Public-public partnerships (PUPs) in water

March 2009

Public-public partnerships (PUPs) in water

by

David Hall, Emanuele Lobina, Violeta Corral (PSIRU), Olivier Hoedeman,
Philip Terhorst, Martin Pigeon, Satoko Kishimoto (TNI)

March 2009

1. Introduction

Water operators need to be efficient, accountable, honest public institutions providing a universal service. Many water services however lack the institutional strength, the human resources, the technical expertise and equipment, or the financial or managerial capacity to provide these services. They need support to develop these capacities.

The vast majority of water operators in the world are in the public sector – 90% of all major cities are served by such bodies. This means that the largest pool of experience and expertise, and the great majority of examples of good practice and sound institutions, are to be found in existing public sector water operators. Because they are public sector, however, they do not have any natural commercial incentive to provide international support. Their incentive stems from solidarity, not profit. Since 1990, however, the policies of donors and development banks have focussed on the private companies and their incentives. The vast resources of the public sector have been overlooked, even blocked by pro-private policies.

Out of sight of these global policy-makers, however, a growing number of public sector water companies have been engaged, in a great variety of ways, in helping others develop the capacity to be effective and accountable public services. These supportive arrangements are now called "public-public partnerships" (PUPs). A public-public partnership (PUP) is simply a collaboration between two or more public authorities or organisations, based on solidarity, to improve the capacity and effectiveness of one partner in providing public water or sanitation services. They have been described as: "a peer relationship forged around common values and objectives, which exclude profit-seeking".[1] Neither partner expects a commercial profit, directly or indirectly.

This makes PUPs very different from the public–*private* partnerships (PPPs) which have been promoted by the international financial institutions (IFIs) like the World Bank. The problems of PPPs have been examined in a number of reports. A great advantage of PUPs is that they avoid the risks of such partnerships: transaction costs, contract failure, renegotiation, the complexities of regulation, commercial opportunism, monopoly pricing, commercial secrecy, currency risk, and lack of public legitimacy.[2]

PUPs are not merely an abstract concept. The list in the annexe to this paper includes over 130 PUPs in around 70 countries. This means that far more countries have hosted PUPs than host PPPs in water – according to a report from PPIAF in December 2008, there are only 44 countries with private participation in water. These PUPs cover a period of over 20 years, and been used in all regions of the world. The earliest date to the 1980s, when the Yokohama Waterworks Bureau first started partnerships to help train staff in other Asian countries. Many of the PUP projects have been initiated in the last few years, a result of the growing recognition of PUPs as a tool for achieving improvements in public water management.

This paper attempts to provide an overview of the typical objectives of PUPs; the different forms of PUPs and partners involved; a series of case studies of actual PUPs; and an examination of the recent WOPs initiative. It then offers recommendations for future development of PUPs.

2. Objectives

In general the objectives of PUPs are to improve the capacity of the assisted partner. In practice, there are a range of specific objectives involved in PUPs. These can be divided into five broad categories:

- training and developing human resources
- technical support on a wide range of issues
- improving efficiency and building institutional capacity
- financing water services
- improving participation

Under each heading, reference is made to some of the case studies presented in more detail in section 4.

2.1. Training and human resources

Increasing the skills of the workforce is perhaps the most important focus when seeking to improve service quality and effectiveness. One striking example is the partnership between Yokohama Waterworks Bureau and the public water company COWASU in Hue, Vietnam. Partnerships with universities and technical colleges have been developed, for example in Singapore.

This reflects the importance of workers to establishing a viable water and sanitation systems, and the growing requirements as services are extended – it has been estimated that 161,000 extra workers are needed globally to achieve MDGs in water.[3] It may also reflect the lack of interest shown by donors in supporting training and human resources. Western donors and development banks have drastically reduced their funding for training since the 1980s, including the closure of regional training centres. Development of water services requires not only investment finance and good institutions but also trained, competent and committed staff and management.[4]

2.2. Technical assistance

Many PUPs are concerned with providing technical assistance, often combined with systematic training programmes as well. There are a number of examples in the partnerships of the Netherlands water companies, for example, involving partnerships which helped deal with leakage, introduction of quality management, preventive maintenance systems, protection of groundwater resources, customer relations, management information systems, and wastewater treatment technology.

2.3. Efficiency and institutions

In the case of the Baltic PUPs, the ultimate objective was cleaning up pollution in the Baltic sea, but the key aim of the PUPs was to build the institutional capacity of the public sector water and sanitation operators, so that they could in future manage to minimise the impact of their cities on the marine environment. In the national PUPs of Honduras, the objectives are the building of capacity in a particular local town.

2.4. Finance

In a few cases PUPs have been formed as a way of raising public finance for capital investment. The wastewater treatment PUPs in China are designed to mobilise investment finance for this important function, and deliver over 80% of the wastewater treatment plants in China – far more significant than the much-publicised plants built by the private sector. The Baltic PUPs also normally involved significant amounts of donor investments to enable treatment plants to be constructed.

It is worth noting that a number of mechanisms for financing investment in water and other infrastructure could be described as PUPS. These include the USA's revolving fund, funded by central government for local government to draw on; the various forms of Municipal Development Funds, for example Sweden's Kommuninvest or South Africa's INCA, vehicles for raising investment finance.

2.5. Democratisation

In some cases an objective has been to develop the involvement of the public or workers in providing a more responsive and effective service. In Tamil Nadu, India, an extensive process of interaction between employees and communities generated vast improvements in relations and in the responsiveness of the service. In the Philippines, a new partnership to develop benchmarking also aims explicitly at involving workers. Some of the partnerships supported by the Grenoble municipal enterprise, from France, have been focussed on the legal and other elements required for a public sector water operation.

3. Characteristics of PUPs

Under each heading, reference is made to some of the case studies presented in more detail in section 4.

3.1. International and national PUPs

Two broad categories of PUPs can be identified: international PUPs, where the partners are in different countries; and national PUPs, where they are in the same country.

International PUPs include the systematic Baltic Sea partnerships of the 1990s, between established water operators in Sweden and Finland and the municipalities of neighbouring countries in transition from communism, including Estonia, Latvia and Lithuania. Other examples include a number of supportive PUPs between European public water operators and southern cities, such as the PUPs between Amsterdam Waternet and the city of Alexandria (Egypt), or the support provided by the Sevilla's CPASE to Bolivian authorities for the re-establishing a public sector water operator in La Paz/El Alto after the failed Aguas de Illimani concession. Some international PUPs are 'south-south' partnerships, such as the support provided by the Argentinian water operator ABSA to the Peruvian city of Huancayo.[5]

National PUPs are initiatives within countries, such as the support provided by SANAA in Honduras for rural water services, the similar role in Sri Lanka of the national public sector water company NWSDB, in Morocco the support role of ONEP. Other internal PUPs may be partnerships between individual authorities, such as the partnership in India between the Tamil Nadu water operator and its counterpart in Maharashtra state.

3.2. Solidarity initiatives

PUPs may be initiated by any of the partners. One form is based on the traditional twinning arrangements between cities and towns. This is positively encouraged and supported by the international association of municipalities, the UCLG: "Mobilisation of resources for co-operation initiatives, twinning and other partnerships between local governments and their associations is one of its work areas."

The most striking and comprehensive form of these initiatives are the programmes initiated by Japanese water and sewerage boards from Osaka, Yokohama and elsewhere, funded by JICA, like the sewerage training provided by the Osaka sanitation board.

A number of European water operators have entered into PUPs as part of solidarity initiatives: these include public water operators from the Netherlands (Amsterdam) France (Grenoble, Paris) and Spain (Province of Sevilla, El Prat, Vitoria-Gasteiz).

There are also a number of solidarity initiatives from the south, for example, those involving the Uruguayan state water company OSE and others in Latin-America; the benchmarking partnership in Cebu, Philippines. In all these types, the common elements are that the knowledge and resources of one partner are made available to the other partner on the basis of mutual cooperation and no pursuit of profit.

