

## Public-Private Partnerships in the Urban Water Sector

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**Why are policy makers interested in Public-Private-Partnerships?**

The urban water sector presents difficult economic and political choices for governments. The provision of water and sanitation services has undoubtedly reduced disease and yielded other health benefits. Free or cheap access to water has also spurred a variety of other uses from maintaining lawns to washing cars. At the same time, this sector is plagued by a long history of under-pricing, and opposition to full cost pricing for ethical and social reasons. These factors have contributed to the unwillingness of many governments to acknowledge water as a finite natural resource and an economic good – a commodity that needs a market price reflecting the cost of provision and its true value to society.

The result is that water systems are often operated inefficiently and that services are unreliable, lacking coverage, regular maintenance and good design. Especially poor sections of the population in developing countries frequently do not have access to public water services. Currently more than 1.1bn people worldwide lack access to safe drinking water and 2.4bn do not have access to basic sanitation facilities. One of the Millennium Development Goals agreed by the international community in 2000 is to halve those numbers by 2015.

Improving the delivery of urban water and waste water services is a critical need for many developing countries and economies in transition. In OECD countries investment needs also will increase substantially over the next years, requiring greater efficiency through better management and the use of new sources for investments. For instance, in the European Union about USD 75bn per year are currently spent on water and waste water services, and capital investment is predicted to increase by 7% a year<sup>1</sup> for the foreseeable future. The report of the Camdessus Group (The World Panel on Financing Water Infrastructure) to the Third World Water Forum in Kyoto, 2003,

1. Owen, David Lloyd, (2002), *The European Water Industry – Market Drivers and Responses*, CWC Publishing, London

suggests that in developing countries, current spending on water services of USD 75bn a year needs to be increased to about USD 180bn if the Millennium Development Goals on water and sanitation were to be met<sup>2</sup>. However, this target will be difficult to meet with public funds alone, as both government budgets and ODA have shown decreasing trends recently. Some governments are therefore increasingly looking to a range of private sector partners to provide access to two key resources: (1) improved management systems and technical options, and (2) private investment funds.

### What are Public-Private Partnerships?

Public-Private Partnerships (PPPs) refer to any form of agreement (partnership) between public and private parties. They should not be misunderstood as privatization, where the management and ownership of the water infrastructure are transferred to the private sector. A wide range of

approaches for involving the private sector in improving the performance of water and sanitation systems exists. Some options keep the operations (and ownership) in public hands, but involve the private sector in the design and construction of the infrastructure. Other options involve private actors in the management, operation and/or the financing of assets. Hence, they involve different degrees of private and public sector responsibilities for service delivery.

In all of these options, however, the public authority remains responsible for overseeing the activity and for ultimately ensuring that public needs are met. Governments retain final responsibility for setting and enforcing performance standards. The fact that the water sector is one of natural local monopolies means that a strong regulatory role is required to ensure that performance standards are met and the interests of consumers protected.

**Table 1. Matrix 1: Allocation of Public/Private Responsibilities Across Different Forms of Private Involvement in Water Services**

	Setting Performance Standards	Asset Ownership	Capital Investment	Design & Build	Operation	User Fee Collection	Oversight of Performance and Fees
Fully Public Provision	Dark Red	Dark Red	Dark Red	Dark Red	Dark Red	Dark Red	Dark Red
Passive Private Investment	Dark Red	Dark Red	Light Red	Dark Red	Dark Red	Dark Red	Dark Red
Design and Construct Contracts	Dark Red	Dark Red	Dark Red	White	Dark Red	Dark Red	Dark Red
Service Contracts	Dark Red	Dark Red	Dark Red	Dark Red	White	Dark Red	Dark Red
Joint Ventures	Dark Red	Light Red	Light Red	Light Red	Light Red	Light Red	Dark Red
Build, Operate, Transfer	Dark Red	Dark Red	White	White	White	Dark Red	Dark Red
Concession Contracts	Dark Red	Dark Red	White	White	White	White	Dark Red
Passive Public Investment	Dark Red	White	Light Red	White	White	White	Dark Red
Fully Private Provision	Dark Red	White	White	White	White	White	Dark Red

