

## Public, Private and Community Roles and Initiatives

### 1. Introduction

One of the most controversial issues in water resources development and governance has been the private sector role. The need to involve the private sector in water services delivery, water resources development and management is often framed around state failure and the definition of water as an economic good. At one end of the debate, water is seen as a public good and a human right to be controlled by government. At the other end, water is an economic good that is most efficiently allocated via the market (Bakker 2003; Hill 2003). Managing water as an economic good regulated by market mechanisms is deemed to bring efficiency and highest value resource use. Arguments to retain water management and water service provision under public control are framed around the definition of water as a public good and human right (Savenije 2002).

Many of the arguments that support the purported innate superiorities and/or benefits of the public or private sectors and/or provision are based on misconceptions (Budds and McGranahan 2003). The empirical evidence for greater private sector efficiency is still contested (McIntosh and Yniguez 2002). The economic benefits of privatisation have often been overstated, misrepresented or miscounted (Abu Shair 1997; Walker and Walker 2000). Many of the arguments for privatisation are based on ideology rather than evidence and analysis. Arguments are transferred from one non-equivalent national context to another (Walker and Walker 2000).

Budds and McGranahan (2003) argue that in the developing country context, both state and private operated water utilities have failed in serving the majority of low-income households. Hill (2003) outlines the broad problems that have caused public utilities to fail: bad financial management, low funding priority, lack of staff experience and qualifications, absent or weak customer orientation, political interference, little or no independent regulation, and an absence of civil society consultation.

There is an overall trend in international development assistance, driven by a dominant economic rationalist paradigm, which supports the separation of public and private roles along the lines that government should be a regulator and not service provider (World Bank 1994; World Bank 1995; Grover 1998). Public retainment of both regulatory and service provision functions are argued to be cause for conflicts of interest to occur and subject to political interference in rational pricing that interfere with decisions that should be driven by financial incentives.

Another problem has been that across the board the dominant economic rationalist approaches towards greater private sector provision have given short shrift to or prematurely terminated experiments in incentive driven state provisioning reforms, ie. corporatisation. Good outcomes have been achieved in countries such as Singapore who have retained ownership of corporations and hence public wealth generation through innovative state corporate governance practices (McIntosh and Yniguez 2000).

Within the regulatory reform process, considerable tension is created particularly through pricing reforms, between the idea of water as a public good and water as a commodity. In many developing country contexts, water regulation has loomed as the area in greatest need of assistance. While the drive for greater private sector involvement in water services has proceeded with much attention given to providing greater incentives and fewer obstacles for private sector participation, public capacity has lagged in both industry regulation as well as catchment regulation.

This paper reviews recent understanding and change of public, private and community roles in water governance. It considers a number of reforms in water provisioning and regulatory approaches in water supply and catchment management. On the former, the consequences of privatisation in the water sector and challenges of community managed systems are considered. On the latter, the theme reviews the contemporary regulatory approaches in water provisioning and catchment management with regards to public, private and community roles and finally, the impact of decentralisation on public and private roles in the water sector is considered.

## 2. Water as an economic good or public good?

The argument over public and private roles in water resource use and governance is often dependent on the way water is defined within a particular socio-political context.

Proponents of water as an economic good or commodity argue that water is no different to other essential goods and utility services and that private companies can run these services more efficiently and profitably than government owned enterprises because they are responsive to both customers and shareholders. Market pricing of water would encourage efficient use of water, for example users will better conserve water as scarcity drives up prices. The economic value of water is now embedded in international water policy as set out in the Dublin Principles (see Working Paper 1). These principles are now adopted by many multilateral and bilateral agencies such as the World Bank and Asian Development Bank (Bakker 2003).

Opponents of the economic good definition of water hold that water is a public good, a resource essential for life. Allowing water to be treated as a business opportunity would be unethical. In this view, water is a commons, where collective ownership is preferable to private ownership and where the latter will invariably conflict with the public interest. Under private ownership, the 'water crisis' is in fact socially produced scarcity in which the short-term logic of economic growth together with the corporate power of the water multinationals converts abundance into scarcity through the appropriation of water resources from communities (Bakker 2003).

Between these two views is an increasingly mainstream view of water as an economic good, a social and environmental good, and a human right in the context of both service and resource management. While potentially contradictory, proponents of this view suggest that these use values need to be balanced and where conflict arises priority should be given to human and environmental requirements without cost recovery or profit becoming a barrier to meeting basic human needs (Hill 2003). However, the concern here is that social priorities may be difficult to achieve when commercial rights are being allocated alongside social obligations. When water is commodified and water rights are allocated to commercial investors, guarantees of access, quantity and quality are demanded by investors.

Savenije (2002) argues that water is not a normal economic good but a special case where decisions on the allocation and use of water should be based on a multi-sectoral, multi-interest, and multi-objective analysis in a broad societal context, involving social, economic, environmental and ethical considerations.

### Text Box 1: Indonesia's Water Resources Law

Indonesia's new Water Resources Law was passed in February of 2004. Prior to the Water Resources Law, Indonesia faced several significant problems with water management.

- Uneven distribution of water services: distribution was focused on servicing commercial activities which supported economic development. Only those consumers who are able to pay have access to clean water.
- Water pollution: water in Jakarta and other large cities was not of drinking-water standard because water sources were heavily polluted.

- Inability of the Indonesian government to expand the irrigation network to fulfill agricultural needs: one result is the fall in rice production from irrigated rice.
- A decrease in clean water and drinking water supplies, caused by a decrease in water storage capacity as a result of changes in land use.

