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Project:
**The Role of Communities
in the Management of Improved Rural Water Supply Systems
in Developing Countries**

**"The Belén Community's Management
of their Water Project"**

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PAR Team - Guatemala

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Quetzaltenango, october 1999.

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COMMUNITY WATER MANAGEMENT IN BELÉN CANTON

I. What is the Belén community like?

The village Belén belongs to the Palmar Municipality, Quetzaltenango. It is a community on the side of the highway from Quetzaltenango to the southern coastal lowlands. Belén is five kilometers from the municipal seat of El Palmar and thirty kilometers from the city of Quetzaltenango. The climate is temperate. The majority of its inhabitants are indigenous Quiches.

When you arrive to Belén, you see a small community. The 290 houses are grouped together. Its total inhabitants number 2,038. Around the houses are planted some coffee bushes and fruit trees such as orange, lemon and banana. Land is also rented to plant corn and beans for family consumption.

Those that live in this community are people that have come from San Francisco el Alto and Momostenango and people displaced from the plantations. They need to work, according to don David "to have money to buy food and for family expenses."

Starting at five in the morning, men, women and young people go to work in the plantations to cultivate coffee and macadamia nuts. They walk five or six kilometers in an hour and a half to get to the plantation. The men take their machete, scythe and knapsack where they carry their lunch. The women take a basket or bag and the young people, a backpack. They return from the plantation at three in the afternoon.

There are also merchants that sell bananas and coconuts. They travel to different markets in Retalhuleu, Mazatenango and Quetzaltenango.

II. How have they supplied themselves with water?

A. The traditional means of supplying water

Before 1975 they did not have a house water system. Doña Paulina, a mother of a family, would go to the *pocitos* ("little wells") starting at five in the morning and begin hauling the water that she would use for the preparation of food, washing of dishes, bathing the children and for the family's drinks.

Hauling water was very difficult, especially for the women. It was done every day, and as they recount, they would wait their turn for up to a half an hour to get a vat or can of water.

At nine in the morning, the women would go to the Ixcayá River to wash clothes, walking an average distance of 500 to 1000 meters. They took advantage of the trip to bathe, as did the men.

For the woman workers on the plantations, they would busy themselves with hauling water upon returning from the plantations from three in the afternoon on, while others went to the river to wash. The children also helped in the hauling after returning from school.

B. The community effort to construct their water system

Don Arnolando Ixcoy, president of the water committee since 1996 relates:

[I]n 1975, eighteen people from our community met with the mayor of Palmar to talk about our needs in Belén. There we told the mayor that our roads were bad and that we didn't have a school nor electric power nor water. Then the mayor told us to organize. In that way the canton's improvement committee was formed with five members, among them, Pedro Chun, Matías Itzep, Encarnación de León and Carlos Itzep.

After having formed the improvement committee, don Carlos Itzep recounts:

[T]he mayor of Palmar, don José López Rodríguez, came to Belén canton to offer us the water project, but we asked first for a school and electric power . . . My worry was the school because I already had one nine-year-old child and there was no school in the canton.

In 1975 a work agreement was made between the Municipality and UNEPAR to do water projects in all the communities in the Palmar municipality, which included Belén. Steps continued to be taken because of pressure from the women. According to don Felipe, "the few women that came protested about the lack of water."

In that way the committee once again took steps with the Municipality. Later, the Municipality supported these steps and solicited the intervention of UNEPAR who was still willing to build the water supply system.

In 1982 a work agreement was made between the community of Belén and UNEPAR to build the water project. UNEPAR, based on the government resolution 293-82, defined the form of charging the fee and named the members of the water-introduction committee with the same people that were on the improvement committee. This committee was to last two years.

For the construction, the committee organized the beneficiaries into commissions, dividing the community into sectors to establish the shifts for ditch digging, hauling

of local materials and other tasks. The purchase of the spring was also made, as was the paperwork to legalize right-of-way permits.

Two years later UNEPAR, together with the committee, carried out the water project construction. UNEPAR gave technical assistance and construction materials. As for the technicians and social promoters of UNEPAR, no training was done.

