

Panchayat leading the Way in decentralised Water Management:

The Case Study on the role of VWSC in revival and management of a Rural Water Supply

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Introduction: This case study narrates the successful initiatives taken by Mr. Rakesh Bhagat, Mukhiya through the Village Water and Sanitation Committee (VWSC) in Bero Panchayat (Bero Block) of Ranchi district of Jharkhand in the context of revival of a dysfunctional piped water supply scheme. According to the policy guidelines of the Drinking Water and Sanitation Department (DWSD) of the Government of Jharkhand, the VWSCs are the cornerstone of implementation of the national Flagships namely, NBA (Nirmal Bharat Abhiyan) and NRDWP (National Rural Drinking Water Programme). VWSCs are formed at the revenue village level; thus a Gram Panchayat will have as many VWSCs as the revenue villages under its jurisdiction. VWSCs are formed under the constitutional provisions of the Panchayati Raj Act. With a view to decentralise the implementation and management of water and sanitation programmes, funds are being transferred to the VWSC accounts. The VWSC has 12 members, out of which 6 are women; the Mukhiya, (elected head of the Gram Panchayat) is the President of the VWSC; a member of the Block Panchayat is selected as the Vice President of the VWSC and the Jal Sahiya (a woman volunteer selected from the community to work on water and sanitation) is the Treasurer. The Jal Sahiya is paid honorarium for different activities related to water and sanitation in the village.

The significance and efficacy of the VWSCs depends on their ability to manage the programmes and ensure community participation. Also, one of the manifestations of viable VWSCs is to mobilise resources for operation and maintenance of the programmes, as a measure of sustainability. The case of Bero Panchayat becomes significant in this context. Bero Panchayat has two revenue villages, namely, Bero (1150 households) and Baridih (148 households). This case study is based on the activities of the VWSC in Bero village. The VWSC of Bero village of Bero Panchayat revived a dysfunctional water supply scheme, improved services, generated fund through water tariffs and evolved as an inspirational example for other VWSCs in the state for management of water supply schemes.

History of Bero Piped Water

1987-88: Scheme commissioned sourcing water from Baridih nullah; water was pumped with the help of a 3 HP submersible pump into a water tower of capacity 13,000 gallons

1997-98: Baridih nullah choked; shifted to underground source using another 3 HP pump

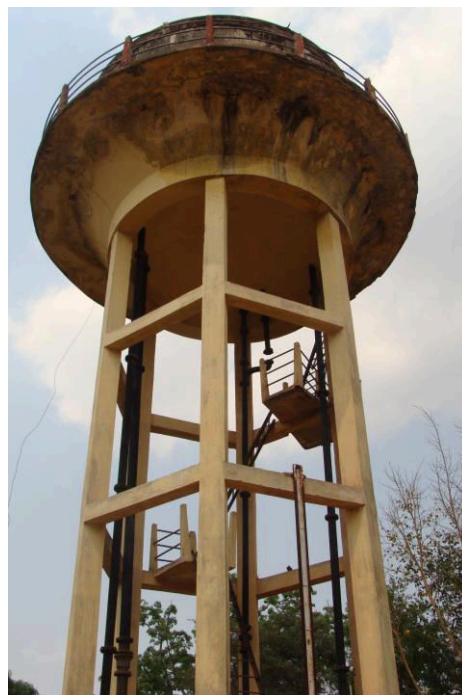
2000 – The borehole became dysfunctional

2001- Another borehole constructed near water tank fitted with a 3 HP pump and the scheme was made functional

2002: A 5 HP pump was fitted to a borehole in the locality to served uncovered population with direct water supply

2009: A second borehole was constructed near the water tank

2011: Scheme was handed over to VWSC



Acknowledgement:- Mr. Ram Bilas Sinha, Superintending Engineer, Ranchi Circle, Ranchi, Mr. Prabhat Kumar Singh, Executive Engineer, Ranchi West, Ranchi, Mr. Rakesh Bhagat, Mukhiya, Bero, Ranchi .

What did the VWSC inherit?

- 15,000 gallon water tank
- One borehole near the water tank fitted with a 3 HP motor
- One borehole near the water tank without motor
- One borehole fitted with a 5 HP motor to supply water directly to the uncovered population in the area

What value did the VWSC add?

