

Paliganj Vitrani Krishak Samiti: A Case Study

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This case study provides a glimpse into the process, the people, failings and successes in the evolution of one of the well-known water user associations in Bihar. It is a testimony to a motivated and passionate leader's crucial role in the success of Participatory Irrigation Management. The work of Paliganj Vitrani Krishak Samiti has already been appreciated by a number of agencies like the World Bank and the Planning Commission of India.

1. Introduction

2.

Paliganj Vitrani Krishak Samiti (hereafter referred to as PVKS) is a water users' association working for irrigation management of Paliganj distributory system in Paliganj, a subdivision that is around 80 km from Patna in Bihar.

Paliganj distributory is an offshoot of Patna Canal, 75 km downstream from its mouth/head from Sone Barrage (near Indrapuri in the Rohtas district of Bihar). It has two sub distributaries: Chandos and Bharatpura. The total length of the system (including sub distributaries) is around 40 km and it irrigates 4500 ha of agricultural land. The system's channels meander through Paliganj and Dulhania Bazar blocks of Patna district and Alwar block of Alwar district covering more than 50 villages.

Table 1
Paliganj Vitrani (Distributory): Some Facts

Geographical Span	52 villages in three blocks of two districts
Agricultural Land	12000 Hectares (approx)
Command Area	6000 Hectares (approx)
Total length of distributaries (including two sub distributaries)	40 km
Annual demand of <i>Patwan Kar</i>	Rs.10,00,000 (approx)
Number of farmers who benefit from the water supply	10,000 (approx)

The Paliganj distributory started to sicken in the later part of the 70s when the authority of the government was reduced considerably due to socio-political reasons. The farmers

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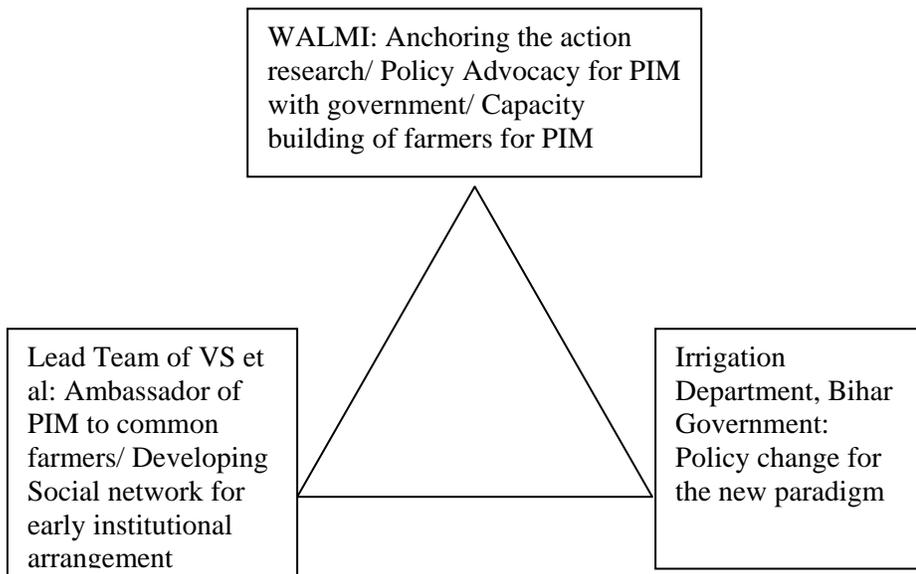
were not paying irrigation taxes and became increasingly indifferent to frontline staff. The staff began to avoid farmers after the area came under the influence of naxal movement. In the absence of effective government presence, the farmers began to take the water supply for granted. Wastage became rampant and cases of conflicts became common which often resulted in violence. The lower order farmers were the first to feel the ill effects of this transition as more often than not water was either used up or wasted before it reached them.

As the state government's financial condition worsened, maintenance became infrequent and the system plunged into total disrepair. Siltation and breaches in the embankments made it almost non-functional. But according to the people the blame for the sorry state of affairs was squarely on the government. Over time they lost any hope that things would change for the better.