According to Indonesian public interest groups, these problems originate from management problems within the Municipal Water Utilities (PDAM) and other government institutions concerned with water management. The management problems have included: corruption, differences in priorities between institutions, and lack of funds. On one hand, the Indonesian government does not have sufficient finances to improve water sector management. On the other, the government institutions themselves are inefficient.

With financial and technical support from the World Bank and the ADB, the Indonesian government formulated the restructuring of the water sector to provide for decentralised water management and private sector involvement, particularly in urban areas, through the approval of the US\$300 million Water Resources Sector Adjustment loan (WATSAL). This restructuring was one of the conditions of the World Bank and IMF's Structural Adjustment Loan to address the economic crisis that began in 1997.

The key reform within the Water Resources Law has been to establish and define both commercial and non-commercial rights to water. As such the Law simultaneously recognizes water as both an economic and public good. Rights of access are broken down in order of priority into three main categories:

- Household use
- Traditional irrigation
- Commercial use

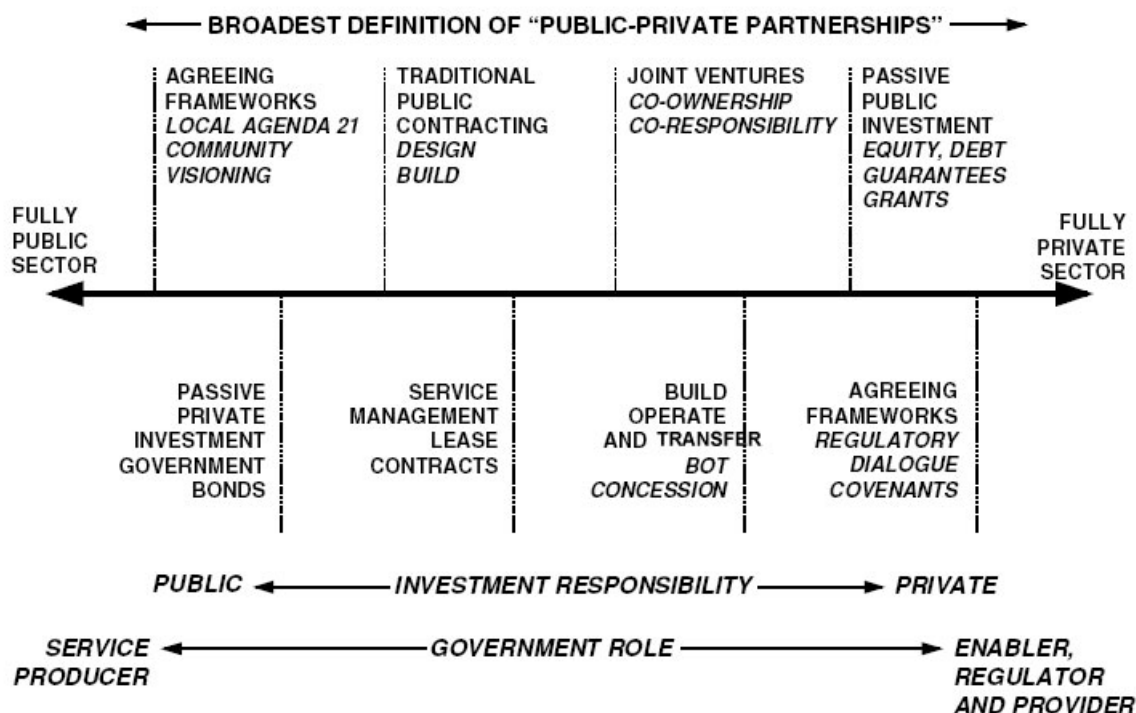
A number of NGOs, farmer groups and academics have opposed the establishment of commercial rights to water in the law on the basis that it is unconstitutional. In late 2004 the Law was being challenged in the Constitutional Court. Opponents argue that the Indonesian Constitution states that water rights should be owned and controlled by the state. While commercial rights to water are given lower priority in the Law than water allocated for household use and traditional irrigation, opponents are concerned that in practice, commercial users would demand that access and allocations of water be contracted for and guaranteed. Should conditions of scarcity arise governments may not be willing to break contracts which would damage private sector confidence. Commercial use would thus override household and traditional irrigator rights and needs. Furthermore, the practice of allocating water requires accurate hydrological and use data, as well as sophisticated modeling capacity in order to accurately determine water allocations and to avoid over-allocations. There is little confidence that such data and capacity exists within government agencies presently.

### 3. Water services provisioning: Change and Challenges

In parallel with international trends towards the definition of water as an economic good or commodity, the private sector has taken on a greater role in water services provisioning over the last decade and more.

Figure 1 illustrates the change spectrum from full public service provisioning on the left to full private sector provisioning and public regulation on the right. In between these two extremes are a number of possibilities of what are termed public-private partnerships (PPP).

Figure 1. Public-private spectrum



Source: (Hukka and Katko 2003)

While the ideological driver of neoliberalism has put considerable pressure on governments to reform the water services sector from full public systems towards fully private systems, a number of failed water privatisations in the late 80s and early 1990s has led to a greater appreciation of development and political contexts within which such a push is possible, desirable or otherwise. For example, the World Bank (1995) now recognises that in certain contexts, a country may not be ready to reform. The Bank provides three criteria with which to judge whether a country or sector is ready to reform: Political desirability - a crisis intervenes which makes the reform desirable or necessary; politically feasible - control of policy making process and ability to overcome resistance to reform; government credibility - government reputation for carrying out and sticking to liberalising reforms in other sectors.