3.3. Multiplying PUPs

PUPs have considerable potential to create a multiplier effect. Public sector operators who have benefited from the assistance of a PUP, may become able and willing to provide assistance to others in need of capacity building. Examples include:

- Beheira in Egypt being first the supported partner, and then going as a supportive partner with DZH in Port Sudan and Gedaref, Sudan;
- Kaunas Water showing their willingness to engage in PUPs as the supporting partner after being the beneficiary of a PUP led by Stockholm;
- Hai Phong Water Supply Company entering an ADB-sponsored WOP with Da Nang Water Supply Company, Viet Nam after HPWSC benefited from a FINNIDA-run PUP, the Hai Phong-Da Nang PUP is a domestic PUP.

3.4. Financing PUPs

A range of methods are used for financing PUPs. At its simplest, the low level of costs associated with some twinnings are simply absorbed by the supporting partner: an OECD study found that "capacity building activities …. often involve 'aid in kind' through institutional twinning and other partnerships. The costs of personnel working on development co-operation in local governments

are usually not recorded in the statistics." (OECD 2005 p. 22).[6] More substantial PUPs such as the training programmes of Osaka and Tokyo may be financed by aid, in these cases from the Japanese agency JICA.

The transaction costs of PUPs are also low. A study of the Baltic PUPs found that administrative costs were only around 2% of total project value.

3.5. Civil society and PUPs

One feature of PUPs is that they can easily and flexibly involve civil society actors as well, including trade unions, community groups and citizens. The partnerships developed in Argentina and Peru are examples of PUPs with strong elements of participation by trade unions and the public. PUPS can also develop out of community initiatives, such as the Orangi sewerage project in Pakistan, which has generated new agreements between national, state and local authorities.

Some PUPs are generated directly on the initiative of trade unions and civil society. One example of PUPs that have developed in recent years at the initiative of local organizations and with the encouragement of civil society networks is the partnership between the Uruguayan state utility OSE and water cooperative AAPOS in Bolivia. Over time, such participation can generate an institutional driver within public water operators to further engage in PUPs, such as was the case for the state water utility OSE. Indeed, the Peruvian water sector workers' federation FENTAP argues that PUPs are a technical tool and at the same time a political tool for those working towards effective public water delivery and the universalisation of water services.

3.6. Associations, public sector mergers

PUPs are a good demonstration of the flexibility of the public sector. It is easier and cheaper for fluid partnerships to develop, compared with the costly and cumbersome takeover processes used by the private sector. It is quite common in Europe, for example, for towns and cities to merge their water operations through inter-municipal associations. The same strength is a feature of the associations between public operators, such as VEWIN in the Netherlands, which provide a way of exchanging information and mutual benchmarking at low cost in a collaborative effort to strengthen operational performance. In Brazil, the national association ASSEMAE has been instrumental in supporting municipal water operators in Brazil and in other neighbouring countries.

3.7. The advantages of PUPs

PUPs have a number of advantages over other partnerships based on commercial objectives. They can be summarised as follows:

- Mutual understanding of public sector objectives and ethos
- Non-commercial relationship, low risk to municipality
- Transparency and accountability
- Many public partners to choose from, north and south
- Low transaction costs: administrative costs around 2% of projects
- Possibility of reinvesting 100% of available financial resources into the system
- Long-term gain in capacity-building
- local control over objectives, methods
- Can involve local civil society, workforce
- Partners which have benefitted from a PUP can become supporting partners to other cities

4. Cases

Case A. Solidarity partnerships from Japan: Osaka, Tokyo and Yokohama: support for sewerage and water supply

Japan has a strong history of public-public partnerships, which were used extensively in developing the sewerage systems in Japan itself from the 1960s. Since the 1980s, Yokohama, Osaka and other municipalities have run training courses in sanitation for public authorities in other Asian countries, mainly financed by the Japanese aid agency JICA.

Yokohama Waterworks Bureau (YWWB) has a long history of international cooperation in human resource development since 1987. Yokohama City heads CITYNET (Asia Pacific cities cooperation

network). Through CITYNET, YWWB has trained staff from Asian public water operators on water quality management. By 2007, YWWB had received 1700 trainees from 17 countries including Thailand, Indonesia, China, and Cambodia, and more recently from Central Asian countries. Since 1973 YWWB has sent 145 trainers to 25 countries. From 2003 to 2005, YWWB has entered technical assistance projects with the public water operators in Ho Chi Minh City and Hue, Vietnam. Supported by JICA, in 2007 YWWB entered a PUP with the public water company COWASU (Thua Thien Hue Water Supply and Construction State Company). YWWB planned to send 17 experts to COWASU and receive 30 trainees over 2 years. COWASU employs 550 staff and provides water services in the province of Hue, where coverage for urban water supply is 75%. COWASU plans to extend water coverage to 90% by 2010.

Objectives of the YWWB-COWASU PUP also include strengthening capacity at managerial level and enhancing drinking water quality. The project is articulated in 5 modules: water pipes (laying pipelines and leakage control), water quality control, management of drinking water treatment plants, human resource development, and consumer services. In 2008, COWASU became able to provide safe drinking water to 95,000 users in the city of Hue, one year ahead of schedule. This is a first in Vietnam and COWASU is now working to achieve the same quality levels in all its operational areas. In 2008, a new 3-year technical assistance project was launched at the TICAD (Tokyo International Conference on African Development). This involves Yokohama city and JICA in the delivery of training programs on purification, water distribution management and water fees collection benefiting trainees from 8 African countries.

The sewerage operator in Osaka, Japan is the municipal department for public works. The municipal department boasts 100% sewerage coverage (ADB, 2004: 3, 19), and "investments in sewerage and sanitation during 1997–2001 amounted to ¥336.4 billion (US$2.71 million)". Osaka Public Works Bureau has offered training programmes in a number of sewerage-related areas to staff from developing countries. Such programmes were funded by Japan's governmental agency JICA. The duration of the typical training programme is 90 days and sessions cover the following topics: finance; renovation of combined sewers; sludge treatment; wastewater treatment plant design; history of Osaka sewerage works; asset management; electrical equipment and sewers maintenance; water quality management; stormwater drainage. From 2003 to 2007, the department trained a total of 51 staff from 29 countries, mostly Asian including India and China but also from the Middle East, Africa and Latin America. It should be noted that other Japanese municipal sewerage operators, including Sapporo city, East Hiroshima city and Kitakyusyu, run similar training programs.[7]

A twinning arrangement between Tokyo Metropolitan Sewerage Bureau and Beijing Municipal Design and Research Institute was instrumental to the design of the Gaobei Dian wastewater treatment plant, but was then extended to include a sewerage component. "The first-phase of construction work had started in 1990, and Beijing City itself executed the entire work under its direct management. In March 1993, when the work was almost 80% completed, Beijing City requested Tokyo Metropolitan Sewerage Bureau to provide them with training for sewerage operation and management". The training was funded by JBIC.[8]

Case B. India: democratisation partnerships in Tamil Nadu

A group of engineers of the Tamil Nadu Water Supply and Drainage (TWAD) Board – Change Management Group – carried out a democratization experiment in 145 village panchayats. An acute water crisis and questions raised about TWAD's relevance had prompted the engineers to introspect themselves. Some 240 chief and assistant engineers were invited to discussions based on the traditional concept of 'koodam' where all participants meet as equal members of society. In 2004, the engineers adopted the 'Maraimalai Nagar Declaration' which imbibed ideas of community involvement and water conservation. The engineers vowed to scale down capital investment by involving the community and stakeholders, increase coverage with the same budget, and take recourse to local, alternate and traditional water sources. In 2004-2007, the experiment reduced capital costs per household by up to 60% and made savings of up to 33% in budgeted schemes. In addition, 65% of Dalit and marginalised communities have received targeted water supply, and 84% of women surveyed reported that the water engineer behaved as a community member, creating a sense of involvement and ownership. Some 51,000 households contributed towards capital investment of over Rs.1.5 crores, and water sustainability has been

improved by the planting of 20,000 saplings, the revival of 200 water bodies and the installation of numerous water-harvesting structures. TWAD engineers have carried forward the change process in the State level Agricultural Engineering Department where 160 engineers have evolved a vision statement called 'WARAM' (Watershed and Agri Resources Re-engineering and Management), now being implemented in 15 districts.[9] TWAD has also been involved in a partnership to provide training for water engineers of Maharashtra state.