2. Process of Change

In 1988-89 Water and Land Management Institute (WALMI) was established in Patna, which initiated an action research on the management of sick irrigation systems with support from USAID. Four irrigation systems were taken up for this action research including Paliganj and Garachoube distributaries of Sone Canal, Jamunia branch canal (Gandak river), and Asarganj distributory (Badur stream). The action research was aimed at developing a participatory management framework for the sick irrigation systems both for its management and more equitable use.

Among the four systems taken up for the action research, Paliganj distributory had the advantage of relative proximity to WALMI and the action research work started here. The action research team was formed under the guidance of Dr L P Srivastava (LPS), the then director of WALMI. WALMI conducted a benchmark baseline survey of the system and the area to understand the perspectives and concerns of farmers towards the management of the distributory.



Players and their roles in the evolution of Paliganj Vitrani Krishak Samiti

The early meetings were extremely unruly as the farmers thought the WALMI team represented the water resources department and vent all their anger and frustration. Slowly, the team started a dialogue with the farmers about how things could be changed for better. At the same time, WALMI team was roping in influential persons to accelerate the process of social mobilisation in favor of a new paradigm for managing the distributory. They came to know about Valmiki Sharma (VS) who was then a local leader in the Congress Party and contacted him for support. He enthusiastically got involved in the campaign for organising village meetings and started the process of convincing farmers for PIM (Participatory Irrigation Management) of the Paliganj distributory.

Text Box 1
Evolution of PVKS: A Time Line

Year	Landmarks/Achievements
1989-90	WALMI started ideating with farmers of the command area in village meetings. The first meeting was held in Ullar village. LPS et al met VS and encouraged him to participate in the social mobilisation for the new paradigm. VS became interested and later took a lead role in selling the idea in numerous village meetings. An ad hoc distributary level committee (DLC) of farmers was constituted who was willing to devote time to work for the cause.
1990-91	WALMI organised training programs and exposure visits for the farmers especially lead /active farmers. The ad hoc DLC campaigned in the villages for formation of village level committees (VLC). A formal DLC was constituted out of representation from these VLCs.
1991-92	The DLC along with VLCs mobilized farmers to contribute in grain and labour (<i>Chanda & Shramdan</i>) for desilting of the distributary and repairs of breaches in its embankments before the onset of the monsoon season. For the first time in more than ten years the water managed to reach the end of the distributary. DLC/VLCs worked with the front line staff of the department for management of the distributary.
1992-93	The department started to assist and support DLC. Gradually, DLC started taking the center stage in the management of distributary.
1993-94	The DLC got registered as Paliganj Vitrani Krishak Samiti (PVKS) under societies registration act, 1860.
1996-97	The management and maintenance of the distributary was formally handed over to the PVKS on a pilot basis for a period of three years.
2000-01	The department evaluated the operation and functioning of PVKS and decided to continue with the new arrangement.
2003-04	The management was visited by important dignitaries from the planning commission

Later, an ad hoc eleven-member DLC was constituted in the presence of WALMI team in a meeting attended by farmers from different villages. This mostly had those farmers who were playing a very active role by then and were willing to work for the cause. The ad hoc DLC later became a tentative institutional vehicle which represented farmers' interests and concerns and which, along with the WALMI team worked to reach farmers in more villages through a series of village meetings.

In less than a year time, twenty village level committees (VLC) were constituted in villages where farmers got interested. The VLC was supposed to be a forum, which would represent the interests of the farmers in a more participative management of the distributary. Each VLC had 11 members: one president, two vice presidents, one

secretary, one treasurer, and six other members. The committee was constituted in the presence of the DLC representative by reaching a consensus and if there was any disagreement the constitution was to be delayed until a consensus was reached.

By 1992-93, 45 village level committees were constituted and it was felt that the ad hoc DLC should be replaced with the elected DLC. The presidents of all VLCs constituted the general body of the DLC and the executive body of DLC was formed by a consensual selection of five office bearers: the president, two vice presidents, secretary, and treasurer and six non-office bearer members. Valmiki Sharma was chosen as the secretary.

Farmers also directly started to get involved in the maintenance of PVKS. Grain (*chanda*) was collected from households and labor, volunteered for desilting and repairs of the distributary. A team of farmers (mostly from lower reach) used to keep an eye on wastage and misuse. This effort, for the first time helped the water to reach the tail-end of the distributary, for irrigation. This change multiplied support of the villagers for PVKS. The department staff now started to work actively with PVKS. The policy advocacy of WALMI with the state government got strengthened with the encouraging signs of potential improvement in the management of distributaries by involving the users.