### *Public provisioning*

If a country is not yet ready to carry out liberalising reforms, public ownership and service provisioning remain a valid approach. There is growing literature to suggest that while inefficiencies have existed in unreformed public sector water utilities, this has not primarily been due to their ownership structure but rather the incentive and regulatory structures under which they operate (Budds and McGranahan 2003; McIntosh 2003). Indeed, the ideological push to full privatisation has often displaced alternative management structures for the public sector. In particular, the corporatisation experiments of the late 1980s and early 1990s have often been by-passed in the rush to privatise. Many developed country's benefited from corporate reforms in their public water utilities and gained invaluable experience in both service delivery and regulation. Yet, many developing countries have been asked to leap-frog this step in the ideological drive to privatise and have therefore not benefited from the state-enterprise corporate reform experience. Furthermore, public water utilities were often forced to operate with tariffs below cost recovery which made them naturally unsustainable. Rather than reform tariffs and its regulation in order

to put the public utility on a sound financial footing, privatisation was seen as the solution. Private water companies have also failed without appropriate tariff reforms and regulation.

A number of recent studies have demonstrated that there are considerable benefits to be gained from state-enterprise corporate reforms. And indeed there are a growing number of state-owned enterprises operating on a sustainable basis following reforms. The Singapore Public Utilities Board which is responsible for water supplies and delivery in Singapore is often cited as one of the best performing public utilities in the world. It does so by hiring the best available staff on the open market and rewarding its managers with world class salaries. The Bangkok Metropolitan Water Authority is a partial privatisation which is majority owned by the government. It sources new capital for investment on the stock-market and operates with the discipline and transparency demanded by its new private investors. The Phnom Penh Water Supply Authority is a public enterprise which has benefited from reforms in 1996 which instilled autonomous administration and financing and disciplined leadership.

The cases of Indonesia and Vietnam show that there are still considerable benefits to be gained through corporatisation in these two countries. In Indonesia, a performance bench-marking system and professional management boards are beginning to turn around municipal water utilities (PDAMs) that were previously unresponsive to customer needs and poorly managed financially. In Vietnam, performance benchmarking has not yet been utilised but corporatisation is proceeding, bringing benefits in the form of financial and operational sustainability.

#### **Test Box 2: Tra Vinh Water Supply Company**

The Tra Vinh Water Supply Company (TWSC) is a state-owned enterprise owned by the Tra Vinh Provincial Government. TWSC was the recipient of an AusAID grant in the early-90s to rehabilitate and expand its piped water distribution system. This rehabilitation and expansion was completed by 1998. Prior to its rehabilitation, TWSC was highly inefficient due to poorly maintained pipes and was therefore unable to recover its costs. It had no independent management board and no financial autonomy. Its funding came from the Tra Vinh Peoples Committee who set the water tariff, and all recovered revenues went back to the Provincial Government.

Following its rehabilitation in 1998, the enterprise was corporatised under the 1995 Government Decree No. 14/CP on State Corporations. The case of TWSC demonstrates the modest gains that reforming SOE's can achieve in quite short time period. This reform consisted of the establishment of an independent management board with financial autonomy. This allowed the enterprise to retain its revenues after meeting operational and maintenance costs and paying taxes to the Provincial Government. It also has authority over investment decisions and sourcing new capital. However, regulation of water pricing remains under the Provincial Government - increases in water tariffs require negotiation with the Provincial Peoples Committee.

Despite having had no water tariff increases since 1998 because of concerns over affordability, TWSC has been profitable in every year since it was corporatised in 1998. It reported profits of 20% on total revenues in 2003-2004, 15 % of which was reinvested in system expansion. The company has also not received any subsidies from the government despite it having a program to assist low-income and ethnic minority households with loans without interest for meters and pipes in new connections.

More gains can be expected through further reform possibilities. These include introduction of a stepped tariff system which will penalise high volume users, further rehabilitation works to reign in the very high water losses of 42% from old pipes which were not addressed in the AusAID rehabilitation project, and introducing performance benchmarks.

#### *Public-private partnerships (PPP)*

Private providers in the water sector consist of an extremely varied mix of agencies. They include formal and informal enterprises, local or multinational, with or without access to financial services, one person outfits to those supported by global staff (Hill 2003). Predominantly, from the perspectives of the host governments, their role has been to bring in new financial capital, technology and expertise in the delivery of water services.

In the Asia-Pacific large-scale full water privatisations are rare. They are predominantly in the form of PPPs. Blatter and Ingram (1998) argue that we need a new 'cooperative interrelationship' between the public and private sector to overcome the failings of both public and private provision. In the last decade, new forms of cooperative interrelationships or public-private partnerships have made their mark on the

water sector. These new forms of service delivery involving government sponsored concessions have gained popularity over the enterprise level privatisations that dominated the decade of the 1980s. Yet, they present their own challenges. In particular, these challenges involve a lack of independent industry regulation and tariff reforms prior to and after the establishment of PPPs. If tariff reforms were difficult while water services were under government management they have been even more difficult politically following the establishment of a PPP. The failure to reform tariffs threatens the financial sustainability of private sector partners (McIntosh and Yniguez; McIntosh 2003).

### **Text Box 3: Jakarta Water Supply Concessions**

Since 1998 two private water companies, PT Pam Lyonnaise Jaya and PT Thames Pam Jaya, have operated the Jakarta water supply under 25-year concession contracts provided by the Jakarta City government. The concessions were brokered by World Bank and a part of water sector reform program being supported by the World Bank.

Prior to the concessions the Jakarta City government owned water utility (Pam Jaya) was running at a loss with little access to capital for new investments. There was no enterprise reform through corporatisation or benchmarking programs and no independent industry regulator. Pam Jaya was effectively self-regulated under the Jakarta City government's supervision. There were also no tariff reforms which could enable cost recovery.