Case C. Pakistan: Orangi project

The Orangi pilot project (OPP), in Karachi, Pakistan, was created by community organisation planning and developing a sewerage network throughout the area, constructed by paving the lanes over sewers built using local labour and micro finance, following natural drainage channels. The municipal authority built large mains sewers in the settlements to support the development. Although the project is best known for its community base, it has from the outset described itself as 'working with government' and expanding the model through 'collaboration with state agencies".[10] The same principles for developing sewerage systems have been applied in other towns and cities in Pakistan, with investments financed by government and development banks. The project has successfully campaigned for the principles of this approach to be adopted by the Karachi Water and Sewerage Board and the provincial and federal governments as the basis for developing sewers throughout the city: "OPP's proposal for sewage disposal for Karachi is now the KWSB's [Karachi Water and Sewerage Board] plan for the city costing Rs.8.85 billion (about US$ 121 million)."[11]

Case D. China: wastewater treatment PUPs

Although the development banks publicise wastewater treatment PPPs in China with the multinational companies Suez and Veolia, the great majority - over 80% - of wastewater treatment plants in China have been developed by municipalities through public-public partnerships with local public sector companies. These companies, usually municipally owned, are able to borrow, which municipalities cannot do, so their key role is to provide investment finance as well as expertise. These PUPs avoid risks associated with PPPs, such as currency risks and risks of commercial opportunism. (Bradbaart et al., 2009)[12]

Case E. Honduras internal PUPs

In Honduras, where most rural water systems are administered through community-based bodies, or NGOs, capacity-building through training and technical assistance is given at the development stage by technicians employed by the national water corporation SANAA. (Walker and Velásquez, 1999)[13]

Case F. Costa Rica: national support for community water services

Costa Rica's state owned water supply and sanitation operator AyA (Instituto Costarricense de Acueductos y Alcantarillados) also acts as a source of support and capacity for community-run rural services (ASADAS). AyA provides financial and technical support for ASADAS and, after due process, takes over those struggling to deliver services. In 2000, water supply coverage in Costa Rica was 98.5% at urban level and 75.4% at rural level.[14]

Case G. Philippines: Labour-management cooperation

The Alliance of Government Workers in the Water Sector (AGWWAS) and Metro Cebu Water District (MCWD) have initiated cooperation on performance benchmarking training for Philippines water districts. Technical assistance is provided by a not-for-profit multi-disciplinary team that includes PSIRU-Asia and Visayas State University (VSU). The PUP aims to enhance appreciation and capabilities of public water managers and workers to implement benchmarking as a tool to improve services; develop consensus on key performance benchmarks for water districts; create benchmarking units or focal persons in water districts; and promote PUPs among water districts and other stakeholders. To date, trainings on performance benchmarking and database management had been provided to 40 representatives from management and unions of twelve water districts. The participants have identified steps to move the capacity-building process forward:

Benchmarking Data Utility Book; Data Standardization / Benchmarking Questionnaire; Educate relevant stakeholders to de-politicize governance of water districts; Future trainings on Integrated Water Resources Management, Watershed Planning and Sewerage and Septage Management; 'Big Brother'- 'Small Brother' PUPs, and Explore PUPs between water districts and local governments.[15]

Case H. Brazil: internal PUPs

Brazil has a long history of public-public collaboration at various levels. These PUPs are behind many successes in the development of public water supply and sanitation operations. First, from the 1970s to 1986, the federal agency PLANASA provided public funding to support the investments of state water companies and their efforts to meet the challenges of growing urbanisation. In this phase, US technical assistance played a "heavy role" (Heller, 2006: 6-8)[16]. More recent PUPs are noteworthy.

Ibiporã's municipal water operator SAMAE has joined ten other municipal undertakings to establish a consortium for the creation of a laboratory for water analysis with the support of federal technical agency FUNASA. The communal laboratory should address the limited technical and administrative capacity of individual municipal structures. "The consortium can join forces and contract engineering, legal or topography professionals in order to provide technical assistance to the municipalities and gain economic status to carry out projects. Moreover, good projects can raise funds from various governmental sectors."

In addition, SAMAE has entered a PUP with Parana State's technical assistance agency EMATER and a municipality for the extension of water supply services in rural areas. The PUP involved joint investments by both SAMAE and EMATER for the construction of infrastructure. In turn, responsibility for management of the service is handed over through a public-community partnership to rural communities, organised through neighbourhood association. "Ibiporã's rates of water supply and sanitary sewage coverage for both urban and rural populations are much higher than the national average."[17] (da Costa et al., 2006)

Case I. Cambodia: a network of PUPs around Phnom Penh

From a war-torn utility, Phnom Penh Water Supply Authority (PPWSA) is now considered as one of Asia's outstanding public utilities, with a growing reputation for organizational excellence, customer-oriented service, and high-level of service performance. PPWSA is keen to offer advice for free to other utilities; provide on-site assistance on a cost-covering basis; assist in non-revenue water reduction; and provide training, again on a non-profit basis. PPWSA has provided advisory services to the Siem Reap Water Utility, 300km from Phnom Penh; as well, PPWSA's training centre caters to managers and staff from provincial water utilities to learn from the experiences of Phnom Penh. In 2007, PPWSA entered an 18 month partnership under ADB's Water Operators Partnership Program (WOP) with the Binh Duong Water Supply Sewerage Environment Company (BIWASE). BIWASE's benefits from the PUP includes more streamlined work processes, new standard operating procedures, fully-trained personnel, a 24-hour customer hotline, more revenues, fewer customer complaints about meter reading errors, and NRW drastically dropped by 20%. With BIWASE's progress, other utilities in Vietnam and elsewhere are following suit, including a domestic PUP between Haiphong and Danang water companies, and a sister-city twinning partnership between Phnom Penh and Iloilo City (Philippines) on sanitation and hygiene promotion activities.[18]

Case J. Baltic PUPs

The Baltic Sea PUPs took place in the early 1990s, supported by the Baltic Sea programme (Helsinki Convention), which identified pollution hotspots in the region and directed finance and capacity-building resources towards them (Hall, 2003). Established public water authorities such as Stockholm Vatten or Helsinki Water partnered cities in the Estonia, Latvia and Lithuania, which had just left the Soviet Union. The PUPs were focused on building the capacity of municipal public sector water operators to manage financial and operational aspects. These PUPs were funded by national aid agencies and development banks, and were often linked to capital investment

projects for e.g. wastewater treatment plants. Reviews and evaluations of these processes have been consistently enthusiastic, whatever their critical observations on specific aspects (Helsinki Commission, 1998). The SIDA review of its overall municipal twinning programme described it as "a successful experiment"; the review of the Kaunas experience in 1998 described it as "overwhelmingly positive"; and the review of the Riga twinning provided a striking summary of its major technical, environmental, financial, managerial and governance achievements: "The twinning arrangement has essentially stimulated and supported the process of transforming Riga Water (RW) into an autonomous, self-financing and self-governing enterprise." (Lariola, 2000).

Case K. Solidarity partnerships from Europe: Netherlands

Dutch water companies have engaged in a number of international partnerships, notably through two of the Dutch public water operators: Waternet, and the Dune Water Company.

The water service of Amsterdam, Waternet, has been engaged in international partnerships since 1991. It has created an international division, Wereldwaternet. In Egypt, has been working since 1991 with water services in Alexandria, Damietta and the provinces of Beheira and Gharbeya. Activities include reducing the level of leakage, introduction of quality guidelines, improve management process, introduction of preventive maintenance systems, protection of groundwater resources, improve surface water quality, organise knowledge exchange between the companies involved. In Alexandria unaccounted for water (UFW) was reduced from 30% to 15% and billing collection increased from 82% to 88%. The Beheira Water Company managed to double its production capacity within one year. More recently, Amsterdam Waternet has extended its cooperation to the management of sewerage and wastewater treatment systems[19].

Amsterdam Waternet has also been involved in a twinning partnership with Surinam since 1996. Amsterdam Waternet employees are seconded to work with colleagues in Surinam water service on the improvement and expansion of the general drinking water service, distribution networks, reducing unaccounted water, setting up a management information system and ensuring supply to rural areas. AWS is also exploring how to set up, maintain and manage a new water treatment plant in the rainforest.

The Dune Water Company has developed a number of PUPs in Romania, Sudan and Indonesia. Some of these have been financed by the Agency for International Business and Cooperation (EVD, part of the Dutch Ministry of Economic Affairs, and some by VNG international.