- Fitted a 3 HP motor to the additional borehole near the water tank
- Identified areas in the village where pipelines were laid but was not connected to the supplies from the water tank; continuously augmenting uncovered areas
- Operationalized the piped water scheme & set up a system for charging water tariff and legalising unregistered connections
- Increased home connections from 135 during time of takeover to 207 at present
- Mobilised resources through water tariff with a current balance of about Rs. 30,000; the Mukhiya received a state level award for resource generation in VWSC in 2011

Other achievements of the Panchayat:

- Submitted a DPR for Baridih (the second village/ VWSC in the Gram Panchayat), and signed an MoU with the DWSD for piped water supply
- Prepared a Pre -Feasibility Report for a piped water supply scheme (sourcing water from Baridih river) to serve the entire Gram Panchayat (which includes 2 VWSCs, namely Bero and Baridih) covering 1500 households
- Constructed a Community toilet in the Market in the Block Headquarters, functioning on a business model with running water supply from the scheme

Box 1: Key Issues Identified by the VWSC at the time of handover

- Resource mobilisation through water tariff has a huge potential; this opportunity has to be explored and a system for collection of water tariff was to be put in place
- The user community was not adequately sensitised on payment of water tariff though there existed a huge demand for piped water supply; this can be achieved by community awareness and improved performance of water supply
- A large number of illegal house connections exists in the village; there was a need of legalising these connections in order to maximise resource mobilisation
- It was imperative that the community's propensity to pay for drinking water supply will increase if (a) the scheme is made functional and (b) its performance is enhanced by ensuring regular supply and for longer time periods during the day

Key Persons:

Mukhiya (elected head of Gram Panchayat)/ President of the VWSC: **Rakesh Bhagat**

Member of Block Panchayat/ Vice President of VWSC: **Dhanajoy Roy**

Jal Sahiya: **Seema Kumari**

Tax Collector: **Lubu Baraik**

Pump Operator: **Budhua Oraon**



Anita devi is the proud owner of a tap connection at home, in Bero village

Background: The Bero water supply scheme was commissioned in 1987-88, sourcing water from the Baridih *nullah* (a channel of the river Baridih). With the choking of the *nullah*, the scheme shifted to underground source through a borehole fitted with a 3 HP submersible pump, in 1997-98. However, in 2001, this borehole became dysfunctional and the water supply scheme became almost defunct. About 150 households in Bero village (located in the outskirts of the block headquarters) thus far used to accessing drinking water from piped water scheme was in great difficulty as the scheme was experiencing frequent breakdowns.

At this juncture, the PRI elections held in Jharkhand in 2010 after 32 years. The VWSCs formed under the constitutional provisions of PR Act opened a bank account in accordance to the policy guidelines of the DWSD. The responsibility of managing the water and sanitation schemes in the village was vested with the VWSC. Rakesh Bhagat, the Mukhiya of Bero Panchayat who was also the President of the Bero VWSC immediately addressed the issue of drinking

water supply in the village; he had inherited a dysfunctional scheme which was still supplying water though infrequently. The scheme had an Overhead Tank (capacity: 15,000 gallons) with a borehole fitted

with a 3 HP submersible pump. Evidently, the Overhead Tank could not be filled up to capacity. In an adjacent hamlet there was another borehole fitted with a 5 HP pump which was supplying water directly to the beneficiaries.

The scheme was facing frequent breakdowns and the 100 odd beneficiary families were receiving water once in a while, though free of cost. Addressing the Operation and Maintenance of the scheme was a colossal challenge for the Department.

During the initial discussion with the local Officers of the DWSD, Bhagat was asked about his plans to revive the scheme. Bhagat seized the opportunity to serve the electorate – he maintained very confidently that revival of the scheme would require resources for repairing the technical faults and ensuring timely and adequate water supply. Once services are improved the consumers will agree to pay and resources for future operations will be generated. With this viewpoint Bhagat, with the help of the DWSD embarked on his mission. The first step was to revive the defunct boring (fitted to the 3 HP pump) and start supplying water to the existing beneficiaries.

Description of the Scheme: At the time of taking charge of the scheme there were 135 registered house connections. There was no fund available to the VWSC. The VWSC took note of the fact that fund crunch was the key factor affecting the operation of the scheme. This was due to the fact that there were large numbers of illegal connections and even those households having registered house connections were also not paying the tariff regularly. A meeting of the VWSC was held in the middle of 2011 when the members agreed that resource mobilisation through collection of water tariff and legalising unregistered connections were critical for operationalizing the water supply scheme.

