

Global aspects of Supply Chains

The Vietnamese approach cannot simply be transferred as a carbon copy to other places. The lessons learnt, however, can be applied. Where conditions are favorable for the setting up of supply chains (cheap and affordable pumps, high volume, short distances, good industrial base, presence of a commercial network, high literacy rate, government cooperation, etc.), it is possible to use social marketing to support the private sector in creating an effective supply chain. Some key factors are:

- Buying both spares and equipment at the lowest level in the supply chain, i.e. from artisans and shops.
- Each link in the supply chain must benefit / profit for the sustainability of the supply chain.
- No level of the supply chain should be excluded from supplying of equipment, pumps, spares, etc.
- Building on local commercial networks even if this means higher prices.
- Provide choices to the customers even at community level.
- The program design should take into account supply chain development and the vital role that social marketing can play.
- Avoid all activities that block or destroy a supply chain such as project-centered procurement, not using the existing commercial network, de-linking supply of equipment from supply of spare parts, doing everything oneself with the illusion that it is cheaper and separating the customer from the supply chain.

Every situation varies and that there are no magic answers or general solutions. It is nonetheless believed that far too little is done worldwide to seriously use existing commercial networks for the development of water and sanitation supply chains.

The challenge is to find mechanisms that promote, create or strengthen supply chains. The implications to governments, donor organizations and NGOs are complex and will necessitate a new type of thinking. This could involve modified procurement procedures, revised attitudes towards subsidies, dropping the fixation that one technology is suitable for all situations and treating beneficiaries as customers who are able to contribute and solve their own problems.

Supply chain assessments should be made, covering the critical questions to see if government and donor practices and policies and RWSS programs or projects are facilitating or blocking the use of supply chains.

Factors that influence the setting up of supply chains for equipment and spare parts are inter-related, they include market size and segmentation, equipment standardization, industrial base for manufacture of equipment and spares, efficiency of existing channels of after-sales support, and the policy direction on involvement of informal service providers.

The impact study should consider the following:

a) Customers (communities, individuals)

- Are options provided which are affordable?
- Do the customers buy pumps/latrines and spares directly from the nearby shop/supplier?
- Are they involved in the selection of the option and making the payment?
- What is the impact of the subsidy or free equipment on all levels?
- Does the artisan provide after sales services such as repairs and sales of spares?

b) Distributors (drillers, retailers, dealers)

- Is the commercial network involved in arranging the purchases i.e. ordering, paying and supplying?

- Do retailers/wholesalers have a direct link to the factory?
- What are the links of the retailer/wholesaler to the local administration (licensing, registration, reporting procedures)?
- Do the artisans (involved in installing/building) have links to the shops/suppliers?
- Do the distributors and artisans make a sufficient profit?

c) Suppliers (factories and service providers)

- Do the factories have local or national agents?
- When local manufacturers are available, are they given preference as suppliers?

d) Promotion

- Is a significant budget percentage used for demand creation?
- Is a significant percentage used for linking the customer to the supply chain?
- Does the campaign focus on giving information about the supply chain?
- Does the promotion focus on training customers/artisans in quality control?

e) Profit and use of a supply chain

- Does each level of the supply chain make sufficient profit?
- Which level (link or links) of the supply chain is bypassed for whatever reason and what is the long-term impact of this bypassing?
- Does money flow into the chain at each level?
- If out of country (imported) supplies are needed, what commercial mechanisms are used for this purpose i.e. local agents or local commercial procurement businesses?

f) External conditions

- Volume of items sold directly for installation in water and sanitation
- Income of customers
- Awareness and need
- Commercial network (often for other related businesses such as bicycles, cars, trucks, supply stores, agents etc.)

The link with O&M concepts

Effective supply chains are the precondition for functioning community based O&M. Therefore the supply chain promotions should not be carried out

in isolation but has to concentrate also on the mechanisms that promote and enforce effective management of maintenance by the communities. This includes the setting up of legal entities that own, operate and maintain the water facilities.

O&M is in itself strongly linked to the economic conditions around the water supplies. Can water be sold at price that is recovering cost? Does the water price include costs for rehabilitation and/or depreciation?

Where there is no supply chain

In remote areas with a low volume and a population with limited means, it is unlikely that supply chains exist or that one can become viable. If the profit margins along the supply chain are not attractive to all levels it will simply cease to exist. Probably a completely different approach is needed to areas where it is recognized that there is little likelihood of encouraging a supply chain:

- Support and recognise individually owned systems based more on what is done locally/traditionally. Household level initiatives can offer a much higher degree of direct participation. The equipment used to draw water can be made locally. The direct relationship between the small-scale suppliers and the users as customer creates a direct link that enhances sustainability.
- More flexible technologies, review whether communal solutions according to centrally defined norms and standards, such as 200 persons per handpump or 250m walking distance to a communal standpipe do actually reflect local needs.