Key: Dark Red: public responsibility - Light red: shared public/private responsibility - White: private responsibility

Source: Yale-UNDP Partnerships Program 1998

Source: OECD, (2000), Global Trends in Urban Water Supply and Waste Water Financing and Management: Changing Roles for the Public and Private Sector, Paris

2. World Panel on Financing Water Infrastructure (2003), Financing Water for All, Paris

## What is the current status of development of Public-Private Partnerships?

In some OECD countries, Public-Private Partnerships in the water sector have existed for more than a century, and many other OECD countries have been using these arrangements for more than a decade. Public-Private Partnerships in the urban water sector mostly take the form of lease or concession contracts, where a public authority retains the ownership of the system and the private sector manages and operates the services. However, there is a wide range - from relatively limited private involvement, such as design and construction contracts (the case of most OECD countries), to full divestiture to the private sector (essentially in England and Wales).

Water supply in France, for instance, is in public ownership, but management is a mix of public and private systems. The French municipal authorities act as an economic regulator. This is in contrast to the UK where ownership and management are private, but the economic regulator, OFWAT (Office of Water Services), is an independent body. The US, like many other OECD countries, has a part-public, part-private ownership structure, where the public sector still largely dominates. However, where there is extensive public ownership, it has become more common to set-up “parastatals” or state owned enterprises, with a large degree of financial and institutional independence. The trend in the OECD is that the role of the private sector in the management of water services is increasing.

**Table 2. Share of Public-Private Partnerships in key OECD urban water markets (in % of population served)**

Country	Public sector management	Private sector management
Germany	96%	4%
France	20%	80%
United Kingdom	12%	88% (100% in England)
The Netherlands	100%	
United States	85%	15%

Source: BIPE (2001), *Prix de l'Eau – Elements de comparaison entre modes de gestion en France et en Europe*, Paris

Outside the OECD, there has been a steep increase of cumulative investments in private water and sanitation projects in developing countries, from less than USD 2bn in 1992 to close to 35bn in 2000. This has been followed by a marked slow-down in recent years (see graph). In fact, an increasing number of Public-Private Partnerships water projects in emerging markets have been reported to be in crisis in recent years. Some private operators seem to have started reacting to this situation and are retreating from certain emerging markets.

Despite the significant expansion of Public-Private Partnerships in the urban water sector in recent years, it is estimated that still only 3% of the popu-

lation in poor or emerging countries is provided with drinking water through private operators<sup>3</sup>. Globally, there are about 200 million people that are served through private operators<sup>4</sup>.

## What are the main obstacles to increased levels of Public-Private Partnerships in the developing world?

Networked water systems have extremely high capital costs, well in excess of other infrastructure services. They are mostly financed with debt, for as long term as is commercially available. Given the high initial costs, extremely long pay-back periods

3. World Panel on Financing Water Infrastructure (2003), *op.cit.*

4. Owen, David Lloyd, (2002), *The European Water Industry – Market Drivers and Responses*, CWC Publishing, London

### Box 1: Bucharest Privatizes Municipal Water Services

The French firm, Vivendi, has won the tender to privatize the Bucharest municipal water services via concession, in the biggest privatization of a municipal-owned water company to date in Central and Eastern Europe. The contracts were signed in March 2000 by Vivendi, concluding a privatization for which the International Finance Corporation served as principal advisor to the Municipality of Bucharest. (cont.)