This project was inaugurated in 1983, supplying at that time 86 families and a population of 516 inhabitants. At that time, five people were named to the committee.

III. How was the water project managed?

A. The first actions of the committee

The new committee began working, but it only dedicated itself to collecting the fees, handing over accounts to the Revenue Administration and selling new connections. At first, since the project was new, there were no problems. Maintenance consisted in cleaning the distribution tank and, occasionally, the collection tank.

Don Herminio Pérez, member of this committee, relates that they met few times. Three years after having been constructed, the system already had many problems. People protested because the water did not get to all the sectors. Problems also began among the committee members. Only the treasurer and secretary, backed by the water engineer, were the only ones that made decisions.

The president and two members decided to no longer participate on the committee because they did not like the secretary and treasurer's way of working, and due to the problems that occurred in the project. The treasurer and secretary continued on the committee for twelve years.

The project's main problem consisted in the fact that the first spring that was bought was no longer sufficient to distribute water to all the beneficiaries, and new taps were sold without taking into account the spring's capacity. Also, much water was used for production purposes, especially cattle and coffee. What is more, there was population growth because of the people who immigrated due to the violence.

B. The first rehabilitation of the water system

Because of pressure from the beneficiaries, the committee decided to buy another spring. It asked for the economic collaboration of the beneficiaries of the water project. With this money the spring, located in the Morelia plantation, was bought. In 1992, UNEPAR started to do the work and in 1993 it was inaugurated. One

hundred more services were installed, adding up to a total of 190 connections with septic tanks for waste water and 190 improved latrines.

After the extension of the system, the treasurer and secretary continued making the decisions and directing everything related to the water project: they collected fees, cleaned the collection and distribution tanks, repaired taps in houses and gave a trimester accounting to the government.

They themselves once again sold more services without considering the capacity of the spring. By 1994 the number of connections reached 315. With this number of connections, and because of the poor management of the project, problems began again. Doña Dora told us, "We don't have water all the time; there's a shortage because the committee sells new taps; there are water leaks and the community of Belén is growing."

The committee did not worry itself about these problems. Don Santiago related that "necessary repairs aren't made, nor do they do a general review of all the elements of the project and the accessories that are used, and those from the committee never give an accounting to the community."

Since water did not arrive, people despaired. They no longer wanted to pay the fee. Only 75 members who received water paid the fee. What was collected served only to pay the Q 300 (US\$ 45) each month to the water engineer for cleaning the tanks and constantly repairing water leaks in the system.

The committee made the decision to ration the water supply, dividing the community into five sectors, and so taking advantage of the night to fill the tank. With this decision, costs elevated since they had to have a full-time water engineer who was in charge of closing and opening valves in these sectors on a daily basis. The fee increased from Q 17 to Q 27 per beneficiary.

This measure did not have the desired effect because it did not manage to satisfy the minimum quantity of water that the families needed because water did not get to the high and isolated sectors. People continued protesting. Doña Hermelinda said "that in the high sectors of the community, the water no longer arrives and in the sectors where it does arrive, they only have water for three hours, and not every day. Nevertheless, the committee does not do anything."

Doña Eugenia also said:

It's not known what was done with all the money she was gotten from the sale of the new taps. The committee doesn't give information about how much has been obtained with the sale of the new connections, nor about the investment of this money. Neither do they inform about the total number of beneficiaries.

Doña Cheli commented that “we’re tired that our project doesn’t function well and neither do we agree with the work that these three people are doing.”

UNEPAR did not want to have anything more to do with this community due to how complicated its problems were. At the same time, the community was not in agreement with the institution. According to the beneficiaries, “The only thing UNEPAR has given us is a promoter that reviews the books, but he only works with the treasurer every six months.”

III. Improving Water Supply Management

A. How was the PAR project initiated and implemented in Belén?

1. Community assessment

The investigation team visited committee members and some beneficiaries of the Belén water project where it was explained to them what PAR was all about. At first, those from the committee did not say anything; then the team decided to work with a group of beneficiaries, with whom a group of local investigators was put together.