Household level solutions cannot be applied everywhere. In places where favorable conditions are not present, community based solutions need to be pursued. This might necessitate a new type of thinking:

- Longer program cycles (5 to 20 year) with the high level of mobilisation needed to ensure that village communities set up the institutional structures for the management of such systems.
- Different type of funding, i.e. contract a commercial company to run the supply chain for 5 to 20 years or more.
- Twinning/linking arrangements with largest town/city in the area.

PROMOTING DREAMS

Setting up viable Supply Chains for Hand Pumps in Vietnam

Summary of an appraisal and impact assessment of the Government of Vietnam-IDE Hand Pump Promotion Program, funded by ICCO.

Sold 64 000 non-subsidized Pumps

- purchased by households
- installed by small businesses
- bought from local shops
- manufactured in the country



Derrick Ikin, SDC

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The Project

In Vietnam, prior to the 1990's, numerous efforts had been made to change the awareness of the people about water and sanitation. In 1960, the agricultural co-operatives initiated "Clean house, Fertile Field" campaigns aimed at improving living conditions by building three sanitary works: "Water (ring wells), Bathrooms and Toilets". In the 1980's UNICEF introduced the No.6 pumps and the low cost "sludger method" for drilling tube wells. For Vietnam the No.6 pump was a rather "high-end" option with a price tag of about USD 100, but it played a seeding role and created a demand for water.

1991, IDE started in Vietnam with a Treadle Pump project. The treadle pump, a foot operated irrigation pump, did not take off as expected. On the other hand, IDE recognized a growing demand for drinking water pumps installed in the homesteads. In response to this market demand, IDE started with training commune based well drillers in the easy to handle sludger drilling method and embarked on the development and production of its own hand pump design. The IDE pump was smaller and lighter than the No.6. The low cost drilling method allowed the establishment of privatized drilling and distribution networks, which cut cost dramatically. The lighter pumps helped to reduce the cost even further. As a result, the market changed and sales rose rapidly. The timing was good for the creation of a healthy market; the private sector emerged and there was a general increase in disposable income.



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The project under the Ministry of Agriculture and Rural Development was executed in the three project provinces Thanh Hoa, Hue and Quang Nam. The government department, Center for Rural Water Supply and Sanitation (CERWASS) was the counterpart organization to IDE. The GOV mass organizations such as the Woman's Union and Vacvina (a para statal NGO) played a leading role in the promotion campaigns. These organizations have a widespread outreach with members and networks at hamlet, commune and district levels.

Based on the researched needs of the customers, IDE formulated powerful marketing campaigns that centered on **promoting dreams rather than pumps**.

For example, children might dream of becoming famous singers, footballers, ...; mothers might dream of a less busy life, healthy kids, or a husband who doesn't drink...; men might dream of earning good money. In the marketing campaigns the pumps were connected to aspirations by actually promoting the dreams that are realized through the hand pumps rather than promoting the pumps as a product. The campaigns informed customers of convenience, safe water, domestic sanitation and health, showed them their choices and offered affordable alternatives.

IDE set up a network of pump promoters, drillers and suppliers and provided training in participatory methods, selling advice and inputs on what and where to buy pumps.