On 25th February 1997, the PVKS signed a Memorandum of Agreement (MOA) with the water resources department, Government of Bihar. Under this agreement, the maintenance and operation of Paliganj distributary was handed over to PVKS and it was authorised to collect irrigation taxes from the farmers. The PVKS had to give 30% of the irrigation taxes to the government in exchange for its responsibility to manage and maintain the parent canal. The MOA was under observation for a period of three years after which a review was to be done.

In 2000-01, there was a review of the new arrangement by the government, which recommended that in view of the satisfactory performance of PVKS the arrangement should be extended.

Text Box 2

Odds in Favour of PVKS

PVKS had quite a few chance occurrences in its favor. One of which was partnership with Technology Information Forecasting Assessment Council (TIFAC) . TIFAC started its work from WALMI premises and was working on some pilot projects. They came to know about PVKS through WALMI and assigned it a project. In 2002-03, Dr S R Singh (State Director of TIFAC) left TIFAC. PVKS was able to impress through its performance. As a result, TIFAC, New Delhi decided to work directly with PVKS in more projects.

PVKS got a revolving fund of Rs. 2 lakhs from TIFAC to provide high quality inputs to the farmers. PVKS along with TIFAC, now regularly organises extension fairs, exposure visits, and training programs to equip farmers with better technologies. ICAR / TIFAC are also helping PVKS to promote breeders' societies of progressive farmers to multiply seeds of high yielding paddy from breeders' / foundation seed. The extension services of PVKS-TIFAC have greatly *increased (up to 50%) the yield of paddy* in the area and reduced the cost (e.g. by propagating reduced seed rate for nurseries and the system of rice intensification).

The most important of coincidence that was in the favor of PVKS is its association with President APJ Kalam. Before becoming the president of India, Mr. Kalam was associated with TIFAC. During his first visit to Bihar in May'03, he expressed his willingness to visit Paliganj (TIFAC project) and to meet farmers. And this gave PVKS (VS et al) direct access to the first citizen of India. During the process of interaction, the farmers demanded a paddy procurement centre for FCI at Paliganj that immediately got the President's approval.

On the President's instructions, the FCI opened its Paddy Procurement Centre in 2003-04. In its first year, it procured 29,000 quintals of paddy @ Rs. 550 per quintal. This stabilised the procurement price of the paddy in the area and benefited the farmers with an average price advantage of Rs. 75 per quintal from the previous year. Cumulatively, this amounted to an incremental income of more than Rs. 20 lakhs to the farmers.

In July'03 some farmers visited President Kalam in the *Rashtrapati Bhavan* on the his invitation. During the meeting the President exhorted them to start cultivation of medicinal and aromatic plants.

Valmiki Sharma gleefully informs, "A representative from the State Bank of India has approached us to finance the cultivation of medicinal and aromatic plant if such projects are forwarded to them for a loan." Valmiki understands the significance of such a polite and courteous offer from a banker.

3. Operational System of PVKS

The operational system of PVKS is aligned with its four broad categories of activities:

Distribution of Irrigation Water among Users

There is a working committee dedicated to distribution of irrigated water among users, appointed by the executive body of PVKS (also known as DLC). This committee oversees the distribution of water in cooperation with the VLCs and a team of volunteers (15-20 farmers mostly from the lower reaches). Besides volunteers there are also 2-4 mates (temporary workers during peak *kharif/rabi* seasons) who keep a constant and close watch on the delegated stretch for any breach of the distributory / agreed distribution norms. If the mates find difficulties in dealing with the situation, they inform the concerned VLC/the team of volunteers who become active to correct the natural breaches with *shramdan* and to resolve breaches of distribution norms through negotiation and social pressure.