In Romania, it has partnered the town of Iasi from 2007-200, helping improve water supply and water quality. It designed, and installed and trained employees in a water quality and quantity monitoring system. The system was handed over to the water corporation of Iasi in November 2008. It has partnered with the town of Botosani, to help improve water quality, including the introduction of a total quality management system.

Port Sudan, a city of approximately 800.000 inhabitants receives limited untreated surface water from several artificial lakes. The nearby huge ground water aquifer is nearly unused as the knowledge of geohydrology is limited. The Dune Water company has been involved in a partnership since 2006, providing advice and training on geohydrology, civil engineering, hydraulics, and management and organisation. Since 2008 the water corporation of Gedaref has also become a partner in this twinning programme. In Indonesia, it has partnered the city of Kabupaten Bogor since 2006 to help reduce UFW, which was around 30%, by helping improve the transparency of customer relations using a web-based technology; hydraulic modelling in order to enable the company to make a reliable water balance; and cleaning of the pipelines by a compressor, a technique for low pressure pipelines.

Case L. Solidarity partnerships from Europe: Finland and Vietnam

Finnish bilateral development agency FINNIDA supported the Hai Phong Water Supply Company (HPWSC) in Viet Nam (but also the Hai Phong sewerage and urban environment companies) with a PUP from 1990 to 2004. This accompanied the successful institutional and organisational restructuring of HPWSC, and included financial support of 50% of total investments until 1995 and a systematic training programme. From 1993 to 1999, UFW fell from over 70% to around 32%. Training

was aimed at the development of both managers and staff. HPWSC management believed that the turnaround of the company's performance was due to the fact that they "trained everyone"[20].

Case M. Solidarity partnerships from Europe: France

France is usually known as the home of the multinational private companies, but there are also a number of municipal water operators. The municipal water and sewerage authorities of Paris, and the municipal water companies of Grenoble and Limoges, have engaged in solidarity partnerships in France and internationally.

SIAAP, the sewerage authority for Paris, has been involved in a partnership to help the city of Hue, Vietnam, renovate and plan the future design of its sewerage system. It has also formed a similar partnership in Morocco. Eaux de Paris, the public water authority for Paris, has been involved in a training partnership with the engineering school of Sfax, in Tunisia. It has also signed a partnership agreement with the water and sanitation operator of Moscow, Mosvodokanal.

Limoges has been involved in a partnership to help rehabilitate the water supply in the city of Pabré, Burkina Faso. The water company of Grenoble, REG, which was formed in 2001 after the termination of a corrupt private concession, has provided advice to a number of other French towns on technical and legal aspects of municipalisation of water. It has provided similar advice to groups in Italy, Bolivia and Uruguay, and provided technical assistance to help Sri Lanka recover its water services after the Tsunami.

Case N. Solidarity partnerships from Europe: UK and Lilongwe, Malawi

A project to improve the water and sanitation services of Lilongwe, Malawi, was a success, from the point of view of institution building, and provided the model for a national approach to managing water in cities and larger towns. Funded by the World Bank, the project produced a master plan and expanded the distribution system and strengthened the capacity of the water board. Access to water improved significantly; the project helped develop an effective management support and training programme; the efficiency of operations increased considerably; the level of unaccounted-for water fell to 16 percent; labour costs were reduced; response time to new service applications and customer complaints has improved.[21]

Case O. Solidarity partnerships from Europe: Spain

CPASE (Consorcio Provincial de Aguas de Sevilla), the water operator for the province of Sevilla, Spain, is engaged in a number of PUPs motivated by international solidarity. The PUPs are conducted with the involvement of other Spanish public entities and NGOs. The PUPs provided or are providing assistance to: 1) a Saharaui refugee camp in Tindouf, Algeria from 2000 to 2007; 2) the building and launching of a school of agriculture in Mlale, Malawi and the construction of infrastructure for irrigation; 3) Ciudad Sandino, Nicaragua for the development of capacity and establishment of a municipal water company with public participation (in a PUP funded by the European Commission's project PROMAPER); 4) the municipal water undertaking of Gibara, Cuba for the reduction of UFW, training of workers the supply of information technology and equipment; 5) Bolivian governmental authorities, with capacity building for the renationalisation of water supply and sanitation operations in La Paz/El Alto after the failed private concession to Aguas de Illimani and for the strengthening of public water operations after the renationalisation; 6) Cuyultitán, El Salvador for the establishment of a public water operator and the construction of infrastructure. Other PUPs have been set up in Peru, Kenya, Cameroun, Nicaragua PUPs in the annexe, at least where it adds new countries. AMVISA the municipal water company of Vitoria-Gasteiz, Spain has also developed a number of PUPs[22].

Case P. Solidarity partnership from the south: Argentina and Peru

The termination of the water privatisations in Argentina has resulted in new public sector operators based on partnerships between public authorities, with strong participatory roles for trade unions and civil society. After the termination of the Azurix-led concession in Greater Buenos Aires, the provincial government created a new public sector company, Aguas Bonaerense SA (ABSA), with strong public participation at many levels. ABSA is co-owned and operated by a workers cooperative "5 de setiembre S.A.", created by the the Water and Sanitation Trade Union of the Province of Buenos Aires (Sindicato de Obras Sanitarias de la Provincia de Buenos Aires), to provide

the technical support which the province had lost following the privatisation. "5 de setiembre" has now expanded operations to replace another failed private concession in the province of Buenos Aires, after the termination of the Aguas de Bilbao concession. "5 de setiembre" is also providing technical assistance to a number of smaller Argentinian water systems[23].

Peru is under pressure from the Inter-American Development Bank (IDB) and the German government to privatise water. Strong campaigns have prevented the implementation of a series of public-private partnerships set out in the National Sanitation Plan of 2005 to 2015, including the privatisation proposed at Huancayo. The city of Huancayo took a different path in June 2007 when a PUP contract was signed between SEDAM Huancayo and the Argentinian ABSA ("5 de setiembre"-operated). This was initiated by the trade unions in each country, and includes a parallel agreement entered into by trade unions FENTAP and SOSBA under the auspices of Public Services International (PSI). The agreement also provided for the involvement of local civil society organisation FREDEAJUN (Frente de Defensa del Agua de la Region Junín) and the international NGO Transnational Institute (TNI). The partnership aims to reduce costs, increase maintenance and investment, to orientate service delivery to the needs of the population, and develop institutional reform to democratise the utility and make it accountable to the public[24].

Case Q. Solidarity partnerships from the south: Uruguay

The public water company of Uruguay, OSE, has formed a partnership with ESSAP, the water authority in Paraguay, providing an exchange of technical expertise and support for management improvement in ESSAP. In 2007 OSE provided technical support for the design of a water supply system in the area of Lago Nokoué. Benin. The project was initiated by EMMAUS International (NGO). It involved an exchange trip by one OSE engineer to Benin in March 2007 and the not-for-profit export of UPAs (mobile water treatment plants) and other technical equipment.

Case R. Emergency/post-disaster partnerships

PUPs are also used in emergency situations to restore water services after natural disasters, such as the Asian tsunami in 2004. The Dutch water sector combined its efforts to assist the victims of the tsunami through the H2O Foundation, funded by €5 million donated by the public and a further €5 million from the Dutch government. As a result of surveys, discussion and need assessments in Indonesia a program was formulated for working in a number of areas, including Aceh Utara, Aceh Besar, Aceh Barat (Meulaboh), Simeleu, Nias and Nias Selatan. The partnership worked to restore the provision of safe drinking water and sanitary facilities, and to restore capacity to operate the water supply & sanitation facilities. The results included a water supply coverage of more than 60% in each of the project areas, with a definitive plan to subsequently reach the MDG objective of a coverage greater than 80%; sanitation coverage of more than 40% in each of the project areas, with a plan to subsequently reach the MDG objective of a coverage more than 60%; ensuring the local PDAM (water authority) was able to generate funds and implement O&M without losses.

Eaux de Paris has also been involved in partnerships to provide assistance in emergencies, in Indonesia, Pakistan, Kenya, Democratic Republic of Congo, and Lebano, in partnership with an emergency aid NGO, "Première Urgence".

