Field Note

Water and Sanitation Program

An international partnership to help the poor gain sustained access to improved water supply and sanitation services

Villagers Treat Water as an Economic Good, Olavanna, Kerala, India

South Asia Region

SMALL PRIVATE INITIATIVES (SPI) IN THE WATER AND SANITATION SECTOR IN INDIA

In India, water and sanitation services are predominantly provided by Government and para-statal agencies. There are very few instances of large-scale formal private sector participation; where they exist they are mostly service contracts or management contracts.

However, a number of small-scale informal private initiatives have emerged to fill the gaps in the existing delivery system. Some of these private initiatives are in partnership with the Government, and others have come about on their own in response to demand from clients.

This series of Field Notes on Small Private Initiatives in the Water and Sanitation Sector in India is designed to document a few successful urban and rural experiences focusing on the poor.

SPI Series: 4

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SUMMARY

Although Kerala is classified as a rain-rich State, there are several pockets of acute water scarcity. Since 1987, one Panchayat in northern Kerala is breaking new ground in community action for self-sufficiency in drinking water supply. Faced with acute water scarcity and the unreliable service of the State water authority, small groups of villagers of Olavanna Gram Panchayat in Kozhikode district have been organizing themselves into groups, collecting money, setting up small piped water supply schemes, and meeting their own water supply needs, rather than depend on the State Government. In this effort they have been inspired by the Gram Panchayat President. This field note describes a demand responsive approach in operation, documents a case of managing rural water supply at the lowest appropriate level, and is an example of how the Government can move from a provider to a facilitator. Most importantly, this field note is about a rural community treating drinking water as an economic good. This is perhaps the first initiative in rural India where the user community is meeting the full capital and operation and maintenance costs of their drinking water schemes.

A water tank constructed under a private drinking water scheme

Background

THE OLAVANNA Gram Panchayat in Kozhikode district had a drinking water scarcity problem. Olavanna presented a classic case of '*water, water everywhere, but not a drop to drink*'. The 3 rivers, including Chaliyar, flowing through the Panchayat are saline. Other non-saline surface water bodies in the Panchayat go dry in February, as summer sets in. The water scarcity forces people (and women in particular) to walk long distances to get water for their daily needs.

The water scarcity was especially acute during the drought in 1985. At that time, there was only 1 Kerala Water Authority (KWA) scheme in the village providing uncertain and erratic water supply to just 1,600 of the 7,100 households. The villagers, fed up with the KWA scheme, picketed the Gram Panchayat (GP) office, demanding drinking water schemes. This led to the GP promising to provide drinking water schemes in the village. This commitment led to the commissioning of the first piped water scheme in 1987 in Vettuvedankunnu Ward of the Olavanna Panchayat (*see box on the Panchayati Raj Institutional Structure*). This scheme was funded by Government grants to the Block Panchayat. The Vettuvedankunnu scheme consisted of an intake well, an overhead tank, and pipelines to distribute drinking water, through public standposts, to serve 400 households.

Since 1987, the GP and the Block Panchayat have built 18 piped water schemes, which provide drinking water through public taps as well as house taps to 1,362 families. The KWA also commissioned 2 more schemes in 1990 and 1998 which serve 2,400 households. However, the quality of service provided by the KWA has not met customer satisfaction and spurred on by the GP President, Mr. Babu Parassari, the Olavanna villagers resolved to meet their drinking water requirements themselves.

Olavanna Gram Panchayat: Main Features

Location: One of 6 Gram Panchayats (GP) in Kozhikode Community Development Block in north Kerala.

Area: 21.43 square kilometers (km), with 32 hillocks, 21 water channels, 41 ponds and the river Chaliyar that bisects the Panchayat.

Population: 44,398 (1991 Census) in 7,153 households. 2,072 persons live in 1 square kilometer (sq. km.) of area, whereas the average density of Kerala is 749 persons per sq. km. Female population is higher than the male population.

Literacy: 100 per cent; the Panchayat has 3 high schools, 4 upper primary schools and 8 creches (*anganvadis*).

Occupational Breakup: Cultivation 377; Agricultural labor 1,314; Household industry 318; Construction 1,927; Other workers 7,550; Marginal workers 1,095; Non-workers 31,817.