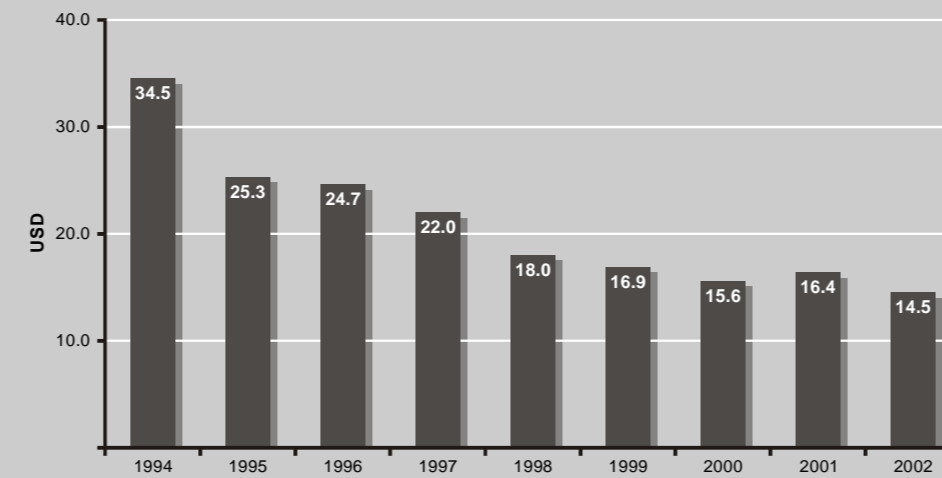
Bringing down costs

The type of pumps and the drillings methods played a vital role. The introduction of the No.6 pump gave the local production industry a basic community pump. The market responded in reducing the size and weight of the No.6 handpump until an affordable household version was for sale. These cheap pumps are by no means quality products, but they function and are affordable. The straightforward drilling method (sludger method and roboscreen filter technology) allowed the reduction of drilling cost, thus making the whole installation affordable to most households. Today an installation of a complete hand pump including the drilling of the well is as cheap as USD 15. This development was a market response to an extremely price sensitive market.



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Cost of Well with Hand Pump



Emerging Supply Chains

The distribution networks changed over the course of the project. When local competitive pumps had a price advantage, IDE phased out its own pump design and left the hand pump and plastic pipe production to the established factories. Using existing commercial market channels the private sector manufacturers created functioning supply chain arrangements in which every level (the customers, drillers, shops, factory agents and the factories) benefits or profits. The government and IDE took on facilitating roles.

A complex, but logical credit arrangement (local and culturally embedded) ensures the smooth function of the supply chain from the customer to the manufacturer. IDE did not distort the credit market or influence prices, but it was adamant on certain quality and guarantee standards through customer and driller education. The fact that the drillers are all based in the immediate neighborhood of the users makes them directly accountable to the clients and created a very close customer oriented service. Well drillers usually provide credit to the purchaser (households) and maintain good after sales services to the customers.

With rural electrification the product range increasingly includes electric pumps and the demand for hand pumps is decreasing.

Phasing Out

Over the last two years IDE gradually withdrew from active promotion; it motivated and trained the well drillers to take up the marketing activities by themselves. The well drillers now all undertake promotion activities with no external financial support. Customer satisfaction is their optimum marketing tool. The supply chains function fully independently, the customers can still buy new pumps, replacement pumps or spares or have the repairs done.

A reduction in sales noted in the 3 provinces is mainly due to the fact the market comes to a saturation point.



IDE's role in the policy dialogue

In the mid-90s the IDE handpump project established an institutional framework and mode of public-private cooperation, which is now the backbone of the National Rural Clean Water Supply and Sanitation Strategy that was introduced in 2000. The success of the IDE handpump project is a living example that the National Strategy can work in Vietnam.

Strong points in IDE's implementation strategy

- Created a demand for affordable products
- Ensured that the pumps were procured/ bought at the lowest possible level i.e. in nearby shops or from local agents
- Promoted water and not a specific type of pump
- Combined promotion with training
- Treated water users as thinking adults and customers with the right to choose from a range of options
- Moved away from the common belief that one size fits all

Push to sanitation and hygiene

IDE should build on this water success by continuing in the area of water promotion. The sanitation and hygiene standards in Vietnam are very



low. Limited latrine coverage and usage and still prevalent open defecation pose a threat to both health and the water quality. IDE's considerable know-how and successes in the water and sanitation sector offers an opportunity to address the chronic sanitation problem in the 3 provinces where it has established a supply chain network and good local links. It could use its wide-ranging experience in social marketing and promotion to get involved in sanitation and hygiene campaigns. IDE should consider formulating a sanitation promotion project. Such a pilot project could be executed within the framework of larger sanitation programs by GOV, UNICEF and the World Bank.

Supply Chains, what worked and why

In Vietnam many of the conditions were favorable to establish a successful supply chain:

- The technology was affordable, USD 15.00 for a complete installation of a handpump
- The hydro geological conditions are most favorable, the water table is high (2-4m), and drilling is easy
- Household level solutions are possible, thus the legal ownership of water points is clear
- The population density is high, therefore a high volume market
- Commercial networks existed that could be linked to the water pumps
- Social marketing campaign created a demand, educated customers and trained drillers
- The economy was growing and the income of the customers rising
- The conditions for small businesses improved
- The rural people have a high literacy rate
- The users were previously exposed to water and sanitation campaigns and new pumps versions became available
- A National Rural Clean Water Supply and Sanitation Strategy was established

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