The fundamental distribution norm, which has wide acceptance over years since PVKS took over, *is equity in distribution of irrigation water among different users to the extent possible*. This acceptance has reduced distribution related conflicts and violence. Innovative ways have been devised to achieve equitable distribution with minimum social turbulence. One such way is time division. A broad agreement has been reached among users that the farmers from the upper reaches would irrigate their field during the convenient day time (sunrise to sunset) while those on the lower reaches would irrigate the fields during the inconvenient night time (sunset to sunrise). One may find this arrangement unfair to the farmers from the lower reaches. But the same arrangement had made the upper reach farmers to collectively conform to the time division norms. The physical-natural advantages of the upper reach farmers not only gives them first access and availability of irrigation water from the distributory, it also gives them leverage over the availability of irrigation water to the lower reaches. The lower reach farmers are aware of this and have accepted the inconvenient time slot in return for a more predictable availability of irrigation water. The upper reach farmers feel their obligation towards the lower reach farmers for having acceded the convenient time slot to them and hence have agreed for not irrigating after sunset and before sunrise.

Any disagreement, in case of scarce water in the distributory or more need of irrigation to a given field, is resolved through impromptu negotiation among users, which may be moderated by representatives of VLCs/DLC.

As PVKS chose not to exclude anyone from using the water, the operational responsibility of the PVKS in distribution is more of minimising wastage and as an arbitrator/moderator of any disagreement/conflict among users in irrigating their fields.

Repairs & Maintenance of the Distributory System

There are two kinds of repairs and maintenance works. One is routine work like repairing small breaches and the other is annual maintenance work before the monsoon, which is done by volunteers and mates as mentioned earlier. The DLC core team does a walk through over the distributory to assess the type and cost estimate of annual maintenance works like desilting, clearing the sides from weeds, strengthening of embankment walls etc. along different stretches. The concerned persons from the given VLC under which the stretch falls are entrusted with the responsibility of maintenance.

Assessment & Collection of Patwan Shulk

After the end of a season (*rabi/kharif*), an assessment of the irrigated area of individual farmers is done and the demand for the season is prepared by the VLCs. The DLC has appointed authorized collection agents for different clusters of villages who collect *patwan shulk* for individual farmers against the demand. These collection agents then submit the amount to the DLC and are paid a commission of 5% of the collected amount.

Accounting & Record-keeping

The PVKS has one full-time accountant for accounting and record-keeping work, who reports directly to the secretary of PVKS.

4. Institutional Arrangement of PVKS

As per the bylaws, the PVKS has a two-tier structure of VLCs and DLC. VLCs are village level units and any user, by paying a membership fee, can become the member of its general body. The general body then chose an 11-member executive body, president, secretary, and treasurer; two vice presidents and six other members.

All presidents of different VLCs constitute the general body of the DLC, which again elects an 11-member executive body. The DLC is registered under Societies Registration Act, 1860.

The secretary of DLC works as the chief executive of PVKS who works with the executive body/VLC to manage the system in the larger interests of users.

The executive body and general body are expected to meet every fortnight and every month respectively for required discussion and deliberation.

Text Box 3
Mapping Change: Before & After PVKS

Before PVKS

Water didn't reach beyond the first half stretch of the distributory in sufficient quantity. The villages near the tail end of the canal got little or no water.

There were 17-18 blockage points/flash points. These were villages along the distributory that used to stop the water flow by felling trees, a source of bitter resentment for villages on the lower reaches. These issues frequently led to conflicts and sometimes even violence.

Farmers inhabiting the upper reach villages used to waste a lot of water, as they didn't feel any obligation/responsibility to the farmers on the lower reaches. Very often such wastage reduced availability of water to the lower reach farmers.

The distributory was not considered as a reliable source of irrigation. Those who didn't get water from the distributory had to use bore well. The high cost of irrigation meant reduced income from agriculture.

Farmers didn't deposit water tax (the collection dropped to less than 5%) and the department didn't have enough money for proper maintenance and management of the system.

After PVKS

Water began to reach full the stretch, especially the lower reach and farmers from even the tail-end villages once again started to irrigate their fields from the distributory.

The number of blockage points are reduced to only a few, which are resolved without any conflict or violence.

The water wastage has been reduced substantially by peer pressure and by a feeling of shared responsibility.

The distributory became a more reliable source of irrigation. The total acreage effectively irrigated by the distributory increased resulting in better and more yield.

More agencies like TIFAC, ICAR started their work in the area in partnership with the PVKS.