Following the meeting of the VWSC, the above issues were set as immediate objectives to be fulfilled. The enthusiasm of the Mukhiya and VWSC was very high as they were newly formed entities and drinking water was the only subject matter which was realistically vested with the Panchayat bodies at this point in time.

The VWSC convened a Gram Sabha meeting in the Block headquarters and mobilised nearly the entire village to participate in the meeting. The community, particularly the direct beneficiaries, i.e., households having house connections came up with their grievances. A summary of the community's concerns is given in Box 2.

Box 2: Key Concerns raised by the Consumers at the time of handover of scheme

- The piped water supply scheme even when functional did not ensure regular water supply; the timing of supply was not convenient to the users and the duration of supply was inadequate and irregular
- There was inordinate delay in repairing any breakdown of the scheme; the users suffered from uncertainties as they had no information on the nature of breakdown and steps taken to mend the faults
- Interestingly, the users pointed out that many households were having illegal house connections; the users pointed out that they had no hesitation in paying for water supply as long as all beneficiaries are made to pay as per a standard guideline.
- Finally, the most challenging issue raised by the community was that only about 50% of the population was being served by the scheme; as a village level unit, the VWSC should take steps to cover all households by the scheme. The community agreed to pay for consumption of drinking water if high quality service was guaranteed



A tap in a kitchen in an eatery in Bero (left) and a house connection in the village

Interventions and Innovations: The VWSC under Bhagat's leadership started addressing the concerns of the community. **Firstly**, Bhagat made an innovative appeal to the existing beneficiaries of the scheme. He *wrote personal letters to each and every beneficiary* pleading them to pay the water tariffs: in the letter it was indicated that the registered users will pay the water tariff, including dues for the past one year (the dues were payable in 3 instalments but should be paid within the financial year 2011-12).

Secondly the VWSC engaged an agent to collect the water tariff; it was agreed that the agent would get an incentive of 10% of the total revenue collected in a month. **Thirdly**, the VWSC appointed a pump operator to ensure that water is stored in the Overhead tank and supplied in the hamlets in a timely manner. Also, *the pump operator would also attend technical breakdown* of the scheme promptly and ensure any repair within 24 hours. The pump operator is paid a monthly salary of Rs. 3000.

These measures paid rich dividends. With consistent supply of water in the habitations, the users were more than willing to pay the charges. This implied that the VWSC balance sheet was depicting a stimulating picture. After all expenditures, the VWSC of Bero Panchayat till March 2012 had a balance of Rs. 35,000. Encouraged by the performance of the VWSC, the Department committed to transfer an equal amount, i.e., Rs. 35,000 as incentive. This fund arrived in November 2012 and by that time the balance of *the VWSC account swelled to Rs. 70,000*. Thus, the incentive amount provided by the DWSD coupled with the existing balance of Rs. 70,000, encouraged Bhagat to embark on the next level of improved service delivery. With the available funds a second borehole was constructed near the Overhead Tank; fitted with a 3 HP submersible pump, *the scheme started supplying water 2 times a day – once in the morning and once in the afternoon*. As may be observed from the above discussions, the community was agreeable to pay for drinking water and the process of collection of water tariff was to be made systematic. Thus, resource mobilisation for the VWSC became a feasible proposition.

The **final challenge** was in the area of including the excluded hamlets/ population of the village which were in no way connected to the scheme. It needs to be borne in mind that the size of the Gram Panchayat made this challenge very complex. The hamlets were scattered in a geographical area of about 2 to 3 square kilometres, and the existing system of piped water supply had a combination of supply of water from boreholes via storage tank and also from direct pumping from boreholes. Bhagat led his VWSC with active support of the DWSD worked out an organised approach; firstly, for Bero Village he has decided to connect all boreholes to the Overhead Tank, to ensure that the Tank is filled to capacity. Secondly, he has initiated the process of installing a mini piped water supply scheme in the other VWSC (Baridih) under Bero Panchayat. Thirdly he has prepared a PFR with an aim to install a new piped water supply scheme (sourcing water from Baridih River) for the entire Bero Gram Panchayat which is expected to be functional in the next 5 to 7 years' time.