According to a recent study (McIntosh 2003), since the concessions were issued:

- Annual investment over the last 4 years has averaged about \$24 million.
- Non-Recoverable Water averaged 49% of production in 2001, compared with about 58% at the start of the concessions.
- Staff per 1,000 connections is now a respectable 5.3.
- Stepped tariffs were introduced with 6 categories of consumers with different tariff levels.
- Lower-income households are charged an average domestic tariff of roughly \$0.04/m<sup>3</sup> when consumption is under 20 m<sup>3</sup> per month, which increases to around \$0.09/m<sup>3</sup> when consumption is over 20 m<sup>3</sup> per month.
- Higher-income households are charged about \$0.28/m<sup>3</sup> when they consume less than 20 m<sup>3</sup> per month and about \$0.39/m<sup>3</sup> when they consume over 20 m<sup>3</sup> per month.
- Industrial tariffs, including those for hotels, are charged at a flat rate of about \$0.58/m<sup>3</sup>. Connection fees are also in accordance with standard of living, with lower-income households paying only about \$9 and higher-income households paying about \$38 for connections using 20 millimeter pipes.
- Total revenue from tariffs in 2001 equaled only 1.3 times O&M costs, which provided only \$14 million for capital expenditure.
- Higher-income Jakarta households can afford bear higher tariffs but do not. The average domestic tariff for Asian water utilities is \$0.20/m<sup>3</sup>.

Despite these improvements a number of significant challenges remain.

#### *Low tariffs affect the poor's access to water*

- In the case of Thames Pam Jaya, because the government has refused to approve its asking tariff, the 6 step tariff is modelled to maximise revenues to avoid financial losses by specifying different volumetric allocations against the 6 tariff levels to achieve desired revenue levels.
- This modelling results in the lowest tariff levels (low income consumers) receiving the lowest volumetric allocation of water. The highest tariff level (industrial users) attracts the highest volumetric allocation and thus produces highest revenues.
- When demand exceeds the allocation, water supply can be cut intermittently, affecting densely populated, poor, low income areas disproportionately.

#### *Regulation*

- The Jakarta Water Supply Regulatory Body reviews tariff proposals from the Jakarta Water Supply Enterprise and the two private operators.
- Once a proposal is reviewed, a recommendation is forwarded to the Jakarta Governor. The Governor decrees the tariff adjustment after consulting with and getting the approval of the Jakarta City Council.
- This system works on principles that include full cost recovery with a fair return on investment, affordability to consumers, demand management, simplicity, and transparency.
- The private sector concessionaires feel that the regulatory body needs to be more independent.
- Both concessionaires are facing financial difficulties as a result of the failure of the regulatory body to approve appropriate tariff increases. The tariffs in Jakarta were less in 2001 than in 1995–1996.

Another popular form of PPP has been the Build-Operate-Transfer (BOT) project delivery approach. They gained favour in the early 1980s in developing countries as a way to mobilise private investment

into infrastructure sectors that remain under public ownership for political or structural reasons. Sometimes called a policy ‘soft option’, they are a form of privatisation that avoids politically controversial or impossible privatisation of a whole public sector, enterprise or utility. Other variants include Build-Transfer-Operate (BTO) and Rehabilitate-Operate-Transfer (ROT). In some countries, the politically less palatable term Build-Own-Operate-Transfer (BOOT) which explicitly indicates a property rights relation is used instead of BOT.

BOT involves the private developer financing, building and operating an infrastructure facility for a concessionary period of between 10 and 30 years. During the concession period, the developer is given the right of ownership, charging users a fee for its product at a rate high enough to repay debt and to generate internal rates of return of up to 20 and 30% in high risk developing countries. At the end of the concession period, the facility is transferred to government ownership at no cost to the government.

Proponents of BOT include the International Financial Institutions and the BOT industry comprising international financiers and banks, large engineering corporations and consultants with specialist expertise on the complexities of BOT. Proponents argue that the approach brings private sector efficiency to public infrastructure provision. Under competitive tenders, which are not always the case, creative solutions to financing and technology result. Ostensibly, BOT also allows the public sector to transfer risks to the party best able to manage that risk. For example, in BOT projects the risk of construction cost and time overruns are assumed by the constructor. Ultimately, proponents hold that BOT allows governments to avoid greater levels of public debt in the provision of infrastructure.

These partnerships have involved the private sector taking on the risks of new capital investment (eg. in the water services sector, new urban water treatment plants) while the state retains its delivery role, retaining ownership of the networked delivery systems (eg. water pipes - a natural monopoly). Yet, these partial non-enterprise level privatisations have had their own challenges. They have often required onerous state guarantees to cover investors’ political and market risks (can be considered a form of public subsidy), while regulation in the public interest has been difficult because of commercial-in-confidence imperatives. The state guarantees can become onerous contingent liabilities which are often not accounted for in the state budget. Indeed, in Vietnam, BOT water treatment plants have been politically controversial with at least one investor pulling out when asked to renegotiate the water tariff after receiving an investment licence.

#### **Text Box 4: Ho Chi Minh City BOT Water Treatment Plants**

Vietnam’s cities suffer from an acute shortage of treated water. The majority of their citizens drink bottled water because either there is no treated piped-water, or treated water is of questionable quality. One third of households in HCMC rely on private vendors for water who charge up to 15 times higher than the state piped-water tariff. In 1998, the water supply capacity of the Ho Chi Minh City (HCMC) was just 650,000 cubic meters per day, far short of consumption demands recorded at a daily 1.25 million cubic meters. Nor has HCMC’s system been properly maintained since the end of the war in 1975. Many of the city’s US-installed treatment plant need to be completely overhauled and 60 km of new pipes need to be laid. The city has six million people, but the city-government owned water monopoly, HCMC Water Supply Company (HWSC), has only 300,000 connections.