Referring to the local investigation team, doña Dora Funes noted:

We got together – doña Eugenia Gómez, doña Hermilinda Pérez, doña Paulina, don Valerio and I – because we were worried about what was happening to the water project. Our intention was to help improve the system. What has helped us to work is that we know all the problems that we had with the water. Hopefully, with your help [of the local investigation team] we think that these problems can be solved.

When PAR began, doña Paulina was one of the most active women. She said: “First, let’s fix the water problem and once the people see there’s water, maybe the committee can be changed.”

Next, the local investigation team made a participatory assessment of the community’s water and sanitation. To do this assessment, the following steps were followed:

First: The local investigation team was trained in the investigative work that they had to do. Afterwards, a list was made of what needed to be investigated and the ways to obtain information.

Second: The investigation team did the field work. It began with a walk through the whole community, where everything being observed was sketched out according to the list of topics that had been selected – water uses, current condition of the project’s structures and latrines, garbage, black water (sewage), etc. Then meetings were held with the committee and with groups of women to get

familiarized with aspects of the water situation. Other techniques were also applied such as structured interviews, matrices, historical timeline, (cortes transversales).

Third: The investigation team made a report and presented it to the whole community in a communal assembly. Specific problems with the water were discussed in work groups.

Fourth: Ideas and alternative solutions were established. In the assembly don Rubén said that "the first thing that we have to do is to get the water to all the houses and for a longer time." Others expressed that "if it is necessary to give an economic contribution, we are willing to give it."

Within their experiences of the investigative work, (they) recount the following: "When we on the investigation team began, we said that we could help the committee work to fix the water problem"; "when they told us how many taps they had sold, we then understood that those gentleman [the treasurer and secretary on the committee] made a lot of dough [money]; that's why they didn't leave their posts"; "we also understood why the two people on the committee aren't in agreement with the ladies from the investigation team."

2. Planning and making decisions with the people

When the community had information from the assessment, it analyzed and discussed it, (surgen) a planning process and made decisions through the meetings and assemblies. This process can be observed in the following selections:

■ Don Augusto expressed that "the committee can't be changed now. They have to (fix) the water problem so the other committee begins working . . . One must see how integrating the other members is done that the committee is missing so that only the three that are working now don't continue working alone."

- "Also, we want a technical study to be done and a budget made to fix the water problems because we don't know what is going on – the tank empties fast."
- To follow up on and solve the problems that were detected, the assembly agreed on the local investigation team going on to form part of a water committee support group. Regarding this, don Jorge commented in an assembly:

Now that you now know the problems, you studied them and have time to keep on meeting. It's better if you keep supporting the committee. Always let us know what you're doing to help them." In this way, the local investigation team transformed into the committee support group.

- This support group was first to establish how much money the committee had to see what activities could be done. Nevertheless, the treasurer and secretary did not want to give the information, saying that the support group was not elected by the community as committee members, nor did they have credentials, much less the support of UNEPAR.
- These two people that had the project under their control were not very much in agreement with the local investigation group as we see from these comments:

The women that are in the support group are very nosy – they want to know everything.” Also, some residents invited by the women to the meeting to make decisions, commented “maybe they [the women] don’t have any way to occupy their time.”

- “The two from the committee [the treasurer and secretary] don’t come to the meetings; that’s why we feel bad about continuing as a support group to the committee. It would be better if people made appointments to see what is done with the committee.”
- Doña Dora, member of the support group, commented: “In order that the water problems get fixed and good decisions are made, it’s necessary to have a complete committee. Those that are already there don’t attend, nor do they work. It would be better if they resigned.” Nevertheless, the answer from the people was “that the committee not be changed; one only has to fill the vacant posts.”
- In this assembly, it was finally agreed upon to have an election and fill the vacant posts. Previous to this, one of the members of the support group declared: “to form the committee, it is important that the women be taken into account because we understand better the problems when there is a water shortage.”
- The persons elected were: president, Arnaldo Ixcoy; secretary, Rigoberto López; treasurer, Telma Alma Luz de León; committee member I, Aracely Itzep; committee member II, Santiago Ramos; committee member III, Eugenia Gómez; and committee member IV, Dora Funes.
- Once the new committee was integrated, doña Alma Luz said: “if I accepted to be on the committee, it is because I want to show that it is possible to work; people want water and they are going to have it and for that they have to give money.”
- At first, the new committee resisted taking into account the suggestions that the support group had been working on because they kept trusting that UNEPAR would come and solve the problem for them once again.