Case S. PUPs in other sectors

The advantages of PUPs can be seen in other sectors as well. A good example of a politically-responsive PUP is the proposed toll road for highway 121 in Texas, USA. Initially, the state transportation agency set up a PPP with a private consortium, but following strong public opposition replaced this with a public–public partnership (PUP) with the local toll road authority (Battaglio and Khankarli 2008). In India, PUPs between the central government National Hydro Power Corporation and state governments have been used to develop hydro-electric power schemes in the states of Himachal Pradesh and Uttar Pradesh, combining the central expertise of the NHPC with the states' understanding of local issues. These PUPs have been implemented more successfully and with less social conflict than hydro power PPPs (Pillai 2008). In Ecuador, the country's public electricity companies receive technical support and advice from both Cuban and Colombian public electricity companies (Hall, 2004).

5. WOPs, commercial incentives, and donor initiatives: undermining PUPs?

The Water Operator Partnerships (WOPs) is an initiative emanating from the UN Secretary General's Advisory Board on Water and Sanitation (UNSGAB). The WOPs were originally conceived from the Public-Public Partnership concept, also known as twinning. The debate within UNSGAB recognised that there are at least 250,000 public watsan operators in the world; that many of them achieve remarkable results in difficult circumstances; and that, in order to reach the MDGs, the capacity of these operators to assist each other should be unleashed, in a systematic fashion.

The participation of private operators in the WOPs system was a compromise within UNSGAB. There are, however, already many mechanisms at global and regional level to advance business interests, including by IFIs, donors and national governments, whereas the mechanisms to advance public partnerships are few. Private companies have an incentive to treat WOPs as another marketing opportunity to obtain subsequent profitable contracts, and to prevent public sector operators from creating PUPs, as this amounts to an erosion of the potential commercial market. Private participation in the WOPs should therefore be on a non-profit basis, with a quarantine preventing commercial business between WOPs partners for a significant period, such that the WOPs initiative is not used as a marketing strategy. (This is also true of public and NGO operators, some of which seek to use such partnerships to accumulate capital from outside of their boundary operations).

Moreover, the private companies, who are already internationally active, are able to exert much more influence on the regional and global initiatives than public sector operators through their sophisticated lobbying machinery and their generous lobbying budgets. This influence is clear in the structure of initiatives by the Asian Development Bank (ADB), USAID, the government of the Netherlands, and the regional WOPS in Latin America.

- The ADB started a regional WOPs programme from 2007, but 4 out of 8 partnerships supported so far involve private companies as the 'expert' partner – quite out of proportion in a region where 90% of water services are run by the public sector. The ADB estimates that the partnerships involve the companies in donating about 100 days of professional time – a substantial commitment for a public authority, but one which can easily be justified as a marketing investment by a private company.

- The USAID initiative in Asia is even more skewed: 7 out of 10 twinning arrangements financed by this programme involve private sector partners, and the programme explicitly allows for commercial contracts to be developed by the partners following these WOPs.

- The government of the Netherlands has made a recent commitment to expanding the 'Water Operator Partnerships' between Dutch water utilities and developing countries. The government rightly states that this would build on the existing work done by Dutch operators such as Amsterdam Waternet, and all Dutch water operators are in fact public sector (as is required by law). Nevertheless, the government states that "Involvement of the private sector" is one of the specific goals of each partnership, and one of the overall objectives of the programme is that: "the private sector is involved or opportunities exist for private sector involvement in the course of the WOP……" It also describes 'temporary ownership' as one 'WOP model'.[25]

- The regional WOP process on the American Continent, WOP-LAC, has so far also only supported three partnerhips. Two of these include private sector actors.[26]

A new International Steering Committee for UN Habitat's Global WOPs Alliance (GWOPA) was set up in January 2009, with a diverse membership including a majority of public operators, regional WOPs networks, private operators, unions, NGOs, and development banks. A principle was proposed, that WOPs should be 'quarantined', so that a company involved in a WOP would be prohibited from entering into business contracts with the other partner for a fixed period of time. Not surprisingly, the private companies were unwilling to accept this principle, although it was agreed that GWOPA will attempt to draft a code of conduct which attempts to address this issue.

Even if such a code is agreed, however, the companies have already questioned whether the regional WOPs initiatives will be bound by such a code.

If we want to ensure that the WOPs mechanism fulfills the intent of UNSGAB, namely to allow public operators to systematically help each other, then many pro-public actors will need to get involved, at national, regional and global levels. If not, the privates will surely turn this into yet another marketing mechanism.

6. Recommendations

- National governments in the south should :
    - Encourage internal PUPs :
        - identify and support a national centre for capacity-building (such as the water service of the capital city or a national public water board)
        - support a national association or network to enable water operators to support each other
        - create or support 'dating' systems to enable water operators to identify potential partners
    - encourage links between their own public water operators and those in other southern countries
    - use PUPs and national associations as vehicles for a systematic training programme
- National associations of water operators should :
    - encourage members to consider PUPs for specific issues, and set up ways of sharing information and advice between members
    - contact other national associations to help form regional and wider networks of public sector water operators
- Civil society organisations should :
    - pressure national governments and national associations to create mechanisms for PUPs
    - promote the involvement of communities and workers as partners in PUPs
    - assist in building networks of community, professional and union organisations which can act as catalysts for PUPs on national and international scale
    - develop mechanisms for information exchange and 'dating' arrangements between public water operators and civil society groups at local, national and global levels
- Local governments and water operators should :
    - use the advantages of PUPs as a way of strengthening capacity, which is relatively simple, flexible, low-cost, and low-risk compared with PPPs
    - identify and support champions and success stories of PUPs
    - develop national and international lobbying and pressure mechanisms to influence policies
- Northern donors, governments and development banks should :
    - provide support and finance to enable water operators to support others through PUPs
    - help their water operators develop PUPs with counterparts in developing countries
    - aid should be available to cover the costs of individual PUPs
    - aid finance should be used to reinstate regional training centres and programmes which used to be a valuable way of sustainable capacity-building
- Participants in the WOPs initiative should :
    - observe the quarantine rule, to prevent WOPs from being used as a commercial marketing tool
    - finance the development of mechanisms which actively encourage public sector operators to enter into PUPs, thus increasing the supply of expertise, knowledge and competence
    - assure that regional processes are structured in transparent and participatory ways and encourage civil society participation in parallel to the global process

7. Further reading and resources

Amorebieta, G. (2005) Argentina: Workers' Co-operative Takes over Post-Enron, in Balanyá, B., Brennan, B., Hoedeman, O., Kishimoto, S. & P. Terhorst (eds.) *Reclaiming Public Water - Achievements, Struggles and Visions from Around the World*. Amsterdam, Transnational Institute (TNI) & Corporate Europe Observatory (CEO), January 2005: 149-157 (http://www.tni.org/books/publicwater.pdf).

Balanyá, B., Brennan, B., Hoedeman, O., Kishimoto, S., Terhorst, P. (Eds.) (2005) Reclaiming Public Water - Achievements, Struggles and Visions from Around the World. Amsterdam: Transnational Institute and Corporate Europe Observatory (http://www.tni.org/detail_page.phtml?page=books_publicwater).

Braadbaart, O., Villaluna, R., Conti, P., Pestaño, A. (1999) The Philippines' Water Districts, in Blokland, M., Braadbaart, O. & Schwartz, K. (Ed.) *Private Business, Public Owners – Government Shareholdings in Water Enterprises*. Published for the Ministry of Housing, Spatial Planning and the Environment of the Netherlands: 151-168.

Bjerggaard, S. (2006) The Twinning Concept of Stockholm Water Company. *Stockholm Vatten Reports*, January 2006 (http://www.stockholmvatten.se/pdf_arkiv/english/SVAB_Twinning_concept.doc).

da Costa, S.S., Heller, L., Moraes, L.R.S., Borja, P.C., de Melo, C.H., Sacco, D. (2006) "Successful Experiences in Municipal Public Water and Sanitation Services from Brazil", published by ASSEMAE (National Association of Municipal Services of Water and Sanitation), (http://www.tni.org/docs/20070125180549467 5.pdf).

Hall, D. (2000) Water partnerships - public-public partnerships and 'twinning' in water and sanitation. *PSIRU Reports*, July 2000 (http://www.psiru.org/reports/2000-07-W-PUPs.doc).