Currently, a state-owned municipal company, RGAB, provides water and sanitation services to the 2.3 million residents of Bucharest. In 1995, RGAB obtained a US\$25 million long-term loan from the World Bank to rehabilitate part of the water supply system and modernize meters. But the company faced low tariffs and relatively high non-payment of bills that made upgrading difficult. The new concession provides for the treatment and distribution of potable water and sanitation services. Vivendi will implement a tariff structure with a 15 percent real tariff increase in the first year of operation, no tariff adjustment for the next four years, and a downward adjustment thereafter. Preliminary calculations indicate that the average tariff over the life of the concession will be about 35 percent below the current rate of approximately Lei 3162.80. The quality and experience of the winning operator; the competitiveness of the tariff bid, which will directly benefit consumers; and the transparency of the tender evaluation process will contribute to reliable service, according to the Bucharest Municipality. This project received substantial technical assistance support from the governments of Denmark, Japan, and the Netherlands.

*Source:* OECD, (2000), Global trends in urban water supply and waste water financing and management: Changing roles for the public and private sectors, Paris

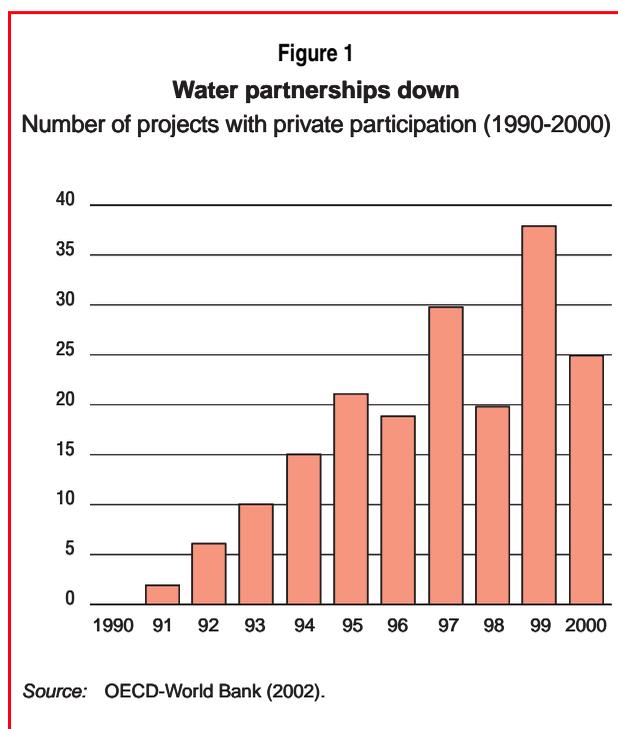
are necessary, and it is essential that revenue streams are as secure as possible. Urban water services are also a business with relatively low rates of return on investment. Due to these sectoral specificities, private operators are particularly sensitive to the quality of the investment climate and the level of risk, which is an important obstacle to Public-Private Partnerships in many regions of the world.

Besides the risk premiums that private investors require to operate in regions with higher levels of political and economic risks, and which can prevent many projects from materializing, several other reasons for the stalled expansion of Public-Private Partnerships in developing world water sectors have been identified in a recent OECD/World Bank conference<sup>5</sup>. Some of the key ones are highlighted below.

There is a dominance of concession contracts (more than 82% of cumulated investment 1990-2000)<sup>6</sup>, where the private operator is responsible for management of operations, maintenance and investment, and hence exposed to a large array of risks, in conjunction with an inappropriate allocation of risks between stakeholders. In fact, many Public-Private Partnerships are designed in a way that require the private operator to directly or indirectly bear the political, regulatory and currency exchange risks in addition to all operational and investment related risks. There is now increasing recognition that this might not be the most appropriate way of allocating these risks, since the former are not under the control of private operators. Developing country governments, and donors/International Financial Institutions can help by taking over part or all of these risks. Foreign

5. OECD/World Bank (2002), *Private sector participation in municipal water services in Central and Eastern Europe and Central Asia, Conference proceedings, 10-11 April 2002, Paris*

6. OECD/World Bank (2002), *Private sector participation in municipal water services in Central and Eastern Europe and Central Asia, Conference proceedings, 10-11 April 2002, Paris*



exchange risks could also be reduced by increasing local currency finance where this is possible.