According to planning officials, the crisis in the public water supply system had been growing through much of the 1990s because of the lack of investment capital. On the promise that BOT projects would bring in additional capital without the need for the city government to put in additional funds, the Ministry of Planning and Investment (MPI) advised that the HCMC Peoples Committee open up two planned projects for foreign BOT investment in the mid-1990s, the Binh An and Thu Duc water treatment plants.

The case of HCMC’s BOT water treatment plants serves to demonstrate what can go wrong in the face of government inexperience and uncoordinated development between public and private entities. In the case of water treatment plants, city governments rather than Ministries are responsible for dealing with the BOT investors, although there is still oversight from MPI since a large proportion of the city’s investment in infrastructure is allocated from Hanoi. As such, inexperience is an even more significant problem.

The first project to go into operation was the US\$38 million Binh An water plant, supplying an additional 100,000 m<sup>3</sup> per day to the city’s water supply. Direct negotiations between a Malaysian consortium comprising Salcon Engineering Sdn Bhd, IJM Corp. Berhad, Malaysian South Corp. Bhd and Sadec Malaysian Consortium, and the HWSC and the HCMC Peoples Committee led to a 20 year BOT concession being granted in 1995. The Binh An Water Company (BAWC) was formed and debt funding was secured through Malaysian banks. However, by early 1998, the East Asian financial crisis had impacted on the Malaysian banking system

and financing was withdrawn forcing the BAWC to seek refinancing. After construction had stalled, the IFC stepped in to refinance the project with a US\$25 million loan on the condition that appropriate guarantees were put in place.

The second project, the US\$154 million Thu Duc water treatment plant, is the largest water treatment project to be considered as a BOT project in Vietnam. Similarly, this was a directly negotiated project with the HWSC and HCMC Peoples Committee. The project company, Lyonnaise Vietnam Water Company (LVWC), was granted a 25-year BOT concession in December 2000. LVWC was formed by a consortium of investors led by Suez of France, formerly Suez Lyonnaise des Eaux one of the world's largest multinational water companies, Pilecon Engineering of Malaysia and Tractebel of Belgium. Financing was secured in 2001. The lenders involved in the US\$106 million loan package included ADB, which provided a US\$31 million loan with a repayment term of 15 years. The ADB's involvement catalysed the involvement of other export credit agencies and international commercial banks. The main cofinanciers include Export-Import Bank of Malaysia Berhad, Fortis Bank, ANZ Banking Group and Credit Lyonnais. The plant's projected production capacity is 300,000 cubic metres of water per day, which would increase HCMC's water supply by almost a third of present capacity.

In both cases, the acute need for treated water led the HCWC and the HCMC People's Committee to hurriedly enter into take-or-pay contracts for the off-take of water from the two concessionaires. What is more, these were guaranteed by the HCMC People's Committee as a condition of the IFI's and other financiers' involvement. The result has proved costly for the city government and its consumers for two reasons. First, a combination of poor planning and coordination, and perhaps mismanagement, resulted in a disjointed planning process whereby the Binh An project was brought on line before the public piping system (distribution losses are about 38%), for which the HWSC and HCMC People's Committee was responsible for, was completed and put in place. The result, according to one reporter (McIntosh and Yniguez, 2000), is that the government owned HWSC is forced to pay BAWC for water it cannot sell to consumers. Water off-take commitments at Binh An in 2001 were costing HWSC more than VND 8 billion<sup>1</sup> a month, yet its revenue from Binh An's production is just VND 3 billion a month. Secondly, as a result of the commitment to these BOT projects, the HCMC People's Committee was forced to raise the price of water to its consumers, rising from VND 1300/m<sup>3</sup> in 2000 to VND 9,400/m<sup>3</sup> by the time Thu Duc was scheduled to come on line in 2004. The price at which BAWC and LVWC sells water to HWSC is VND 3000/m<sup>3</sup> and VND 6,000/m<sup>3</sup> respectively.

By late 2002, the mismanaged planning process, and concerns over increasing water prices had generated concerns within conservative sections of the HCMC Peoples Committee. Questions were raised over why the price of water from LVWC was effectively double that of what BAWC was able to provide. LVWC was requested to renegotiate the water price and other unspecified contract terms which in all likelihood cut away at LVWC potential returns.

By April 2003, LVWC announced that it was pulling out of the project, before it had begun construction. In the immediate aftermath the HCMC Peoples Committee ruled out further foreign involvement in the project and invited only domestic investors to proceed with the project.

### *Community based systems*

Community based water supply systems have become a popular mode of delivery in rural areas through much of the developing world, increasingly attracting direct policy support from governments. These are usually run and frequently managed as co-operatives where the users themselves control the water supply system. In these co-operatives, users are actively involved in aspects of management and decision making with the aim of ensuring effective management based on community demand and norms.

Long term sustainability and better demand driven services and infrastructure has been the major objective of involving communities in the management of their water supply and sanitation systems. As support for community systems have moved from household wells to larger-scale and more complex community piped systems, so have the challenges grown. Contemporary experience shows that operations and maintenance and financial sustainability have been the biggest challenges with community managed systems followed closely by institutional and cultural challenges (van Wijk, Sari et al. 2002).

#### **Text Box 5: Flores Water Supply and Sanitation Reconstruction and Development Project**

A major community managed water supply and sanitation project that has provided many contemporary lessons for AusAID has been the Flores Water Supply and Sanitation Reconstruction and Development Project (later called the FLOWS project). This US\$20 million project was initially a response to the December 1992 earthquake and tidal wave. The aim of the project was to assist the Indonesian Government with reconstruction and development of water supply and sanitation facilities in urban and rural areas of the (then) five Kabupaten (Flores Timur, Sikka, Ende, Ngada and Manggarai) of Flores Island. The initial emergency assistance was followed by longer-term assistance with the reconstruction and development of WSS infrastructure. The project formally began on 2 July 1994, and officially closed on 30 June 1999.