Hall, D., Lethbridge, J., Lobina, E. (2005) Public-public partnerships in health and essential services. *Equinet Discussion Paper* Number 23, May 2005 (http://www.equinetafrica.org/bibl/docs/DIS23pub.pdf).

Hall, D., Lobina, E. (2008) Sewerage Works – Public investment in sewers saves lives. *PSIRU Reports*, commissioned by UNISON and PSI, March 2008 (http://www.psiru.org/reports/2008-03-W-sewers.pdf).

Hall D., Lobina, E. (2006) *Water as a Public Service*. Ferney-Voltaire: Public Services International (http://www.psiru.org/reports/2007-01-W-waaps.pdf).

Hall, D., Lobina, E. (2003) International Solidarity in Water - Public-Public Partnerships in North-East Europe. *PSIRU Reports*, March 2003 (http://www.psiru.org/reports/2003-03-W-NEeurope.doc).

Kitchen, H. (2003) 'Public–public partnerships', *Newsletter 14*. McIntosh Xaba and Associates: City. December 2003. http://www.ksp.org.za/holonl15.htm

Lariola, M. & B. Danielsson (1998) Twinning cooperation between Kaunas Water Company, Lithuania and Stockholm Water Company. *Sida Evaluation Reports*, 98/19, commissioned by Sida (Swedish International Development Cooperation Agency), Department for Central and Eastern Europe, September 1998 (http://www.sida.se/shared/jsp/download.jsp?f=utv98-19.pdf&a=2299).

Lobina, E., Hall, D. (2006) Public-Public Partnerships as a catalyst for capacity building and institutional development: lessons from Stockholm Vatten's experience in the Baltic region. *PSIRU Reports*, August 2006 (http://www.psiru.org/reports/2006-09-W-PUPs.doc).

Miranda, A. (2006) Developing Public-Public Partnerships (PUPs) – Why and how not-for-profit partnerships can improve water and sanitation services worldwide, in *Papers prepared for a seminar on "Reforming public utilities to meet the water and sanitation Millennium Development*

Goal" at the UK's Department for International Development, 4 July 2006, organised by the World Development Movement and WaterAid, pp. 52-60.

Olesen, G., Rekve, P., Permin, H. (2001) Sida Supported County Twinning Programme in the Baltic Countries 1996-2001. *Sida Evaluation Reports*, 01/23, report commissioned by Sida (Swedish International Development Cooperation Agency), Department for Central and Eastern Europe, September 2001 (http://www.oecd.org/dataoecd/56/45/35197916.pdf).

Reclaiming Public Water (2006) Public Water for All – the Role of Public-Public Partnerships. '*Reclaiming Public Water' discussion paper*, March 2006. Published by the Transnational Institute and Corporate Europe Observatory (http://www.tni.org/water-docs/pubwaterforall.pdf).

Stenroos, M., Katko, T.S. (2005) D38: WaterTime case study – Stockholm, Sweden, *WaterTime Deliverable* D38, 31 January 2005 (http://www.watertime.net/docs/WP2/D38_Stockholm.doc).

World Development Movement (2007) Going Public – Southern solutions to the global water crisis. London: World Development Movement, March 2007 (http://www.wdm.org.uk/resources/reports/water/goingpublic14032007.pdf).

8. Annexe: List of PUPs (137 PUPs in 70 countries)

Home country	Location	External partner	External country	Wat/ San	Year	Fin-ance	Type
Argentina	Buenos Aires province	% de Setiembre					NAT
Aruba		Amsterdam Waternet		SAN			
Bangladesh		Osaka Public Works Bureau, Sapporo, East Hiroshima, Kitakyusyu	Japan	SAN	2005	JICA	INT
Bangladesh	Dhaka	Korea Water (Daejon, Korea)	South Korea	WAT	2008	ADB	INT
Benin	Lago Nokoué	OSE	Uruguay		2007	NGO	INT
Bolivia		Osaka, Sapporo, East Hiroshima, Kitakyusyu	Japan	SAN	2003	JICA	INT
Bolivia	AAPOS		Uruguay		2006		INT
Bolivia	Cochabamba	Assemae	Brazil				INT
Bolivia	Cochabamba	REG (Grenoble)	France				INT
Bolivia	El Alto	REG (Grenoble)	France				INT
Bolivia	El Porvenir	Amvisa	Spain		2007	NGO	INT
Bolivia	La Paz	REG (Grenoble)	France				INT
Bolivia	Potosi	OSE	Uruguay				INT
Bosnia		Osaka, Sapporo, East Hiroshima, Kitakyusyu	Japan	SAN	2006	JICA	INT
Bosnia-Herzegovina	Srebenica	Waterbedrijf Groningen	Netherlands		2006		INT
Brazil		Osaka, Sapporo, East Hiroshima, Kitakyusyu	Japan	SAN	2006	JICA	INT
Brazil	National	Assemae	Brazil				NAT
Brazil	Porto Alegre		Brazil				NAT
Brazil	Recife		Brazil				NAT
Burkina Faso	Pabré	Limoges	France	WAT	2008	EU	INT
Butan		Osaka, Sapporo, East Hiroshima, Kitakyusyu	Japan	SAN	2006	JICA	INT
Cambodia		Osaka, Sapporo, East Hiroshima, Kitakyusyu	Japan	SAN	2003	JICA	INT
Cambodia	Siem Reap	PPWSA	Cambodia				NAT
Chad		ONEP	Morocco			JICA	INT
China		Osaka, Sapporo, East Hiroshima, Kitakyusyu	Japan	SAN	2004	JICA	INT
China	Beijing	Tokyo Metropolitan Sewerage Bureau	Japan	SAN		JBIC	INT
China	municipal	Municipal companies	China	San			NAT
Cuba	Gebara	Aguas del Prat	Spain				INT
Cuba	La Habana	Amvisa	Spain		1998		INT
Dominica		Osaka, Sapporo, East Hiroshima, Kitakyusyu	Japan	SAN	2007	JICA	INT
Ecuador	CENAGRAP						NAT
Egypt	Alexandria	Amsterdam waternet	Netherlands		1992	USAID	INT

Home country	Location	External partner	External country	Wat/ San	Year	Fin-ance	Type
Egypt	Beheira, Gharbeya etc	Amsterdam waternet	Netherlands		1992	USAID	INT
El Salvador	Nejapa	Amvisa	Spain	WAT	2000		INT
Estonia	Tallinn, Tartu etc	VARIOUS	Finland			EBRD,EIB+	INT
Ethiopia	Afar	Amvisa	Spain		2007	NGO	INT
Fiji		Osaka, Sapporo, East Hiroshima, Kitakyusyu	Japan	SAN	2006	JICA	INT
Finland	Hameenlinna	Municipalities in region	Finland	water			NAT
Finland	Tampere	Municipalities in region	Finland	Water			NAT
France	Brest	REG (Grenoble)	France				INT
France	Castres	REG (Grenoble)	France				INT
France	Paris	REG (Grenoble)	France		2005		INT
France	Rennes	REG (Grenoble)	France				INT
Guatemala	Champerico	Amvisa	Spain		2007	NGO	INT
Guatemala	Solola	Amvisa	Spain		1998		INT
Guinea		ONEP	Morocco			JICA	INT
Honduras	Juntas de Aguas	SANAA	Honduras				NAT
Honduras	Lempira	Amvisa	Spain	SAN	1999		INT
India		Osaka, Sapporo, East Hiroshima, Kitakyusyu	Japan	SAN	2007	JICA	INT
India	Delhi	Delhi Jal Board (DJB)		W	2004+		NAT
India	Maharashtra	Tamil Nadu	India		2008		NAT
Indonesia	Bogor region, Java	Duinwaterbedrijf Zuid-Holland	Netherlands		2006		INT
Indonesia	Deli Serdang, et al	Tirtanadi PDAM	Indonesia		1999>		NAT
Indonesia	Kabupaten Bogor	Duinwaterbedrijf Zuid-Holland	Netherlands	WAT	2006	EVD	INT
Indonesia	North sumatra	Duinwaterbedrijf Zuid-Holland	Netherlands		2004		INT
Indonesia	Banten, West Java	Amsterdam Waternet	Netherlands				INT
Indonesia	Makassar	Amsterdam Waternet	Netherlands				INT
Indonesia	Medan	Amsterdam Waternet	Netherlands				INT
Indonesia	PDAM Pontianak	Oasen	Netherlands		2003		INT