Regulatory frameworks in host countries are frequently insufficient and unstable. This generates

significant uncertainty about future cash flows for the private operator, since essential cost elements (e.g., wastewater treatment requirements), as well as revenues (e.g., tariffs) can not be anticipated. This situation, in conjunction with weak levels of contract enforcement, are key reasons for the low use of Public-Private Partnerships in many emerging market economies and developing countries (Table). Technical assistance from donors can help to remove many of these obstacles by providing support for capacity building and institutional reform – but ultimately political commitment is also needed.

Political commitment to Public-Private Partnerships at all relevant government levels is key to their success, since water is perceived to be more than a simple commodity by both consumers and many politicians. This has sometimes been overlooked, leading to the rapid loss of political backing as soon as projects encountered the first difficulties. Building strong political commitment for Public-Private Partnerships requires time to organize the necessary stakeholder consultations, to build capacity, and to develop studies that help to identify the advantages and disadvantages of different options besides Public-Private Partnerships.

### Box 2: Work on Public Private Partnerships in the Water Sector at the OECD EAP Task Force

The Environmental Action Programme (EAP) Task Force for Central and Eastern Europe, for which the OECD is providing the secretariat function, has carried out substantial work on the issues of urban water sector reforms in the countries of Eastern Europe, Caucasus and Central Asia (EECCA) for a number of years. This includes activities to foster the understanding of PPP in the EECCA water sector.

In 2000, the EAP Task Force organised a major Conference of EECCA Ministers of Environment and Finance/Economy in Almaty, Kazakhstan, to discuss necessary reform in the urban water sector. One of the key issues discussed at this conference was the potential role that PPP could play in the reform process. The conference led to the adoption by Ministers of Guiding Principles for water sector reform in EECCA<sup>1</sup>.

Following this major conference, a dialogue between the private sector, donors, and International Financial Institutions has been set-up jointly with the World Bank. The main objective is to identify the main obstacles to better quality and increased numbers of Public-Private-Partnerships, in the EECCA region and to find the ways to overcome these.

<sup>1</sup>OECD, (2001), *Water management and investment in the New Independent States*, Paris.

Table 3. Risk assessment per country CEE/EECA from a survey of private operators

Country	Operation risk	Water tariffs low	Low profit expectations	Strong competition	Financial risk	War, civil disturbance	Regulatory risk	Legislation does not permit	Breach of contract	Macroeconomic risk	Political instability	Political interference	Recipient not interested	Other
Poland	0,8	1,3	0,9	1,1	1,1	0,3	1,5	0,4	1,0	1,3	0,6	1,4	0,8	0,8
Czech Republic	0,6	0,9	1,0	1,6	1,0	0,3	0,7	0,3	0,9	1,1	0,6	1,4	0,4	0,0
Estonia	1,3	0,7	0,7	1,3	1,0	0,3	1,7	0,3	1,0	2,0	0,7	1,3	0,0	0,0
Latvia	1,3	0,7	0,7	1,3	1,0	0,3	2,0	0,3	1,0	2,0	0,7	1,7	0,3	0,0
Lithuania	1,3	0,7	0,7	1,3	1,0	0,3	2,0	0,3	1,0	2,0	0,7	1,7	0,3	0,0
Slovakia	0,7	2,0	1,5	1,1	1,4	0,4	1,6	0,7	1,3	1,3	0,9	1,4	0,4	0,0
Hungary	0,5	1,8	1,2	1,3	1,3	0,5	1,4	0,5	1,2	1,0	0,5	1,7	0,7	0,0
Slovenia	0,7	0,8	0,7	1,0	1,0	0,5	1,2	0,5	0,7	1,5	1,1	1,0	0,0	0,0
Croatia	1,1	2,0	1,3	1,0	1,7	1,3	1,7	0,9	1,4	2,0	1,3	1,4	0,0	0,8
Turkey	1,0	1,3	0,8	1,7	2,1	0,8	1,5	0,3	1,5	2,0	1,5	1,8	0,5	0,0
Russian Federation	1,5	1,7	1,2	1,0	1,5	0,8	1,5	1,5	1,7	1,9	0,8	1,6	0,3	0,8
Azerbaijan	1,8	1,8	1,8	1,0	2,0	1,6	1,4	1,6	1,8	2,2	1,6	1,7	0,6	1,0
Kazakhstan	1,8	1,5	1,5	0,8	2,0	1,5	2,0	1,4	2,0	2,3	1,6	2,0	0,8	1,3
Uzbekistan	2,0	2,0	1,5	0,8	2,3	1,8	2,0	1,4	1,8	2,0	1,8	2,3	0,8	1,3
Turkmenistan	2,0	2,0	1,5	0,8	2,0	1,8	2,0	1,8	2,0	1,5	1,6	1,7	0,8	2,0
Kyrgyz Republic	2,0	2,0	1,8	0,8	2,0	1,8	2,0	1,8	1,8	2,3	1,6	2,3	0,8	0,7
Tadjikistan	2,0	2,0	1,5	0,8	2,0	2,3	2,0	1,8	2,0	2,0	2,0	2,3	0,8	1,3

