerned.

Each case is different, but all depend on high levels of investor confidence to start the process. In all cases the investor still has to make its returns. In Chile and Manila this remains likely, but in Buenos Aires it is not.

These examples all show what can be achieved when the political decision makers provide the conditions that are needed for operators to invest