Home country	Location	External partner	External country	Wat/ San	Year	Fin-ance	Type
Indonesia	Pekanbaru	PWN	Netherlands				INT
Indonesia	Tirtinadi	Indah Water Konsortium	Malaysia	SAN	2007	USAID	INT
Indonesia etc		Eau de Paris	France		2005	NGO	INT
Iraq		Osaka, Sapporo, East Hiroshima, Kitakyusyu	Japan	SAN	2007	JICA	INT
Italy		REG (Grenoble)	France				INT
Jamaica		Osaka, Sapporo, East Hiroshima, Kitakyusyu	Japan	SAN	2006	JICA	INT
Japan	various	Internal sanitation PUPs	Japan	SAN			NAT
Kenya		Osaka, Sapporo, East Hiroshima, Kitakyusyu	Japan	SAN		JICA	INT
Kenya	Nairobi	NWSC Uganda	Uganda	WatSAN			INT
Laos		Osaka, Sapporo, East Hiroshima, Kitakyusyu	Japan	SAN	2003	JICA	INT
Latvia		Amsterdam Waternet	Netherlands		2003		
Latvia	Riga, Daugavpils et al	Stockholm Vatten	Sweden	SAN		EBRD,EIB+	INT
Lithuania	Kaunas, Klaipeda, et al	Stockholm Vatten	Sweden	SAN		EBRD,EIB+	INT
Malawi	Blantyre	Sevilla	Spain				INT
Malawi	Lilongwe	Severn Trent (pre-privatisation)	UK	water		WB	INT
Mali		ONEP	Morocco			JICA	INT
Mauretania		ONEP	Morocco			JICA	INT
Mexico		Osaka, Sapporo, East Hiroshima, Kitakyusyu	Japan	SAN	2007	JICA	INT
Mongolia		Osaka, Sapporo, East Hiroshima, Kitakyusyu	Japan	SAN	2006	JICA	INT
Morocco		Paris SIAAP	France	SAN			INT
Morocco		Osaka, Sapporo, East Hiroshima, Kitakyusyu	Japan	SAN		JICA	INT
Morocco	ONEP	Eau de Paris	France		2006		INT
Morocco	various	ONEP	Morocco				NAT
Myanmar		Osaka, Sapporo, East Hiroshima, Kitakyusyu	Japan	SAN	2007	JICA	INT
Nepal		Osaka, Sapporo, East Hiroshima, Kitakyusyu	Japan	SAN	2007	JICA	INT
Netherlands	all	VEWIN	Netherlands	w			NAT
Nicaragua		Waterschap De Dommel	Netherlands				INT
Pakistan		Osaka, Sapporo, East Hiroshima, Kitakyusyu	Japan	SAN	2003	JICA	INT
Palestine		Osaka, Sapporo, East Hiroshima, Kitakyusyu	Japan	SAN	2007	JICA	INT
Palestine	Jenine,Tulkarem et al	Eau de Paris	France		2008		INT
Papua NG		Osaka, Sapporo, East Hiroshima, Kitakyusyu	Japan	SAN	2005	JICA	INT

Home country	Location	External partner	External country	Wat/ San	Year	Fin-ance	Type
Paraguay	Essap	Copasa	Brazil				INT
Paraguay	ESSAP S.A.)		Uruguay		2009		INT
Peru		Osaka, Sapporo, East Hiroshima, Kitakyusyu	Japan	SAN	2005	JICA	INT
Peru	Huancayo (SEDAM)	ABSA	Argentina	WAT	2007		INT
Peru	Lima (Sedepal)	SABESP	Brazil				INT
Peru	Paita	Amvisa	Spain	SAN	2007		INT
Philippines		Osaka, Sapporo, East Hiroshima, Kitakyusyu	Japan	SAN	2004	JICA	INT
Philippines	Cebu	Visayas State University,	Philippines		2007		NAT
Philippines	Cebu	City West Water, Melbourne	Australia		2008	ADB	INT
Philippines	various	LWUA	Philippines				NAT
Romania	Botosani	Duinwaterbedrijf Zuid-Holland	Netherlands				INT
Romania	Iasi	Duinwaterbedrijf Zuid-Holland	Netherlands		2007		INT
Russia	MOSVODOKANAL	Eau de Paris	France		2007		INT
Rwanda		PWN	Netherlands				INT
Saudi Arabia		Osaka, Sapporo, East Hiroshima, Kitakyusyu	Japan	SAN	2005	JICA	INT
Singapore	National	Ngee Ann Polytechnic, PUBEU (union)	Singapore	WAT	2002		NAT
Singapore	National	SWCC	Saudi Arabia	WAT	2005		INT
South Africa	Odi, Harrismith	Rand water	South Africa	Water			NAT
South Korea	Nonsan	K-water	South Korea	Wat	2004		NAT
Sri Lanka		REG (Grenoble)	France		2004		INT
Sri Lanka		Osaka, Sapporo, East Hiroshima, Kitakyusyu	Japan	SAN		JICA	INT
Sudan	Gedaref	Waterschap De Dommel	Netherlands	WAT			
Sudan	Port Sudan	Beheira WDC	Egypt	WAT	2006	VNG	INT
Sudan	Port Sudan	Duinwaterbedrijf Zuid-Holland	Netherlands		2006	VNG	
Surinam		Amsterdam	Netherlands				INT
Syria		Osaka, Sapporo, East Hiroshima, Kitakyusyu	Japan	SAN	2004	JICA	INT

Home country	Location	External partner	External country	Wat/ San	Year	Fin-ance	Type
Tanzania	Dar-es-Salaam	NWSC Uganda	Uganda	WatSAN	2005	WB	INT
Thailand		Osaka, Sapporo, East Hiroshima, Kitakyusyu	Japan	SAN	2005	JICA	INT
Thailand	Krabi	King County WTB	USA	SAN	2007	USAID	INT
Tunisia	Sfax's Engineers School	Eau de Paris	France		2006		INT
Tunisia	Sfax's Engineers School	Eau de Paris	France		2006		INT
Turkey		Amsterdam Waternet	Netherlands		2008		INT
Uruguay		REG (Grenoble)	France				INT
Vietnam		Osaka, Sapporo, East Hiroshima, Kitakyusyu	Japan	SAN	2003	JICA	INT
Vietnam	BIWASE Binh Duong	PPWSA	Cambodia		2008	ADB	INT
Vietnam	Da Nang	Haiphong Water Supply Co.	Vietnam		2008	ADB	NAT
Vietnam	Ha Long	Indah Water Konortium	Malaysia	SAN	2007	USAID	INT
Vietnam	Hai Phong		Finland		1990	FINNIDA	INT
Vietnam	Ho Chi Minh City	Bangkok MWA	Thailand	WAT		ADB	INT
Vietnam	Hue	Paris SIAAP	France	SAN			INT
Vietnam	Hue	Yokohama Waterworks Bureau	Japan	WAT	2007	JICA	INT
Vietnam	Hue , Ho Chi Minh City	Yokohama Waterworks Bureau	Japan	WAT	2003	JICA	INT