The Private Response

THE SCHEME initiated by the GP generated a lot of interest in the 3 villages. The GP President was acknowledged as a true leader and his efforts to solve the drinking water problems of the GP applauded. The villagers realized that local needs required local solutions. However, given the financial constraints, which were discussed openly in the GP meetings, a retired school teacher had a novel idea in 1989. He collected money from the community and installed a small 1 HP pump with an intake well to service 5 neighboring families in the hamlet of Kambiliparamba. The GP supported this initiative. This project was successful and the other villagers realized that instead of helplessly agitating against the KWA and the GP, they could themselves solve their drinking water problem. This could be done at a low cost and, as they themselves managed the project, they could organize the service according to their requirements. This scheme serving just 5 households was soon to herald a new era in rural drinking water supply in Kerala. Encouraged by this initiative and supported by the GP President, 54 other households of Kambiliparamba got together in 1989, and, with a contribution of Rs. 4,500 each, formed a registered co-operative Society to provide drinking water for their own needs. This was a piped water supply scheme consisting of a similar intake well, pumpset, overhead tank and distribution system. From 1991 onwards, several such private Societies have been formed and similar small piped water supply schemes commissioned. Today, there are 26 such private co-operative Societies operating in the GP and 6 more

The Panchayati Raj Institutional (PRI) Structure

THE PRI structure is a three-tiered one: Zila Panchayat (district level), Block Panchayat (intermediate level) and Gram Panchayat (village level). A district typically has several Block Panchayats and each Block Panchayat contains several Gram Panchayats (GP). Each GP, which comprises one or more villages, has several *wards*, which are electoral units for GP elections. There are also several *hamlets* within a village, which are locally-recognized clusters of habitations.

Societies are in the process of constructing their schemes. The GP has successfully shifted its role from being a provider to a facilitator and it has performed the regulatory function to sustain and encourage this novel project for the last 11 years. The GP does not provide any funds to these Societies, as capital costs or for the operation and maintenance (O&M). It also needs to be noted that not a single private scheme has failed till date.

Institutional and Operational Arrangements

How Private Societies Start

The process of initiating a private piped water supply scheme is as follows.

- After enlisting all households who wish to benefit from a piped water supply scheme, the beneficiaries get together, draft their by-laws and register their co-operative Society (under the Co-operative Societies Act of 1860). This process is facilitated by the GP, which in turn supports a group of individuals who are willing to mobilize the beneficiaries and take the responsibility of running the project in an open and democratic manner.

SELF-REGULATION is a key concept in these Societies. Once the scheme is ready, water is available 24 hours a day, except in the summer months of April and May. During this period, water supply is reduced by mutual agreement among the beneficiaries, to about 10 hours a day. As the users are also the managers, self-regulation brings in an element of responsibility and ensures that there are no unnecessary complaints.

Extracts from the By-laws: The following extracts from the by-laws of a private Society give an idea of the detailed institutional arrangement that has been worked out.

Meetings

- The date of the GBM will be intimated to all the members at least 3 days before the meeting.
- The quorum is 50 per cent of the general body.
- EC meeting dates and times must be intimated to EC members at least 24 hours in advance.
- Members should inform the EC in writing if they cannot attend a meeting.
- If a member is absent from 3 consecutive EC meetings without notice, the EC has the right to co-opt another member in his or her place, but has to obtain the approval of the GB within 3 months.
- A copy of all rules of the Society, which has been signed by the Secretary and adopted by the EC, must be made available to all members.

Finances

- The Secretary is authorized to sign for expenses up to Rs. 100 a day. For larger amounts, the Treasurer has the sanctioning authority.
- Amounts exceeding Rs. 500 should not be kept in the custody of the Treasurer.
- Any amount more than Rs. 500 must be deposited in a bank account in the name of the Secretary in a bank chosen by the EC.
- The Treasurer has to present written accounts to the EC and the GB.

Dissolution of the Society

- If for any reason the Society is dissolved, all assets of the Society shall be handed over to another Registered Society with a similar mandate.
- The assets of the dissolved Society shall not be divided among the members in such an instance.

Household connections

- All members of a Society must permit other members to lay pipelines through their property. However, this must be done without causing any damage to the property-owner.
- All members must take individual connections from the main line to their houses, at their own expense.

Permitted uses of water

- Water must not be used for irrigation under any circumstances. Storing water for irrigation, if detected, will invite penal action by the EC. However, a show cause notice must be issued to the member concerned before initiating any action.

House sale

- If a member sells his house, the water connection is also transferred. These sales must be intimated in writing to the EC. In no case will the EC pay back the initial contribution of the original member. The purchaser will automatically become a member of the Society.

- Members of the Society are asked to pay their membership fees, which varies from Rs. 4,500 to Rs. 12,500 per household. The amount differs across Societies because the costs of individual schemes vary.

- Land is purchased for the open well and for the overhead storage tank. The location of the well is arrived at by consensus.

- Local expertise construct (or reno-

vate) the well and the storage tank, and lay the pipelines.

- Beneficiary families provide voluntary labor as per the skills required from time-to-time in the scheme. This is in addition to the cash contribution.

- If electricity is available, an electric pump is bought and installed. If not, a diesel pump is purchased.