Three critical actions triggered the success of the VWSC in Bero; they were, (a) reaching out to the user community with a personal appeal (b) engaging agents for collection on water fees with performance based salaries, (b) improving the service of the piped water supply scheme, which in turn influenced the user's propensity to pay. Ultimately these actions helped to strengthen the financial status of the VWSC

Evidence of success: There were only 135 connections when the scheme was handed over to the VWSC. As a result of the house visits, the number of registered users increased, also new house connections were added. The total number of house connections by 2013 increased to 207 with a few households getting added to this list every month. Subsequently, resource mobilisation through collection of water tariff was also increasing; the VWSC account was having zero balance at the time when the VWSC took charge. Currently the account has a balance of about Rs. 30,000 for operation and maintenance. It may also be mentioned that the second VWSC in Bero Panchayat, i.e., at Baridih, an amount of Rs. 16 lakhs is available for construction of the new mini piped water supply scheme.

The monthly water charge has been fixed at Rs. 62 by the Drinking Water and Sanitation Department. However, the VWSC at Bero decided to charge the users at the rate of Rs. 72 per month. In addition, the one-time charge for house connection was fixed at Rs. 310 as per suggested norms

Bhagat was also inclined to make the system transparent, as he explained; the community will be more regular in making payments when they can see that the balance sheet was performing well. The balance sheet thus became, in a way, a motivating factor for the community. The community started taking pride in the fact that they were contributing to enhance the financial performance of the VWSC.

The physical performance of the scheme added to the credibility of the VWSC. Both the borings fitted with 3 HP submersible pumps are currently functional and the other boring available in the village (fitted to a 5 HP pump) will now be connected to the water tower with an aim to store enhanced volume of water. Bhagat also has plans for utilising a fourth boring (HYDT - having high yield discharge 20,000 liters per hour) available in the village to pump water in the water tower.

Initially, the users were supplied water once a day for 2 hours in the morning - gradually this was increased to 2 times a day (morning and afternoon) for 2 hours each time. Interestingly, the scheme experienced 2 incidents of breakdown (of the submersible pump) and both times the repair work was done in less than 2 working days. This was vital for gaining the confidence of the user community. It was noted that the physical performance of the scheme bolstered the financial performance of the VWSC. Payments of water tariff were more spontaneous, regular and timely. This encouraged the President of the VWSC to discuss the prospect of levying late payment charges to few households who were not paying the tariff in time.

The VWSC has also shown a lot of enterprise in augmentation of the scheme. Initially they found that in some uncovered hamlets, pipelines were already laid but water was not supplied. These hamlets were gradually included in the scheme. In some cases additional pipelines are being laid. Also, a comprehensive planning has been conducted to lay pipelines in all uncovered hamlets are reaching 100% per cent population with drinking water.

In final analysis, setting up a system of (a) ensuring high level of service delivery, (b) setting up a system for collection of water tariff, (c) regularising illegal connections and (d) concurrent monitoring of the physical performance of the scheme/ financial performance of the VWSC were the key success factors.

Factors of success: *Rakesh Bhagat was one of the awardees of the Foundation Day of Jharkhand on 14 November in 2012 for **generating maximum resources in the VWSC account**. In Jharkhand a ceremony is held by the DWSD on the Foundation Day to felicitate Panchayati Raj representatives, Jal Sahiyas, Departmental officers and other functionaries working in the water and sanitation sector for good performance and innovation. First held in 2011, this event has been subsequently institutionalised in the state.*

The key success factors that led to the success of the scheme are given below:

- **Participation/ transparency:** People were told that they were the primary stakeholders of the scheme; the performance of the scheme will depend on their participation. Also transparency encouraged enhanced participation

The intensity of involvement of the community was triggered by connecting with individual households consistently by writing letters and house visits. The confidence of the user community grew as they realised that they have a crusader to pursue their cause. Hence they responded by participating in the programme and also helping in resource mobilisation.

- **Service delivery influenced resource mobilisation:** Improved performance of the scheme ensured more willingness amongst users to pay for the scheme; hence the VWSC maintained active partnership with the Sub Divisional Office of DWSD and repaired the faults in the scheme and ensured quick recovery

- **Systemic approach in collection of water fees:** The consumer's reluctance to pay was due to the lack of a system in place. The VWSC quickly ensured that there is a strategy in place for collection of water tariff; community awareness also led to regularisation of illegal connections

Agents were engaged to collect water tariff and they were paid a commission on the revenue collected (water tariff and legalising un-registered connections). This method of incentive based payment resulted in remarkable performance in collection of water charges.