9. Notes

[1] Lobina, E., Hall, D. (2006) Public-Public Partnerships as a catalyst for capacity building and institutional development: lessons from Stockholm Vatten's experience in the Baltic region. *PSIRU Reports*, August 2006 (http://www.psiru.org/reports/2006-09-W-PUPs.doc), p. 16.
[2] Lobina, E., Hall, D. (2006) Public-Public Partnerships as a catalyst for capacity building and institutional development: lessons from Stockholm Vatten's experience in the Baltic region. *PSIRU Reports*, August 2006 (http://www.psiru.org/reports/2006-09-W-PUPs.doc), pp. 5-7.
[3] Brian Mathew (2005) Ensuring Sustained Beneficial Outcomes for Water and Sanitation Programmes in the Developing World, IRC Occasional Paper Series 40.
[4] See for example Asian Development Bank: Project Completion Report On The Ho Chi Minh City Water Supply And Sanitation Project (Loan 1273[Sf]) In The Socialist Republic Of Viet Nam July 2004 PCR: Vie 25095 http://www.asiandevbank.org/Documents/PCRs/VIE/pcr-vie-25095.pdf
[5] Trevett, A.F. (2001) 'The SANAA technician in operation and maintenance program in Honduras.' In Institutional Arrangements for Rural Communities, Strategic Paper No. 1, Case Studies on Decentralization of Water Supply and Sanitation Services in Latin America. Environmental Health Project, prepared for the USAID Bureau for Latin America and the Caribbean EHP Project No. 26568/Other.LACDEC.C. USA.
[6] This is like the practice of international institutions preparing reports and conferences on private sector development, which is not recorded as state aid to private companies but is nevertheless a significant allocation of public sector resources.
[7] Source: email communication from Naoki Fujiwara, Osaka Public Works Bureau, 4 February 2008.
[8] ADB (2007) Development of Sewage Treatment System in Beijing, China, in ADB Asian Water Development Outlook (http://www.adb.org/Documents/Books/AWDO/2007/AWDO.pdf).
[9] Needed, a paradigm shift, V. Suresh And Vibhu Nayar http://www.hindu.com/mag/2008/10/26/stories/2008102650130400.htm; The Maladies of the Water Situation Democratising and Demystifying The Conundrum, by V. Suresh, Vibhu Nayar and Pradip Prabhu, March 2006 http://www.tni-archives.org/water-docs/suresh.pdf?
[10] From the title of an early book on the project: "Working with Government: The Story of the Orangi Pilot Project's Collaboration with State Agencies for Replicating its Low-cost Sanitation Programme". (Arif Hasan. 1997. City Press, Pakistan)
[11] Orangi Pilot Project Research And Training Institute (OPP-RTI) http://www.oppinstitutions.org/creplicationofspnd.htm
[12] Braadbaart, O., Zhang, M., Wang, Y. (2009) Managing urban wastewater in China: a survey of build–operate–transfer contracts, in *Water and Environment Journal*, 23, pp. 46–51.
[13] Walker, I., Velásquez, M. (1999) Regional Analysis of Decentralization of Water Supply and Sanitation Services in Central America and the Dominican Republic, EHP Report 165, May 1999
.
[14] Source: http://www.aya.go.cr/informacion/historiaamp.php; Haglund, L.D., Gomez, G. (2006) Context matters: how state forms and reforms influence water provision in Latin America, November 2006 (http://www.policyinnovations.org/ideas/policy_library/data/01405/_res/id=sa_File1/Haglund-Gomez_FinalDraft11-06.pdf).
[15] Violeta Corral, "Public-Public Partnership; Training on Performance Benchmarking for Philippine Water Districts," 21-24 October 2008, MCWD Regional Training Center, Cebu City, Philippines; City of Iloilo (Philippines) - City of Phnom Penh (Cambodia) http://www.waterlinks.org/
[16] Léo Heller (2006) "Access to Water Supply and Sanitation in Brazil: Historical and Current Reflections; Future Perspectives", Human Development Report 2006, Human Development Report Office OCCASIONAL PAPER 2006/24, published by UNDP.
[17] Silvano Silvéiro da Costa, Léo Heller, Luiz Roberto Santos Moraes, Patrícia Campos Borja, Carlos Henrique de Melo, Denise Sacco (2006) "Successful Experiences in Municipal Public Water and Sanitation Services from Brazil", published by ASSEMAE (National Association of Municipal Services of Water and Sanitation), (http://www.tni.org/docs/20070125180549467 5.pdf).
[18] Visoth Chea, From bad service to outstanding water utility: Phnom Penh's experience, In: "Going Public: Southerm solutions to the global water crisis," World Development Movement (March 2007) http://www.globalpolicy.org/socecon/gpg/2007/0319public.pdf; Violeta Corral, Public-Public Partnerships in ADB's WOPs Program, February 2009
[19] Amsterdam Waternet, various email communications, February and March 2009.
[20] World Bank and WaterAid (2004) Modes of Engagement with the Public Sector Water Supply Providers in Developing Countries: A World Bank – WaterAid Workshop Report of Proceedings, Royal College of Nursing, London, 23-24 August 2004 (http://www.wateraid.org/documents/plugin_documents/publicsectorproviders.pdf), pp. 15-16, 38-40; Aldo Baietti, William Kingdom, Meike van Ginneken (2006) "Characteristics of Well Performing Public Water Utilities", Water Supply & Sanitation Working Notes, Note No. 9, May 2006, Washington DC: World Bank (http://siteresources.worldbank.org/INTWSS/Resources/Workingnote9.pdf), pp. 7, 59.
[21] World Bank: Two water projects in Malawi (OED précis No 146 May 1997)
[22] Jaime Morell Sastre (2007) '"Políticas de agua y repercusión en países en desarrollo", Consorcio Provincial de Aguas de Sevilla (http://www.cpaguasdesevilla.org/2007_POLITICAS_AGUA_PAISES_EMPOBRECIDOS2.pdf).
[23] Lobina, E., Hall, D. (2007) Water privatisation and restructuring in Latin America, 2007. *PSIRU Reports*, September 2007 (http://www.psiru.org/reports/2007-09-W-Latam.doc), pp. 20-22; Interview with Guillermo Amorebieta, SOSBA, October 2007.

[24] Terhorst, Philipp (2008) "Huancayo: From Resistance to Public-Public Partnership", article published in April 2008 and in the Arabic edition of Reclaiming Public Water, 2008 (http://www.tni.org/books/waterhuancayo.pdf?)

[25] Presentation: WATER OPERATOR PARTNERSHIPS Engaging Dutch Water Utilities to achieve the MDGs

[26] (http://www.aidis.org.br/span/ftp/WOPjan09.pps).These WOPs are SABESP-SEDAPAL on procurement systems, the Peruvian partner is now scheduled to be sold partly to SUEZ and SABESP is a mixed company. Aguas Andina –Chile and SEDAPAR- Peru (general management and administration improvements) and EPM (Colombia) and ENACAL- Nicaragua (project support, IT focus, business operation).

Public Services International Research Unit (PSIRU - www.psiru.org) is part of the Department of International Business and Economics in the Business School at the University of Greenwich (www.gre.ac.uk). PSIRU's research covers economic, political, social and technical dimensions of public services worldwide, with special focus on water, energy, healthcare and waste management. Its research has been especially concerned with the effects of liberalisation, privatisation and restructuring; the multinational companies involved; the policies of international financial institutions and the European Union; and sustainable public sector provision. A core database is financed by Public Services International , the worldwide confederation of public service trade unions. PSI and the European Federation of Public Service Unions commission many of the reports of PSIRU. PSIRU coordinated the WATERTIME project, and is a member of the PRESOM and GOVAGUA networks, all funded by the research budget of the European Commission. PSIRU Researchers: Prof. Stephen Thomas, David Hall (Director), Jane Lethbridge, Emanuele Lobina, Vladimir Popov, Violeta Corral

Contact
PSIRU, Business School, University of Greenwich, Park Row, London SE10
9LS, U.K.
Website: www.psiru.org Email: psiru@psiru.org
Tel: +44-(0)208-331-9933 Fax: +44 (0)208-331-8665
Researchers: Prof. Stephen Thomas, David Hall (Director), Jane Lethbridge, Emanuele Lobina, Vladimir Popov, Violeta Corral

Transnational Institute (TNI), founded in 1974 is an international network of activist-scholars committed to critical analyses of the global problems of today and tomorrow. It aims to provide intellectual support to those movements concerned to steer the world in a democratic, equitable and environmentally sustainable direction.

Contact: Satoko Kishimoto <satoko@tni.org>
tel: +31 20 662 66 08
fax:+31 20 675 71 76
http://www.tni.org
PO Box 14656
1001 LD Amsterdam
The Netherlands

PSI represents 650 affiliated trade unions in 158 countries and territories. Together, these unions organise more than 20 million public sector workers, providing services in central government, health and social care, municipal and community services, and public utilities.

Public Services International
45 ave Voltaire
BP 9
01211 Ferney-Voltaire Cedex
France
Tel: +33 (0)450 40 64 64
Fax: +33 (0)450 40 73 20
E-mail: psi@world-psi.org
Web: www.world-psi.org