



PPP for rural water supply in Cambodia

Virginie Mauclert and Andrew Trevett

Can private investors manage rural water supplies? Initial results from a pilot project in Cambodia reveal poor take up and a lack of consultation with villagers.

War, neglect and a shortage of public finance have had a great impact on water-supply infrastructure in Cambodia. The rehabilitation effort has mainly focused on urban areas, leaving rural communities in a precarious situation. Although 84 per cent of the population live in rural areas, only 25 per cent of these people have access to an improved water supply, such as public standpipes, protected dug wells and springs. Most rural communities continue to depend on traditional sources such as rivers, ponds and unprotected wells. Continuing a trend in the urban areas, a few privately financed rural water systems have been developed by local family businesses. The service is generally flexible, involving easy terms, and not overly driven by a desire for profits. The systems are usually basic, however, limited to the densely populated village centres and supplying untreated surface water.

The Ministry of Rural Development (MRD) has come under pressure from international funding agencies to adopt a water-sector privatization policy founded on a demand-responsive approach. The MRD is responsible for water supply in rural communities of fewer than 1000 inhabitants. It has identified several obstacles that limit

private sector participation in the rural water sector.

- An absence of suitable rules, regulations and financing mechanisms to raise investment capital.
- A preference to invest in peri-urban areas, with higher demand, where it is more likely to be profitable.
- A lack of technical and business management skills specific to rural conditions in the private sector.

In summary, a new institutional framework was deemed essential for promoting commercially viable water supply in rural areas, which could attract private sector interest while protecting consumer interests through regulation.

The MIREP programme

In response to this situation, the MIREP programme (Mini Réseaux d'Eau Potable – a French acronym for small, safe, piped-water systems) was launched in 2001 by the GRET–Kosan partnership. (GRET is a French NGO working in Cambodia since 1991 on rural development and microcredit initiatives, and Kosan is a Cambodian engineering consultancy firm providing technical support.) The overall aim is to develop sustainable public–private partnerships (PPP) between small entrepreneurs and local authorities (commune councils). This is achieved by establishing an institutional, technical and financial framework to support local authorities, the private sector and users in the planning and implementation of safe piped-water networks.

The programme aims to support 10 water system projects in Takeo Province over a three-year period from 2001 to 2004. Grant funding is provided by the Syndicat des Eaux d'Ile de France (SEDIF, H43 000), the French Ministry of Foreign Affairs

(H75 000) and Vivendi (H109 500). GRET–Kosan provides technical assistance only. To date, only one project has been completed and three other projects are ongoing. The MIREP programme consists of four phases.

Phase one: identifying suitable investors. First, awareness about the MIREP programme is promoted through advertising campaigns. This is followed by a participative evaluation at the commune level to decide whether private investment in the implementation of a water system is necessary. Where it is decided to proceed, local investors are identified in all communes and invited to present an investment project proposal to the commune council. GRET–Kosan also conducts a selection survey to establish a list of priority projects.

Phase two: signing a concession contract. GRET–Kosan drafts the concession contract, which is signed between the local authority, the users' representatives and the investor. It specifies, among other things, the obligations and rights of each party, the conditions of service, the rates and management fee, and the conditions for extension of the water system (see Table 1).

Phase three: providing financial support to the private sector. Having selected the project, GRET–Kosan carries out a feasibility study to determine appropriate technical solutions, and drafts a financial and business plan. An agreement is then reached between the provincial rural development committee and GRET–Kosan on the amount of the incentive grant to be allocated for constructing the water treatment station. The incentive grant never exceeds H40 per beneficiary family (based on the usual subsidy allocated to rural wells) and is channelled through the provincial rural development committee.