• <sup>1</sup> US\$1 = 15,000 Vietnam Dong (VND)

Key aspects described in the FLOWS project design strategy included:

- targeting of economically disadvantaged people living in urban and peri-urban slum areas and low income communities, and in un-served and under-served villages listed by the Indonesian Government under its poverty alleviation programme;
- community participation, and engagement in decision-making processes;
- integrated environmental health education reinforcing the sanitation program;
- narrowing gender gap disparities by involving women in all aspects of project development;
- demand-driven interventions;
- cost recovery through community capital cost contribution and user fees;
- training using structured learning approaches;
- human resource and institutional strengthening;
- involvement and development of local NGOs.

The Australian contribution to project costs covered technical assistance and training, and the procurement of goods and equipment. The balance of materials and equipment, and the costs of construction work were met by the Indonesian Government, with communities also making significant contributions to the rural component works. There were no construction contractors engaged in the rural program; all construction of facilities serving the village communities was undertaken by the villagers themselves, without receiving any payment from the project.

#### *Lessons learnt*

A major follow-up review of the project between April and July 2002 (van Wijk, Sari et al. 2002) found the following:

- Design flaws and poor quality of materials and workmanship were commonly found but were significantly improved when local men and women were involved in monitoring and decision making and had some control over these quality issues;
- Financial sustainability has been a major problem: operation and maintenance costs are not budgeted for; budgets are not realistic; tariffs are not equitable; people are not actually asked to pay; and if asked, not everyone pays;
- Sustainability of locally constituted management committees remain a problem. Three to five years after establishment, some 53% had become dormant and 6% defunct;
- Catchment area management remains problematic and under addressed.

#### *Recommendations for future projects:*

- Need to replace a single, linearly planned approach for participatory project planning and implementation through more diversified time tables and support packages which are tailored to the different types of situations on the ground;
- Particular attention needs to be paid to the differences in institutional and social and cultural conditions in individual villages;
- Social and environmental feasibilities of system sharing should be conducted;
- Local control mechanisms (by village men and women) of design and construction quality should be utilized;
- Villages and technology projects with more complex situations require more time and high quality support, including for social organisation and mediation;
- Project support should include designing for, and capacity building on feasible forms of expansion of the water supplies. Decisions on expansion must be part of good management.

Conclusions from this study suggested that policy development in Community managed water supply and sanitation systems can be strengthened further on community management aspects, training and gender and social equity.

Despite the desirability of involving communities in the management of their own WSS systems, recent experience suggests that as rural incomes increase, communities are demanding both higher levels of service and management arrangements that release them from day-to-day decision-making (Pollard 2005). In such cases, community members, particularly those with management capacity and expertise suitable for a role on management committees, may prefer to be involved in other productive or entrepreneurial activities.

The FLOWS project encountered difficulties in sustaining the management committees though it was not clear whether this was a result of an increase in rural incomes and community individuals not having enough time and interest to be involved in the day-to-day management of community water supplies. The AusAID supported Cuu Long Rural Water Supply and Sanitation Project which is supporting the development of water supply, solid waste disposal and drainage facilities for rural clusters directed to poor households in five provinces in the Mekong Delta (Kien Giang, Bac Lieu, BenTre, Vinh Long and Long An) does not have the same degree of community involvement as does the FLOWS project. Community involvement in the Cuu Long project has consisted primarily of participation in consultative

planning workshops and capacity building workshops focused on raising awareness of better hygiene practices rather than direct management as does the FLOWS project. Reasons given by project management suggests that communities do not have the capacity to manage more complex piped water systems, and they do not wish to be involved in day-to-day management, preferring to be fully engaged in their own farming and entrepreneurial activities.

This suggests that careful monitoring of community managed systems is required, paying particular attention to changing levels of economic development within a community, and their capacity and level of interest in day-to-day management. Adaptive management approaches that can monitor a community's level of interest in day-to-day management can assist in adapting management practices, responsibility, and composition of management committees. Governments will need to be responsive to the need to take over day-to-day management when communities no longer demand such an active role.

#### **4. Regulation: Context Specific Issues**

##### *Regulatory challenges in water provisioning*

Because water has economic and social values, regulation is considered as both a bureaucratic/technical and social/political process. Often there is tension between these two processes. Competition for water occurs between competing uses and users. Issues of competition, access, use and affordability are inherently political in nature, yet they are often dealt with as a technical matter.

The predominant regulatory approach, supported by development aid agencies such as the World Bank and ADB, has been towards non-political regulation based on market and financial criteria. While regulation based on political criteria can undermine the financial sustainability of public and private service delivery alike, regulation based on market criteria alone without reference to political processes may result in political unsustainability, and resistance which can undermine financial sustainability (eg. through the non-payment of fees – Jakarta water supply concession).

Another key issue that has become apparent in recent years is that PPP projects have often lacked an assessment of the public interest regulatory capacity of the state (Hill 2003). Thai NGOs have observed that the privatisation of water services in Thailand have not been accompanied by the allocation of resources or capacity for proper regulation (Chantawong 2002). Indeed, many PPP projects have launched from the context of a self-regulated public water supply system. Within this context, public bodies naturally have little experience in independent regulation or industry regulation.

Furthermore, the focus on technical regulation has often come at the neglect of other governance aspects, for example, in Australia the greater involvement of the private sector in formerly public works has required the involvement of independent bodies such as the Independent Commission Against Corruption and Auditor General's Office who have statutory independence from government and report to parliament. These institutional developments which assist in the governance of public goods have been neglected in many developing countries where the private sector role has been growing.