Legend : (3)=this is main reason/risk (2) this is a main CEE/risk (1) this is a reason/risk (0) this is no significant reason/risk

Colour code :

< 0,75

0,75-1,5

1,6-2,25

> 2,26

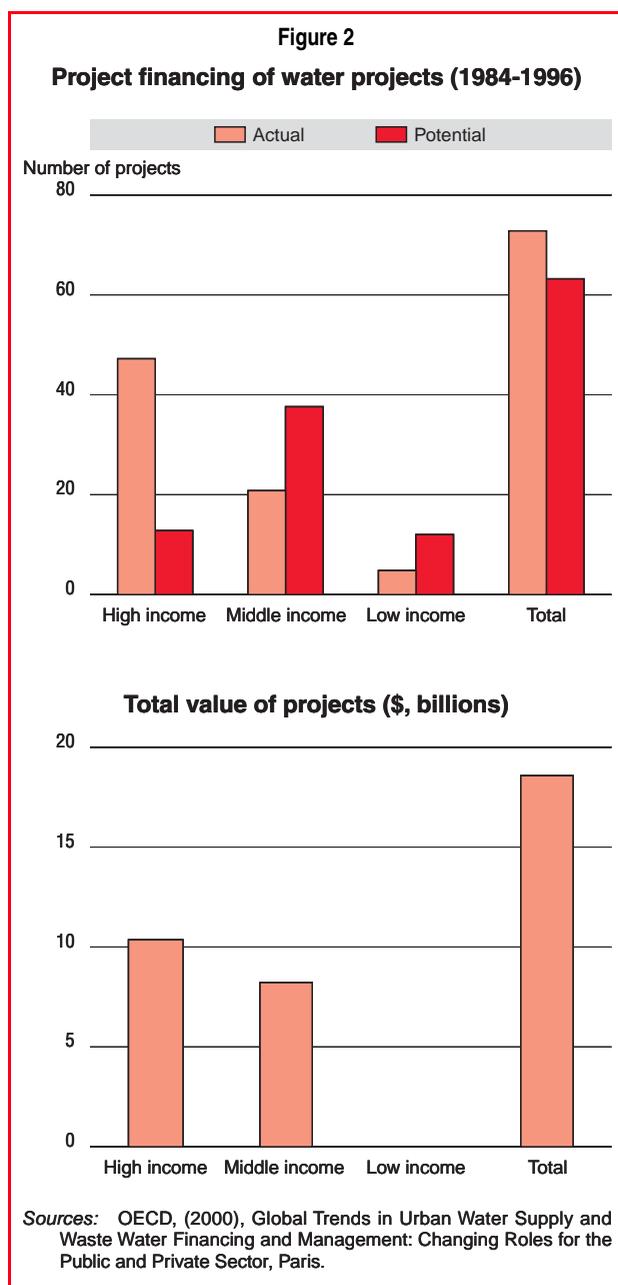
Source: OECD/World Bank (2002), Private sector participation in municipal water services in Central and Eastern Europe and Central Asia, Conference proceedings, 10-11 April 2002, Paris