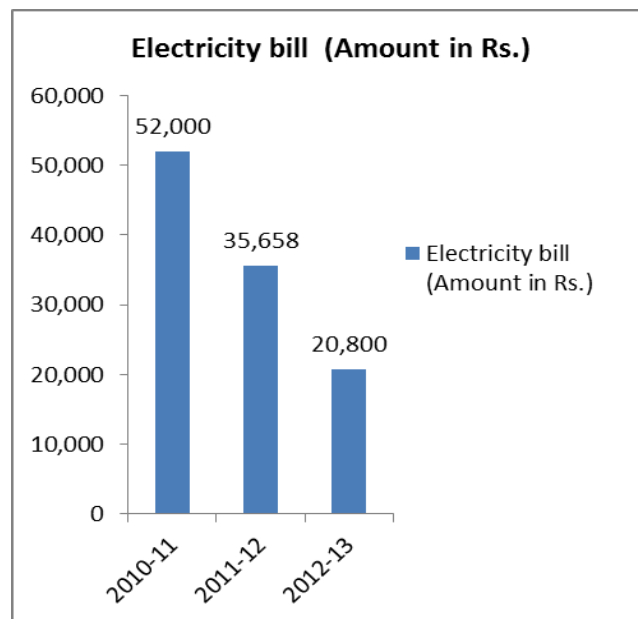
- **Partnership between Panchayat and Drinking Water and Sanitation Department (DWSD):** Finally, the Head of the Gram Panchayat and other VWSC members maintains very strongly that the partnership between the VWSC and the Drinking Water and Sanitation Department was critical for the success of the programme. It is necessary to work out an congenial working relationship with the Government Department for effective functioning of the VWSCs.

A strong advocacy campaign by the Drinking Water and Sanitation Department with the Jharkhand State Electricity Regulatory Commission had helped reduction of the electricity charges from Rs. 4.40 per unit to Rs. 1.10 per unit when the piped water schemes would be handed over to the VWSCs. The implication of this revision of rate on the O&M of piped water supply schemes has been phenomenal. Previously, electricity charges accounted for 60% of the O&M cost. Following the revision of rates, electricity cost was reduced to 40% of the total O&M cost and 60% of the O&M funds are now available for funding costs of engaging manpower in the scheme, spare parts and repair, chemicals etc.

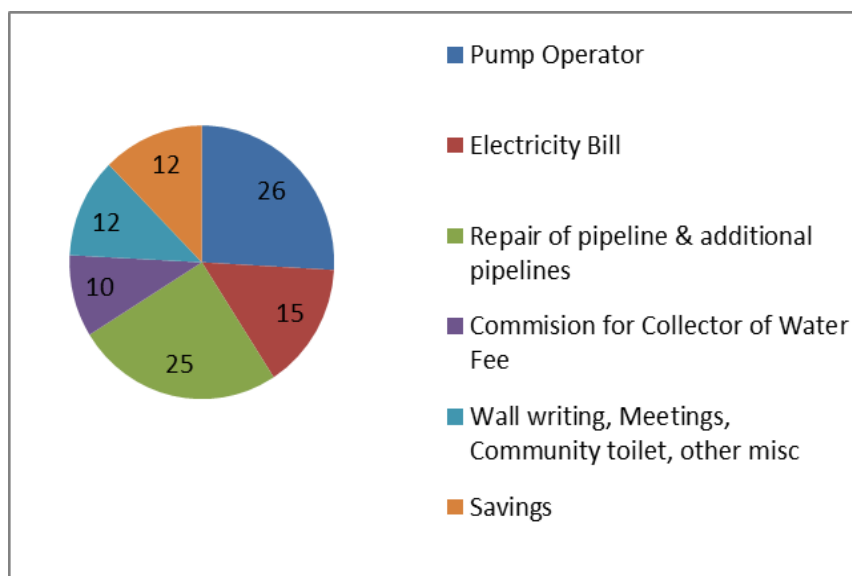
Rakesh Bhagat: Mukhiya (Left) Dhanonjay Roy: Upadakshya, (Right) of VWSC