Legal Structure

THE GENERAL Body (GB) of each Society, consisting of all users (averaging around 50 households per scheme), elects an Executive Committee (EC) of between 7 and 11 members, including a President, Vice-President, Secretary and Treasurer. The EC is elected annually and runs the day-to-day affairs of the Society. The Treasurer operates the Society's bank account, and is answerable to the EC. The EC has to obtain the permission of the GB to utilize the Society's funds - including the payment for the construction of the water supply scheme. Each year, a General Body Meeting (GBM) is held to scrutinize the accounts, discuss the annual report, and elect the EC for the following year. Transparency in everyday functioning is a critical factor contributing to the sustainability of the Society. Each Society has prepared detailed by-laws for efficient functioning.

Local Technical Enterprise

SINCE MANY Olavanna residents work as construction labor in nearby Kozhikode city, they are familiar with the work of laying pipelines and constructing water tanks. This experience has given them the confidence to undertake the construction of the piped water schemes without technical assistance from outside the village. Nearly all of these schemes are constructed within 2 to 4 months. The quality of construction is good and, compared to KWA-constructed schemes, these have lower material and labor costs. This is an aspect that even the KWA acknowledges.

> "It was difficult to pay the Rs. 5,500 needed for the scheme. But I paid it in 3 installments over 6 months. And it was worth it. I have no drinking water problems now."
>
> *Khoya, a poorer resident of Olavanna*

Social Concerns

ALTHOUGH SEVERAL residents of Olavanna are fairly well-off by rural standards, there are some relatively poorer families in the GP. It is interesting to note that membership to the private Societies is, however, not restricted to the well-off. Even poorer families contribute to private schemes, paying their initial contribution in installments. The reason is straightforward, as the GP President notes, "If the need is felt, the money can be found." The GP President maintains that he has been sensitive to the issue of the poor families' requirement for water and their ability to pay for it. In order to assist the poorer families, the Societies accept their contribution in installments. In some Societies, the poor are given an opportunity to earn wages during the construction of the scheme, that part-funds their contribution. However, it needs to be accepted that the really poor have not opted for the private schemes, but are dependent on the GP and the KWA schemes.

Financial Issues

HOUSEHOLDS WHO wish to join the scheme *after* it has been commissioned have to pay twice the initial membership fees to offset the initial risk taken and efforts made by the members who initiated the Society.

The beneficiaries pay all the O&M costs, including the cost of hiring a pump operator and energy costs. The Society makes sure that there is an operating surplus for future repairs and maintenance. The due date for monthly payment is the 30th of the month. Payments are accepted till the 5th of the next month with a fine. But if the payments are delayed after the 5th, supply is disconnected. By and large, severance is rare.

> THIS IS perhaps the first instance in rural India where the local community is meeting the full capital cost as well as the O&M cost of a drinking water project.

Women at the street tap

IN KAMBILIPARAMBA, the oldest cooperative Society in the Panchayat, members have installed a sensor-based automatic switching system, which starts the pump when the water level in the tank falls below a certain level, and stops when full. All expenses, except the salary of the full-time watchman, are met from the interest on the reserve fund in the Society's bank account. Members contribute Rs. 25 per month for the watchman's salary. According to the President of the Kambiliparamba Society, although even the watchman's salary could be met from the bank account, the Society decided to continue household collections simply to sustain a sense of ownership in each beneficiary household.

Each household is allowed 400 liters per day. Water meters are installed to check the consumption, and excess consumption attracts a penalty at the rate of Rs. 20 per 1,000 liters. This is indeed a remarkable achievement, for, not only can the Societies collect the full O&M costs, but they can also impose such high penalties for excess usage. This is in stark contrast to the experience of the water boards where meters are tampered, the O&M costs not paid and where it would be impossible to regulate and restrict the use of water at critical times.

Gram Panchyat-run Schemes

IN ADDITION to the piped water schemes by private Societies, the GP and the Block Panchayat have built 18 piped water schemes so far, and 12 more are under construction. These schemes provide drinking water through public taps as well as house taps, benefiting 1,362 families.

Schemes run by the Olavanna GP also have registered Societies, which function on the same lines as the private schemes. These registered Societies plan, design and construct the drinking water schemes. In these GP schemes, households contribute 25 per cent of the total capital cost of the scheme either in cash, labor or land, while the GP provides the remainder. Poorer and low-caste families benefiting from a Panchayat-run scheme are not required to contribute towards capital costs. Instead, an additional amount ranging from Rs. 300–400 is collected from each of the *other* contributing beneficiary families. Water supply is limited to 2-3 hours in a day. In the summer months, it is restricted to only $1^1/_2$ hours a day.