Finally, many Public-Private Partnerships have encountered difficulties due to insufficient attention being paid to the social consequences of involving the private sector as they often implied tariff increases due to a move towards the full recovery of operation and maintenance costs through tariffs. Another reason is the popular mistrust of institutions involved in PPP projects. Unless continued access to water services of the poorest sections of the population is ensured at a reasonable cost, and sufficient levels of transparency in decision making are ensured, major social resist-

ance to Public-Private Partnerships has to be expected. Making sure that social protection schemes are being developed prior to or in parallel to Public-Private Partnerships is therefore a crucial success factor.

### What is the scope of Public-Private Partnerships in the urban water sector?

Even if these obstacles are overcome, it must be recognized, however, that Public-Private Partnerships are not the panacea that some might claim. Public-Private Partnerships involving international



private sector operators can not solve all the problems in the water sector, nor can they be applied everywhere. Clearly, the private sector will only operate where certain profitability requirements can be met, which considerably limits the scope for Public-Private Partnerships.

Firstly, for some of the reasons mentioned earlier, major investment in the framework of water Public-Private Partnerships is likely to focus on OECD and emerging market economies where the framework conditions for foreign investors are most favorable. This has been so in the past and is unlikely to change significantly in the future. Close to 100% of the value of Public-Private Partnerships projects has been realized in high and middle income countries, leaving most Least Developed Countries uncovered (Figure 2). For instance, less than 0.2% of all private sector investments in the water and sanitation sector of developing countries went to Sub-Saharan Africa<sup>7</sup>.

Secondly, there are only a limited number of international water operators, and their human and financial capacities allow for the management of only a limited number of projects. The three largest private operators account for more than 50% of the global market. Public-Private Partnerships in non-OECD countries therefore focus on urban areas which are likely to yield the most substantial revenue flows and offer the best opportunities to achieve significant economies of scale: typically large cities with a population of 500.000 or more. Rural areas as well as small and medium cities are not or only rarely on the radar screens of international private operators<sup>8</sup>.

While the potential area of operation of international private operators is, hence, clearly limited, opportunities for the involvement of new entrants into the urban water market exist. The mobilization of new actors such as the private sector in developing countries, as well as smaller OECD companies may help to enlarge the scope for PPP substantially in the future.

### For more information

More information about this *Policy Brief* can be obtained from Peter Börkey at the Environment Directorate (email: peter.borkey@oecd.org, tel. +33 1 4524 1385)

7. United Nations Millennium Project (2003), *Achieving the Millennium Development Goals in Water and Sanitation – Background Issues Paper*, Task Force on Water and Sanitation

8. Even though some investors try to convince smaller municipalities to merge their water systems with those of their neighbors so that a critical mass can be reached.

## For further reading

- **Water management and investment in the New Independent States, 2001**  
ISBN 92-64-18701-4, €37, 144p.
- **Improving Water Management – Recent OECD Experience, 2003**  
ISBN: 92-64-09948-4, €24, 132p.
- **Private sector participation in municipal water services in Central and Eastern Europe and Central Asia, Conference proceedings, 10-11 April 2002,**  
**Available at [www.oecd.org/env/eap](http://www.oecd.org/env/eap)**
- **Global Trends in Urban Water Supply and Waste Water Financing and Management: Changing Roles for the Public and Private Sector, 2000,**  
**Available at: [www.oecd.org/env/eap](http://www.oecd.org/env/eap)**
- **Environmental financing strategies – Experience and perspectives, *forthcoming***
- **OECD Environmental Performance Reviews - Water: Performance and Challenges in OECD Countries, 2003**  
ISBN: 92-64-10132-2

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