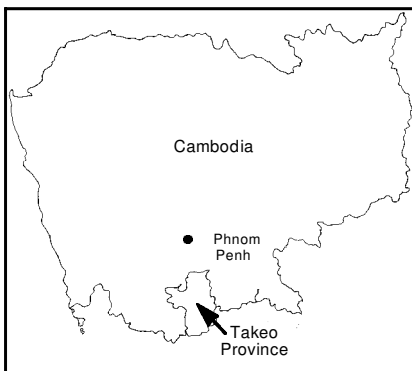


Table 1. Breakdown of responsibilities for MIREP's piped-water systems

Cost items	Responsible agency
Water treatment plant construction cost	Donors (Vivendi, MAE, SEDIF)
Piped water system construction cost	Investor (own finance plus donor loans through the Rural Development Bank)
Running costs (maintenance) and extension of the system	Investor (should eventually be covered by users' fees)

In addition to the incentive grants, a 'Rural Infrastructure Fund' has been created in collaboration with the Rural Development Bank to provide long-term credit (5 years at 14 per cent per year) to private investors willing to contribute to rural development. The credit enables the private sector to invest in the water distribution network (pumping station, reservoir and pipes).

Phase four: construction and technical support. A competitive bidding process is organized to select a suitable building contractor. Although the provincial rural development committee is responsible for final selection, GRET-Kosan provides the committee with an independent assessment of the technical capacity and financial offer of the contractor. The contract is between the committee, the investor and the contractor. During the construction phase, GRET-Kosan supports the committee by validating the contractor's requests for payments through site inspection.

Mixed results in Pech Changva

A study of the one completed pilot project in the village of Pech Changva identified both strengths and weaknesses in the MIREP programme. The Pech Changva project was implemented in 2001 and was designed to incorporate a water treatment plant into an existing piped water system at a total cost of approximately H40 000. Water is pumped from a pond to the water treatment station, stored in an elevated reservoir, and supplied via a branch water distribution network. Currently, the system is fully operational and supplies 202 households (about 1010 inhabitants).

The main benefit of private sector participation in Pech Changva is quite simply that such an investment would not have been possible without private investment. No price rise has occurred:

the price charged for water is \$0.5 per cubic metre, the same as it was before the water treatment plant was built. The study also identified some weaknesses, however; in particular social and organizational issues that have not been given sufficient consideration. The MIREP programme has not yet adopted a demand-based approach, and this may put the sustainability of the programme at risk. The initial evaluation provided the programme with a detailed analysis of four main areas of concern: a lack of capacity building, a limited demand-responsive approach, a lack of any hygiene education and a weak business environment.

Training in the correct operation of the water treatment station was not provided. Consequently, treatment chemicals were incorrectly proportioned and this led to poor water quality. At the

Poor people are excluded from the project as they cannot afford the connection fee

time of the study, a drought forced the investor to buy water from other ponds, which were of poorer quality than the usual source. Failure to follow correct procedures at the treatment plant resulted in turbid water coming out of the tap. The users no longer want to drink this water or cook with it; instead they buy unsafe water from other private vendors, which they then have to boil, adding to their costs. People do not understand the importance of adding chlorine to water; they dislike the chlorine taste, stop drinking it and in Pech Changva they even asked the operator to stop chlorination.

The MIREP programme is very prescriptive and does not allow consumers much choice. GRET-Kosan has attempted to make the process more user-focused through the organization of meetings, distribution of leaflets, and the nomination of customer representa-

tives. However, they have not been able to match service levels with willingness to pay, nor has a pro-poor strategy been adopted. Poor people are excluded from the project as they cannot afford the connection fee. They do not buy water from neighbours with connections, as was anticipated; instead they use water from unprotected sources (surface water or unprotected wells) or buy unsafe water from private vendors, which is five times as expensive as water from the new network. In Pech Changva, 10 households in the target area for the new supply have not been connected. The reasons they give are the high connection fees and the fact that six of them have been given a private protected borehole by the government.

The villagers did not understand the reasons for chlorination and did not like the taste

User representation is dominated by the village chiefs who are not even connected to the network; this is clearly unsatisfactory. In addition, the users do not know who represents them, so they cannot lodge complaints about water quality. When there is a problem on the network, a few people complain directly to the investor; but all users interviewed responded that this was inadequate.

The programme does not include any hygiene education that would help to maximize the health impacts from the improved water system. Pech Changva's villagers did not understand the reasons for chlorination and they were therefore not prepared to get used to the taste.

Furthermore, there are few reliable chemical providers in the country and the investor/operator had difficulty finding a reliable supply of good-quality chlorine bleaching powder.