Once the scheme is constructed, the beneficiaries contribute towards partial O&M. Water meters are installed on house connections, and Rs. 15-20 is collected per month from each family. Excess consumption of water attracts penalty, as in private schemes. Poorer families, who cannot afford to pay the capital cost to have household connections, instead draw water from street taps and pay between Rs.10-15 a month as the O&M costs. The GP pays Rs. 450 per month towards the salary of the pump operators and the cost of fuel. The maintenance of the street taps is done by the local KWA officials, for which the GP pays the KWA an annual fee of Rs. 1,750 per street tap. The GP realizes that this is a high cost and is planning to hand over the entire O&M of the GP schemes to registered Societies of water users, like those which run private schemes.

KWA Schemes

THE FIRST KWA scheme was commissioned in 1984. It was a small piped water supply scheme in the Gram Panchayat (GP), constructed and operated by the KWA. This scheme provided drinking water to 1,600 individuals through private connections and street taps. In 1990, another KWA scheme was commissioned, benefiting about 1,200 people and a third scheme was started in 1998, for another 1,200 persons. The sources of the 3 KWA schemes are open wells. These 3 schemes are designed to provide 40 liters per capita per day (lpcd) drinking water, but cover only 4,000 individuals in the GP with a total population of 44,398.

Of the 45 standposts of the KWA, only 25 are being used as there is no water in the rest. In addition, the quality of service is poor and these schemes become extremely unreliable between the months of February and April every year. The KWA's cost structure made supply to rural areas prohibitively expensive. For example, while the GP paid a pump operator Rs. 450 per month, an equivalent employee of the KWA receives Rs. 10,000 per month (along with other benefits that are standard for Government employees). As a result, while the average monthly revenue from the schemes at best comes to about Rs. 4,000, the average monthly expenditure, mainly towards the salary of operators and electricity charges, comes to about Rs. 20,000.

An important reason for the community initiative in Olavanna is that this Panchayat was neglected by the KWA as there are no reliable drinking water supply sources that could enable the KWA to implement a scheme of a reasonably large size. The KWA is not geared to construct and operate small schemes that were suitable for this area. This gap could only be filled by the GP and the private schemes.

The Government of Kerala's decentralization plan has devolved

Comparative Assessment of RWS Schemes in Olavanna

	PRIVATE SCHEME	GRAM PANCHAYAT	KWA
Per family share in capital cost	Rs. 4,500 (full recovery)	Rs. 7,000 (25% recovery)	Rs. 7,000 (no recovery)
Average capital cost	Rs. 2.5 lakhs	Rs. 3.75 lakhs	Rs.16.8 lakhs
Per family share in O&M cost (per month)	Rs.25-50 (full recovery)	Rs.10-20 (75% recovery)	Rs.17 (25% recovery)
Average number of house connections	54	52	240
Number of public standposts	—	20	45 (25 in use)
Supply hours	24 hours (10 hrs in Apr-May)	2-3 hours ($1^1/_2$ hrs in Apr-May)	Uncertain & poor service
Supply months	12	12	8-9
Management responsibility	Society	GP	KWA
Number of schemes	26 (6 under construction)	18 (12 under construction)	3

powers to the GPs. In March 1999, the Government issued an order transferring all RWS schemes to the GPs. The State water utility, the KWA, is now only responsible for multi-Panchayat schemes. This means that the KWA schemes at Olavanna are in the process of being handed over to the GPs. Given the success of the private schemes and the GP intention of handing over the GP schemes to private Societies, the Olavanna President would like to hand over the KWA schemes to the private Societies, with the GP keeping a close eye on the functioning of the Society. These measures will go a long way in ensuring the sustainability of the RWS projects and management by the actual users.

Key Lessons

■ **Willingness to pay** The Olavanna GP is unique in that community groups have paid 100 per cent capital costs, in addition to 100 per cent O&M costs for rural water supply schemes.

■ **Private schemes are more cost-effective** The difference in the O&M costs of private schemes and GP-run schemes is basically due to the difference in staff salaries (that is, payment to the watchmen-cum-pump operators). Therefore, the KWA costs are far higher compared to the O&M costs incurred by private Societies for their schemes.

■ **User management has led to user satisfaction** An interesting facet of the sustained service from these schemes is the absence of conflict that might be expected over an issue as important as water supply. Local villagers ascribe this unique feature to the level of satisfaction provided by the service.

■ **Local expertise** By constructing overhead tanks and piped systems for a community mini-water supply scheme, *without* outside technical assistance, the villagers of Olavanna have demonstrated that the technology involved in such schemes can be demystified and used by rural households.

■ **The Panchayat as a facilitator and not provider** Perhaps the most important lesson of Olavanna is the demonstration that the GP can effectively reduce its role from being a passive provider of public services and can instead become a dynamic facilitator for communities to take on the responsibilities of helping themselves. As a facilitator, the GP is seriously considering transferring its existing rural water scheme assets to user groups.

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