5. What were the Implications?

1.1 Win-win Situation for the Government and the Farmers

It was a win-win situation for all. The government incurs no cost for the routine management and maintenance of the distributory. But it is getting half of the taxes collected, which amount to around 15% of the demand. The users without any incremental cost get more water for irrigation for more area in a more reliable way.

1.2 Policy Implication

The action research at Paliganj was meant to explore workability of Participatory Irrigation Management Approaches in reviving and revitalising sick irrigation systems at distributory and sub-distributory levels. Although, out of the four systems adopted for WALMI action research, only Paliganj reached a logical conclusion. The encouraging results of working with PVKS changed the attitude of the department towards PIM.

An apex body was constituted (that included development commissioner, the department secretary, representatives from NGOs etc.) to work towards overseeing PIM across the state. The department had also formulated guidelines for expeditious replication of the Paliganj models.

According to Mr. I. C. Shukla, anchor of PIM at WALMI, "More than 600 irrigation systems (at distributory/branch and sub-distributory levels have been earmarked for PIM). In 80 of the systems, distributory level committees have been constituted out of which around twenty DLCs have registered under Society Registration Act, 1860. Since the review of first pilot transfer of Paliganj distributory in 2000-01, eleven more systems have formally been handed over to the DLCs (9 in 2002-03 and 2 in 2003-04)."

The PVKS has been visited by a number of national and international agencies like the Planning Commission, World Bank, ISPAN, and WAPKOS. A team from the Planning Commission (Lakshami Ratan Saha *et al.*) visited Paliganj in 2004 to study the model. Apparently they appreciated it and would incorporate its learning for formulating strategy to give a new policy thrust towards PIM in the five-year plan.

5.3 Livelihood Implication

Reduced Cost of Irrigation

Besides the distributory, the area is also endowed with deep bores owned by relatively big and prosperous farmers. When the distributory was sick, the farmers would source irrigation water from the bore-wells by paying a rent to the owners and incurring the cost of diesel used in the pump systems (as the electricity supply was either absent or highly erratic, the diesel engines were used). But when the distributory again became functional the farmers save almost all the cost which they incurred on rent or in purchasing diesel.

Text Box 4

Change in Pansui Village

The Pansui village, home of the president of PVKS Sri Gopal Singh Yadav, is located near the tail end of Bharatpur branch of the Paliganj distributory. The neighbouring village, Bharatpur, is the stronghold of the CPI-ML.

A visit to the village revealed the farmers' perspectives on the change in the management of Paliganj distributory. Although the farmers are apparently happy, there were complaints about the free-loaders who neither volunteer time nor give *patwan shulk*. One of them quips, "Small and marginal farmers of the village are more active and forthcoming in volunteering their time. This lot has also benefited the most from the new arrangement as big farmers are now becoming less inclined to agriculture and giving their land for sharecropping in face of labor problem and naxalite unrest."

According to the farmers, "The cases of conflict are rare and any such case is resolved with impromptu negotiation and understanding of mutual concerns."

Gopal Singh Yadav further adds, "The cases of increased conflicts and violence were the result of the gradual ineffectiveness of the department in managing the system after mid-70s and the void thus created encouraged "free-for-all" behavior on part of the users who often clashed in the absence of any regulation/arbitration by an authority." The emergence of PVKS has given them a compromise and negotiation platform for a long-term collective interest.

More and Better Yield

After the revival of the distributory, the acreage, especially under rabi crops have increased. The crops productivity has increased (which are up to 50% in case of paddy) which partly can be attributed to availability of irrigation water especially during the critical crop periods.

Increased Wages

There has been a trickle down effect for the farm labor. More and better yield means farmers are in a position to pay the higher wage demanded by the farm labor (the area is under the influence of militant leftists).

6. What Made PVKS Click?

6.1 *Effective Leadership*

It was a stroke of chance that WALMI was able to find an effective leader in Mr. Valmiki Sharma (VS) who was instrumental in the social mobilisation process and encouraged the acceptance of WALMI initiatives. This can be gauged from the fact that out of the four systems taken up for the action research only Paliganj reached a logical and beneficial end. The reason for failure in the other three cases could be attributed to the lack of effective leadership.