Institutional support was not provided to the commune council or the provincial rural development committee for planning, implementing and monitoring the project. Private sector participation represents a significant structural and procedural change for the local government in the way services are delivered. A shortage of trained and experienced staff meant that adapting to these changes was particularly difficult.

Conclusions

Although the case of Pech Changva demonstrates several important failings, it is important to remember that this was an early evaluation of a single pilot project. Many of the problems identified could quite easily be resolved through careful attention to the social and organizational aspects of the programme. Training, capacity building and consultation with the users, investors and local authorities would undoubtedly have led to much more satisfactory results. Some problems were to be expected since this was a pilot project.

The MIREP programme represents the first experience of public-private participation in the Cambodian rural water sector. Currently, all the phases of the project are supported by GRET-Kosan, but the goal is to hand over progressively to the communal and provincial authorities, thus allowing the project to carry on without any outside support. The transfer of ownership of the project to local authorities will require more on-the-job training and field practice to ensure that all phases of the project can be competently managed. In addition, the

Rural Development Bank's own funds should gradually replace the funding obtained by GRET-Kosan. There is potential for the public-private partnership approach to be replicated in many Cambodian villages, providing that the relatively low profitability does not discourage private investment.

About the authors

Virginie Mauclet can be contacted at virginie.mauclet@france.com
Andrew Trevett is a Research Associate at the Institute of Water and Environment, Cranfield University, UK. He can be contacted at: a.f.trevett@cranfield.ac.uk

webwatch

- **Sanitation Connection: Financing and cost recovery theme**
Outlines the key aspects of the topic and provides links to key online publications and websites, plus an enquiry service facility.
<http://www.saniconn.net/titles/topicintro.php3?topicid=13>
- **Water forum 2000: Financing wastewater projects through capital markets**
It is generally recognized that sanitation faces even greater hurdles for private sector financing than water supply. This session included case studies of privately financed sanitation projects, both stand-alone sanitation projects and those where a sanitation component had been included as part of a broader water and sanitation programme. The session concluded with a roundtable discussion of the merits and pitfalls with each type of approach and attempted to draw lessons that could be used to help promote further investment in the sector.
http://www.worldbank.org/html/fpd/water/forum2000/trackone_session1.html
- **Private sector development**
The World Bank Group offers a range of products and services to help member countries implement private sector participation in infrastructure. Major areas of assistance include advice, finance, risk mitigation, knowledge and information, and dispute settlement.
<http://www.worldbank.org/privatesector/ppi/index.htm>
- **Public-private partnerships and the poor in water and sanitation**
The purpose of this project is to determine workable processes and strategies which encourage public-private partnerships in the provision of water and sanitation services for the urban poor.
<http://www.lboro.ac.uk/departments/cv/wedc/projects/ppp-poor/index.htm>
- **WELL document catalogue**
A search under 'privatization' gives bibliographic details to key publications in this area.
<http://www.lboro.ac.uk/orgs/well/resources/document-catalogue.htm>
- **Water and sanitation privatization toolkit**
Its stated objective is to transmit the experience gained so far in Private Sector Participation (PSP) in the water and sanitation sectors and the lessons on what can make or break PSP process. Broken down into three separate Toolkits, which cover: (1) outline of the broad-brush analysis required to assess the need and potential for introducing PSP and selecting a PSP option from a menu of options; (2) developing the more detailed analysis required in the run-up to the transaction (with a focus on arrangements where the private sector takes on a substantial role), and the issues related to managing the process, such as organizing the bidding; (3) for the three main types of contracts (concession, lease and BOT), detailed lists of issues that need to be considered for drafting contracts and revising contracts drafted by adviser.
<http://rru.worldbank.org/Toolkits/water/>
- **Private sector development**
To achieve their goal of reducing poverty in Asia and the Pacific, ADB work to expand and strengthen the private sector in the developing member countries. Includes links to a private sector development strategy, private sector operations and relevant publications. The claim is that sustained growth creates jobs and reduces poverty, and the private sector is the largest source of employment and investment. A healthy private sector will increase the tax base for social services provided by the state.
<http://www.adb.org/PrivateSector/default.asp>