There is now considerable experience in countries like Australia with independent regulators with capacity to assess the commercial as well as public interest of both public and private industries. However, such capacity and institutional developments are still lacking in many developing countries including the case study countries of Indonesia, Thailand, and Vietnam. In the Australian state of New South Wales (NSW), a good example of an independent water sector regulator is the Independent Pricing and Regulatory Tribunal of NSW (IPART)<sup>2</sup>. IPART regulates water utility pricing in NSW at arms length from government (statutory independence). While considering the technical merits of any price increase it

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• <sup>2</sup> <http://www.ipart.nsw.gov.au>

also seeks public submissions from public interest groups and makes its considerations over the submissions public.

In Table 1, Bakker (2003) provides a comparison of three different water supply system governance models. Note that in this ideal model, private sector incentives and sanctions are not determined by political means. However, in countries such as Vietnam and Indonesia, while cost recovery has become a dominant objective, political regulation by the government continues to be utilised in order for governments to achieve their political objectives such as providing the poor with access to water.

**Table 1. Three water supply governance models.** Source: (Bakker 2003)

	<b>Public Utility</b>	<b>Private Sector</b>	<b>Community/Co-operative</b>
<b>Consumer role</b>	Citizen	Customer	Community member
<b>Form of consumer participation</b>	Collective, top-down	Individualistic	Collective, bottom-up
<b>Accountability mechanism</b>	Hierarchy	Contract	Community norms
<b>Primary decision makers</b>	Administrators, experts, public officials	Companies, experts, Individual households	Leaders and members of community organisations
<b>Primary goals</b>	Guardian of public interest Conformity with legislation/policy	Maximisation of profit Efficient performance	Serve community interests Effective performance
<b>Key incentives for water conservation or other goals</b>	Expert/managerial feedback in public policy process Voter ratepayer opinion	Price signals (share movements or bond ratings) Customer opinion	Agreements and shared goals Community opinion
<b>Key sanctions for failure to maintain safe, adequate services</b>	State authority backed by coercion Political process via elections Litigation	Financial loss Takeover Litigation	Livelihood needs Social pressure Litigation (in some cases)
<b>Primary conception of water</b>	Public good / commons	Commodity / Economic good	Public good / commons

### *Regulatory challenges in catchment management*

Catchments involve multiple-users who may be public or private actors, or whole communities such as villages. Until recently, catchment based approaches to managing watersheds were not common in the region. Presently, initiatives supported by multilateral development banks such as the ADB and bilateral aid agencies such as AusAID are assisting countries such as Thailand, Vietnam and Indonesia to setup local catchment authorities or River Basin Organisations (RBOs) in order to create more responsive decision making structures.

A key issue in the establishment of the RBOs will be the way in which the state agencies who oversee the RBOs deal with private users and community groups or civil society. In each country, we see differences in how this issue is dealt with depending on the country's political and structural context. In the case of Thailand with its strong civil society, community groups are demanding a seat at the decision making table through representation on RBO committees. To what extent communities will be able to participate in decision making on the RBOs in Thailand will be a key issue that remains to be determined.

In the Australian context, effective community involvement has only come around through the explicit recognition and indeed official support for the empowerment of communities to participate in decision making and power sharing (Blackmore 1995). In the Vietnamese state dominated context with a weak to non-existent civil society and general distrust of the private sector, a true multi-user catchment approach is a long way away. To date decision making within the Vietnamese RBO's is monopolised by central government agencies which are not open to sharing power. Hence the role of lower level governments, the private sector and community is being severely curtailed in catchment management in Vietnam.

**Text Box 6: Australia-Vietnam Water Resource Management Assistance Program (VWRMAP): Cuu Long River Basin Organisation**

The VWRMAP is an AusAID supported project designed partly to assist with the implementation of Decree 162, Dec 2003, on the establishment of RBOs. It does this by supporting the establishment of an RBO for the Cuu Long Delta (Mekong Delta).

By late 2004, a Secretariat for the Cuu Long RBO had been established within the Southern Institute for Water Resources Planning (SIWRP), a predominantly technical planning agency of the Ministry of Agriculture and Rural Development (MARD). While the agency has yet to fully establish itself, a number of challenges have emerged. The first and most serious is that the management committee of the Secretariat does not consist of any provincial representatives. The Committee is constituted of Ministerial appointments from Central agencies, with little connection to the Cuu Long Provinces.

The result of the lack of Provincial representation was clear at an October 2004 review workshop. At the workshop, invited participants from the Provincial governments (DARD, DOE, PCs) raised concerns over the confusion/blurring/unclearness of roles/linkages between different agencies with apparent overlaps in roles/responsibilities.

One participant observed the fragmentation of water resources management with the project – there are conflicts across the Provinces of the Mekong Delta - and suggested this should be brought to the national level agenda and that the RBO should be placed in its proper institutional context which it is not now (veiled criticism of SIWRP/MARD hold on the Secretariat).

Another participant, from Bac Lieu Province, stated that the RBO was not sensitive to Provincial needs. Conflicts arise in water use between Provinces but it was not clear whether the RBO had a role in addressing these. The participant observed the need for cooperation and this is beyond the work/capacity of Peoples Committees. In order to do this, the RBO needed to have a representative from each Province which it does not have at the moment.

**5. The Impact of Decentralisation on Water Regulation**

Policies for decentralisation theoretically could support better management and regulatory processes by bringing decisions closer to consumers/users and producers. Decentralisation processes are underway in Thailand, Vietnam, and Indonesia. Yet, decentralisation has proved to be difficult because of its complexities and resistance from central authorities reluctant to relinquish control. In the case study countries, administrative and institutional structures have historically been vertical. Paternalistic approaches still prevail and decisions are imposed from above rather than being developed from below. In this context, decisions are made on the basis of control rather than through participatory and transparent processes (Biswas, Varis et al. 2005).