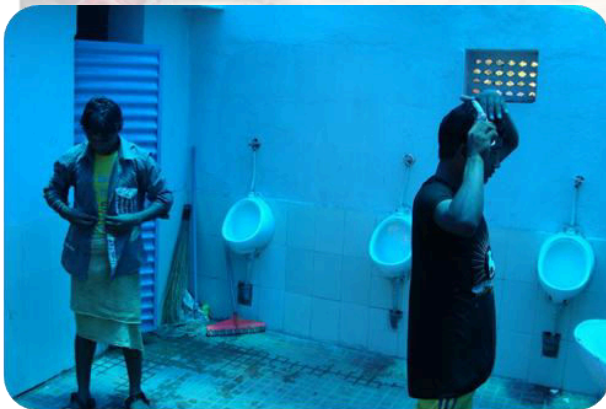
Temporal Trends in Reduction of Electricity Charges in Bero PWSS
(After tariff reduction)



Expenditure Pattern & Savings of VWSC (figures in per cent) for 2012-13



The Community Toilet in Bero Block supported by running water from the PWSS: The VWSC further expanded its activities by addressing the larger issues of water and sanitation under its jurisdiction. Bero village, as has been mentioned earlier is in the vicinity of the Bero Block headquarter and therefore has a peri-urban character. Responding to the demand of the local population and the traders of the locality the VWSC constructed a Community toilet in 2012, outside the campus of the water tank, which is a major thoroughfare of traders and labourers. The Community toilet has latrines/ bathrooms and most importantly provisions of running water in the facility there are separate arrangements for men and women. The Community toilet functions on a “pay and use” basis charging the users for the facilities and also attracting the users with additional facilities (free soap and shampoo). In order to make the facility economically viable, a Caretaker has been appointed to manage the facility; the users are charged Rs. 1 for urine, Rs. 3 for latrine (soap provided) and Rs. 5 for bath (shampoo provided). The Caretaker also sells additional soap and shampoo to the users. The model is still evolving with an income of about Rs. 1700 per month against an expenditure of about Rs. 3000 – the VWSC is currently filling the gap in income with a view to promote the model for long term sustainability.



Community Toilet, Bero: Clockwise from top right: The Community toilet, the Caretaker holding fort, users washing hand in the wash basin and taking bath with the running water in the toilet

A young mother now owns a tap connection in her backyard



Sustainability of the Project:

Sustainability of improved services in drinking water supply squarely depends on the leadership and performance of the Village Water and Sanitation Committees (VWSCs). In case of Bero it has been noticed that the leadership of the VWSC in addressing both technical sustainability of the project and management of the scheme.

The leadership of the VWSC in Bero has ensured that the community is adequately mobilised and they

contribute to make the schemes financially viable. Further, the VWSCs continuously strived to improve service delivery and ensured that the community's confidence is sustained.

Finally, a vibrant partnership with the Drinking Water and Sanitation Department ensured that the technical sustainability of the scheme is addressed. It is interesting to note that Bhagat has developed a PSR with a long term vision of 30 years life cycle to serve both the VWSCs, namely Bero and Baridih with a scheme by sourcing water from the Baridih River. The process will take another 2 to 3 years' time to initiate; the challenge is to keep the community enthused, motivated and confident with services during the interim period.

Lessons Learnt and Replication: The key lessons learnt from this project are as follows:

- Decentralisation of management of water supply schemes are essential for their efficient functioning and sustainability; the process of handing over of responsibilities of water supply schemes need to be continued.
- An effective partnership between the Drinking Water and Sanitation Department and the Panchayat is mandatory; the purpose is to facilitate the Panchayats to perform better. Hence where ever necessary initial handholding support and technical support should be provided
- The Bero experience depicts that some of the most bold and innovative ideas emerge from the community itself; for instance the method of providing incentives to Agents engaged for collection of water tariff proved to be very successful. Such innovations should be allowed to emerge from the community and documented for sharing within the Panchayat peers
- The Bero experience also provided a very promising example of the role of Panchayats in reviving a defunct scheme, not merely for short term services, but using the revived scheme as a platform for envisioning provisions of drinking water for the population for future times to come.

Hence, the VWSC in Bero becomes a model for those Panchayats which are hesitant or reluctant to inherit defunct schemes or schemes that are plagued with technical problems; The VWSC has to realise that taking charge of a scheme is the entry point for shaping and developing the future scenario of drinking water supply in their areas.