1.2 *Effective Maneuvering by WALMI*

The WALMI action research team was in constant touch with the ground realities with frequent visits/interactions with the lead farmers. This was possible as Paliganj was relatively closer to WALMI. The other areas where action researches were taken up were distant and hence didn't enjoy this advantage.

The then director of WALMI Dr L P Srivastava was personally involved in it's the Paliganj project and was impressed with the encouraging response from the farmers. He enjoyed good rapport with the senior officials of the irrigation department where he had worked as chief engineer. The lead team of VS et al also considered him as their mentor and guide.

Dr Srivastava also ironed out the last minute hitches by using his personal rapport e.g. he case where there was a disagreement over the acreage being irrigated by the distributary. As the lead farmers were involved in managing the distributary before the official transfer they knew that the acreage is less than what is mentioned in MOU for the official transfer. Dr Srivastava had to make the farmers agree to the increased acreage as the irrigation department refused to accept the reduced acreage.

1.3 *Early Positive Results*

The lead team of VS et al brought early tangible results. They mobilised public support for *shramdan* and *chanda* for desilting and repair works of the distributary in 1992. This was followed by monitoring of water usage through a team of volunteers to minimise wastage. And the results were spectacular. For the first time in more than a decade water reached villages at the end of the distributary. This started a virtuous cycle of gaining credibility and confidence with more and more farmers.

7. Issues

7.1 *Sustainability Concerns*

7.1.1 Revenue Model

The only important source of revenue to the PVKS is the *patwan shulk* collected from the farmers and the major expenditure is payments made to the government and the expenses incurred on the maintenance of the distributary.

As per the agreement with the Bihar Government, the PVKS would deposit 30% of the demand with the government and would keep 70% to meet expenditures incurred on maintenance and management of the distributory. At the prevailing collection rates, it would simply not be possible to follow this rule as the revenue in that case would be far less than the minimum annual expenditure. So, they convinced the government to relax this rule till such time as the collection increases and accept 50% of the total collection instead of 30% of the total demand in the meanwhile. A representative estimate of revenues and expenditure are given in the following table.

Table 2
An Approximate View of Annual Cash Flow
(Source: VS, PVKS)

Revenues		Expenditure	
Heads	Amount(Rs)	Heads	Amount(Rs)
Collection of <i>patwan shulk</i> (taking collection as 30% of the total demand of Rs 1000,000)	300,000	Payment to Bihar Govt.	150,000
		Staff salary	40,000
		Repairs & Maintenance	70,000
		Overseeing water distribution (jeep/diesel) cost	10,000
		Collection commission and mates' labor	35,000
		Miscell. & office maintenance	5,000
Total	300,000	Total	310,000
Deficit at current collection	10,000		

So PVKS' present cash flow is unsustainable, which can be attributed to the poor collection of *patwan shulk*, which, on an average, is less than one third of the demand for the period 1997-98 to 2003-04 (refer Table 3). More serious is the fact that the trend of the collection amount is not encouraging (refer Table 3).

Table 3
Collection from 1997-98 to 2003-04
(Source: PVKS)

Year	Demand (in lac)	Collection (in lac)	Proxy %
1997-98	7.96	2.3	28.9
1998-99	8.62	2.98	34.6
1999-00	6.73	3.1	46.1
2000-01	8.1	3.21	39.6
2001-02	8.19	3.08	37.6
2002-03	10.91	1.94	17.8
2003-04	10.96	2.21	20.2
1997-04(Cumulative)	61.47	18.82	30.6

NB 1: Collection after 1997-98 includes collection due in the year, some over-dues from previous year(s), which materialised in the given period.
NB 2: Increase in demand in the year 2002-03 is due to increased *patwan kar* rate of Rs 88 per acre from Rs 70 per acre for kharif season and that of Rs 70 per acre from Rs 60 per acre for rabi season. The rate for rabi season was further increased from Rs 75 per acre in the subsequent year 2003-04 and further increasing the demand.

Either the collection rate has to double its prevailing rate or it must create some other source of revenues if the PVKS is to attain a sustainable cash flow and meet its financial obligation to the government.