The Thai, Vietnamese and Indonesian cases suggests that a major challenge will involve the building of regulatory and monitoring capacity at lower levels of government, as well as building understanding of management and regulatory processes within communities and the private sector. The division of regulatory responsibility between national and lower levels of government has also been problematic, particularly in the Indonesian context leaving regulatory vacuums and different approaches between different regions. One example has been the non-uniform codes on corporatisation of the state-owned water utilities.

In the case of PPPs in Vietnam, while central level agencies such as the Ministry of Planning and Investment have been encouraging BOT water treatment plants to overcome the shortage of public finances, lower levels of government such as the Ho Chi Minh City Peoples Committee which has jurisdiction over the implementation of the plants have been ambivalent and imposed their own regulatory hurdles causing at least one investor (eg. Thu Duc Water Treatment Plant) to withdraw after receiving an investment licence. Despite the less than positive experience of HCMC, proposals for BOT water treatment plants are increasing in frequency from Provincial Governments with even less planning and regulatory capacity than the HCMC government.

**6. Conclusions and implications for development assistance**

Increasingly, water is being viewed as both an economic good and a public good. This raises the question on how conflicts between these two values will be resolved. When private actors are allocated commercial rights to water, they will demand guarantees of access, quality and quantity which may impact on the rights of others particularly in conditions of growing scarcity.

- Jurisdictions that define water as simultaneously an economic and public good require support to establish independent regulators with capacity to consider economic, financial and political issues in a transparent manner.
- State capacity is required to develop sophisticated water allocation models in order to avoid costly contractual disputes with commercial users and to avoid conflict with non-commercial users in situations of scarcity develop.

The ideological drive towards privatisation has distracted attention away from the benefits that could be gained from restructuring and regulating state-owned utilities. In both Vietnam and Indonesia, gains are being made from corporatisation. The role of the private sector has been to bring in new financial capital, technology, and service expertise. PPPs are now the predominant form of private sector involvement in the water sector. However these partnerships are problematic in that they hold considerable risk for the public through the issuance of guarantees that private partners demand to cover their political and some market risks.

- Having passed underpinning legal reforms for state corporate governance, countries such as Vietnam and Indonesia are yet to take full advantage of such reforms.
- Even small public water utilities can become self funding when the proper governance arrangements are put in place. There are numerous other examples of sustainable public water utilities including the Singapore Public Utilities Board, Bangkok Metropolitan Water Authority, and the Phnom Penh Water Supply Authority.
- Development assistance should consider a fuller range of alternative corporate governance reforms including corporatisation and performance benchmarking. These have the potential to deliver operational efficiencies and financial sustainability without resorting to privatisation.
- These alternatives to privatisation may be desirable in underdeveloped regulatory contexts and can act as a capacity building step on the road to future regulated privatisations.
- The bag of state corporate governance reform tricks is not yet empty. For example, water utilities such as the Bangkok Metropolitan Water Authority have floated shares on the stock market to raise capital. In Vietnam, institutional reforms have put in place underpinning legislation to allow for the part-privatisation (or equitisation) of state owned companies in order to raise new capital.
- Inexperienced governments often do not have the capacity to analyse the risks of BOT and other PPP projects. Development assistance needs to assess planning capacity of government and risks posed to the government when considering financing for private sector partners.
- Support and capacity building to assess risks and contingent liabilities is required for all levels of government considering BOT projects.

Community based water systems are growing in popularity in rural areas, promising better responsiveness to consumer demands, however there is some evidence to suggest that they may not be sustainable as users standards of living change and they demand to be freed from their day to day management responsibilities.

In the regulatory arena, there is tension between technical and political approaches to regulation. The predominant focus on the technical has resulted in the neglect of other institutions of governance to guard against corruption, and to provide qualified actuarial expertise in reviewing new proposals for PPPs.

Political regulation continues to be utilised in the water sector as governments such as Indonesia and Vietnam strive to meet their citizen's needs.

- Independent regulatory capacity needs to be put in place before the privatisation of water rights and provision go ahead.
- Support for building independent regulatory capacity should be given high priority. Capacity to consider economic, financial and political issues in a transparent manner is required.

The regulation of catchments is relatively new in the region and the management role of private, community and civil society groups underdeveloped. While there is greater political space for private sector and community involvement in Thailand's democratic political context, there is much less so in Vietnam. In the Australian context community empowerment has been an official goal within catchment management frameworks, however there is considerable resistance to such an objective within the bureaucratic cultures in the region.

- Development assistance for RBOs can be more proactive in promoting the need for greater stakeholder representation.
- Where civil society is weak as in the case of Vietnam, RBOs could include greater representation from lower levels of government who often are more closely aligned with community interests. There is scope to incrementally build a constituency upon local government initiatives in local water management.
- Care also needs to be taken in terms of the placement of the Secretariats, avoiding institutional homes which are predominantly technical planning agencies. Doing so has the potential to turn the RBO into a planning agency rather than one that facilitates stakeholder processes for dealing with conflict, cooperation, coordination, etc.

Finally, decentralisation is having an impact on the way in which lower levels of government are dealing with both public and private actors in the water sector.

- Support for RBOs should take account of Provincial capacity and that of lower levels of government to involve themselves and other stakeholders in the business of the RBOs.
- Clear roles and responsibilities within RBOs should be developed in consultation with the Provinces and lower levels of government.
- Capacity building programs should not only include support for the Secretariat but should be extended to relevant provincial agencies and those at lower levels of government.
- Capacity building for risk assessments and contracting of BOT water projects need to be extended to the Provincial level.

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