Text Box 5

Possible Avenues for a Healthier Revenue Model for PVKS

Inputs/credit intermediaries:

The PVKS has a reach of around 50 villages and ten thousands farmers. The PVKS is working with TIFAC and organising different events like extension fairs, training programs etc. that keep it in regular contact with the farmers of the area. Its VLCs are present in 48 villages and could form an effective supply point. Its collection agents and labor mates, who primarily work in two seasons (around six months) and are idle for the rest of the year, could also double as collection of payment and orders.

Looking at some rough estimates, the total input cost of agriculture in a year is (assuming paddy and wheat as two crops sown in an acreage of 10,000 and 8,000 acres respectively with an input cost of Rs 800 per acre for paddy and Rs 1200 per acre for wheat) more than two and half crores. If we can conservatively assume that PVKS supply only 25% of the inputs with 10% margin the total revenue earned by it would exceed four lakhs.

Using the land strip:

The distributory has a strip of land running parallel to it, which has a width of six to twelve feet on each side. This land has not been handed over to the PVKS. This land can also be a substantial source of income by the temporary lease out or cultivating medicinal and aromatic plants as the President had suggested to the farmers. But this would require making the government agree to the same.

Increasing collection:

Increasing collection is urgently required. VLCs need to be presented with incentives to achieve this end. The option “only payers use” which would have brought an immediate improvement in the collection is not viable for technical reasons (it would be difficult to ensure that a person who does not pay, is not allowed to use irrigation water in so large an area) and also for social reasons in view of sensitivities of the naxal-active area.

7.1.2 Need for Institutional Development Services

Vicious Circle of a Leadership Trap

The core contribution of WALMI (a lot of credit goes to the then director Dr. L. P. Srivastava) in the Paliganj Action Research is identifying, motivating, and capacity building of the core team of Valmiki Sharma et al and using the same as a key driver for the social acceptance of the new paradigm. Later the same team formed the backbone of the formal institutional arrangement in the DLC/PVKS.

The active involvement of VS et al may have either not left enough space for others or else have imparted a sense of complacency in the other participants. The PVKS active team has mostly remained restricted to VS et al. Many of the farmers who were earlier active are no longer taking any interest. On the other hand, as VS et al may also argue, that such involvement from their side is warranted in view of the fact that not everyone is forthcoming.

One such case is the contribution of the farmers (Rs. 2.09 lakhs), which was mobilised and deposited with the government to qualify for a functional grant. VS et al arranged the money on their own as PVKS wasn't in a position to do so. Such steps, while well-intentioned and operationally expeditious, may further alienate other farmers and reduce their ownership.

The PVKS has been able to develop a minimal operational apparatus. But institutionally it has not been able to grow and mature. Although PVKS bylaws (formulated by WALMI) had provisions for institutional processes and structure, VS is looked upon and asked for every little thing and has achieved larger-than-life image. This was also an important concern for Dr. Srivastava, who frequently urged the PVKS about the need for a second rung of leadership. Even now the PVKS has not been able to discover/develop a second rung of leadership.

However its long-term sustainability as a *users' forum* would be possible only under strong institutional context (norms, processes, systems and a clear strategy and vision for future) with broad based participation. To reach such an institutional state;

Declining Participation

Presently, the DLC/PVKS has become more of an interface between farmers and the government. Although the farmers acknowledge the positive difference and appreciate the role of PVKS in it, the number of farmers who actively participate in the affairs of PVKS has gradually declined. As per Valmiki Sharma, "Initially many of the farmers who gave their time started to expect some kind of financial benefits after PVKS was authorised to collect water taxes. They stopped participating when they didn't get it."

Text Box 6

From Direct to Declining Participation

During the formative days of PVKS, the people's participation was relatively more and direct. They had new hopes when water started reaching the tail end and its use began to be peer-monitored and negotiated in an agreed value system. This furthered enhanced credibility of PVKS and its leadership in the eyes of farmer-users.

From 1991 to 1996, the distributory was maintained by the contribution of user-farmers in the form of grains (paddy/wheat) and *shramdan* (volunteered labor). In Feb 1997, the water resources department (Government of Bihar) official handed over the distributory to PVKS for its management, maintenance, and collection of water tax. This was a milestone in formalising the process, which was underway for 6 years.

Ironically after this, some farmers became complacent as they thought that those who are at the helm of the affairs at PVKS should be making money from the collection of water taxes. And also when PVKS/DLC started collecting water taxes it was their responsibility to maintain and manage the distributory.

From 1997 to 2000, the distributory was in a dilapidated condition and hence maintenance cost was high. The poor collection of water tax was not enough to meet maintenance and management expenditure.

In 2000, the distributory was renovated by the government at an expenditure of more than one crore which reduced the maintenance cost, manageable at the given level collection. And the system of *chanda* (contribution of grains) and *shramdan* (volunteered labor) had discontinued.

7.2 Missing Incentives/ Disincentive:
What would make them pay/participate?

The present collection of the *patwan kar* (irrigation tax) is around 30% against the total demand. One of the reasons for the poor collection may be attributed to the absence of any incentive/disincentive between those who pay and those who don't. The greater challenge is dealing with the social realities of naxalism and violence. The PVKS has consciously chosen to be very inclusive and is hopeful that over a period of time, users would start appreciating the need to pay for the benefits they enjoy.

VS commented that many of the farmers who had earlier been very active were no longer involved. They had expected some incentives for their active roles and involvement. Such incentive might be necessary in long term.

Text Box 7

Interstate Water Conflicts and PIM at Paliganj

For the first time since PVKS took charge of the distributary, the wheat fields may not have irrigation water in the present year. The distributary has little water and the government department has no answer. Now farmers are told that Sone Barrage itself does not have enough water. The farmers ask, "If the water in Sone Barrage were less why was it not intimated to us in November when we started sowing wheat in our fields in the hope that there would be water from the distributary. Who will compensate us for more than Rs 2000 per acre which we have invested in our fields?"

According to Mr. IC Thakur, the anchor of participatory irrigation management at WALMI, "The rainfall was less. Madhya Pradesh refused to release water from the dam, which it had built on one of the tributaries of Sone in MP as per agreement between the two states. MP had cited 'insufficient water' as their reasons for not releasing water."

In hindsight, a reliable and real time information sharing is required for the availability of water with the PVKS to retain its credibility among farmers. Such problems are likely to recur which might have been avoided with better communication among the all parties concerned.

7.3 Differential stakes: Head reaches vs. Tail reaches

Like any irrigation system, the farmers inhabiting lower reach of the command area are at a disadvantage. However, the free riders are not restricted only to the upper reaches. Even many farmers in the lower reaches, in absence of any incentives/disincentives, choose to be free riders. According to Gopal Singh Yadav, president of DLC/PVKS and inhabitants of Pansui village, near the tail most end of Bharatpur branch of the Paliganj distributary:

“The free riders are mostly big farmers. They also default in paying *patwan kar*. The marginal and small farmers are more forthcoming in shouldering responsibility and very willingly pay their dues. One of the possible reasons for such behavior (besides the absence of incentive/disincentive system) may be the fact that the big farmers also have alternative irrigation sources like the bore-wells, which gives them relative security (albeit with increased cost) and reduce their dependence on the distributory.”

7.4 A Strategic choice/dilemma for PVKS: A broad based users' forum or a good service provider?

The PVKS was intended to be a water users' forum. But its evolution has given it the nature of a *service provider*. To save time the VLCs were constituted of 'early adopters' instead of a truly representative VLC evolved by a broad based democratic process. These VLCs were constituted in village meetings in the presence and with the facilitation of VS et al. It was expected that these VLCs would later involve all other farmers in due time. Very often VLCs were not able to meet the expectation.

The involvement of people remained limited to those who were in VLCs/DLC and, in many of the cases, to only office bearers. This may be inferred from the fact that out of an estimated number of more than 10,000 water users in 52 villages for an irrigated acreage of 11,500 acres (*kharif* season), the number of farmers who chose to be the PVKS members (by paying a membership fees of Rs 11) lay in the 500-600 bracket which was too low for PVKS to be a water users forum. Incidentally, the total number of farmers who are in the working committee of 48 VLCs, 11 in each VLC, also fell in the same bracket.

7.5 Is the prototype mature enough?

Although it has been eight years since the PVKS has officially assumed the management and maintenance of the distributry, the *Paliganj* model is far from mature. This is reflected in other cases of transfer of irrigation systems where the conflict and confusion has marred the process. Lack of an effective institutional development support to the fledgling users' forum further aggravates the problem.