- Several applications were made to UNEPAR to support the improvement of the system or to authorize another institution do it. As a result, no answer was received. Faced with this, some committee members declared: "the best thing is for us to solve the problem and not wait for UNEPAR to come. We on the support team have always said that the residents of Belén must solve the problem in Belén while looking for some outside resources."

Based on these analyses, discussions and proposals, the committee made a community plan to improve the supplying of water. Aspects of the system included were budgets, committee, functions of local personnel, administration, regulations, and fees. This plan was also validated in community assembly.

3. New work methods of the water committee

a. The first thing is to ensure the water

Conscious of the problems that affected their water system, immediate action to improve the supply of water was initiated according to two principals: a) provide water to all the beneficiaries; b) search for ways to collect the fee from all the beneficiaries; c) look for financing for another rehabilitation; and d) begin the paperwork to legalize the new committee.

For the improvement of the water supply, the new committee divided the community into two sectors in order to rationalize the system. One sector had water 24 hours and the other no. This measure was adopted to check if the flow and pressures had the capacity to supply 50% of the houses and also to verify leaks in the system. It was then realized that one sector consumed more water than the other, above all because there were more connections and also due to utilizing the water for production ends.

The stopcocks were changed because they were deteriorated. Next, the committee took a second measure that consisted in the regulation of connections at low points. The test was done for one month in 100 houses resulting in the water arriving to the most affected houses. People agreed but demanded the measure be taken with everyone.

This measure, although it managed to "regularly" supply water, was not a definitive solution. It had advantages since it did not require a full-time water engineer. The president, who had already been in formation since PAR began, began plumbing activities.

a) Second rehabilitation of the water project

The solutions were not definitive because the water kept failing. The water flow in the tank was not sufficient to supply the whole of the community. The committee began thinking about the second rehabilitation and, with the help of the PAR project technician, ded a study and made a budget to determine a solution to the

water shortage problem. That this process involve and commit the people was one of the conditions of the investigative team.

The study reflected the need to make a change in the conduction line because the tubing did not correspond to those specified in the design. This would allow for increasing the flows and covering the demand for water. Since the committee did not have economic resources, the beneficiaries did not have all the money that was needed. The committee made the decision to take the steps with institutions to solicit economic support. As a result of these steps, they manage to get a Q 5,000 donation from the Municipality of Palmar and a loan from Nuevo Amanecer for Q 11,000. This loan had to be paid off in six months by all the beneficiaries.

In 1987, the work for the second rehabilitation was done. Together with this work, the committee and the local team of investigators implemented the community plans with the support of the investigaton team. These plans included action related to redefining the fee; regulating the water supply; improvements in the system; prevention of deforestation; training of treasurers, secretaries and water engineers; and exchange between committees.

One of the training sessions was for water engineers and committee members on the water project's elements, for example, tank volume and its capacity for supplying water.

The committee members felt calmer: "Now we know when it's possible to give a new tap and when it's not." The committee took steps to make a budget for the new tank and has planned the construction of this tank for 1999.

In this way, they managed to get the people to pay the fee, make regulations for the water supply and consolidate the committee.

d. The problems that are faced as a new committee

The work that the new committee had been doing was very difficult. The previous committee did not easily leave their post; there were people that still believed in them. The previous treasurer and secretary continued taking steps with institutions, installing new connections and collecting the fee. This situation gave place to the existence of two groups. As don Julio expressed: "Well, now we don't know whom to pay the fee and the contributions that are asked of us."

In spite of this, the new committee had collected additional contributions. As the treasurer noted: "I would go to the houses to collect the contribution to pay the debt on the repair that was done. It seemed that the men were embarrassed that a woman was collecting from them, so they paid me."

The assembly then named two people to join the committee to support and reinforce the activities as well as to bring about a new restructuring of posts within the committee.

e. The principal achievements of the new committee

Despite the previous problem, the new committee had managed to make an impact in the community. Among the most important achievements was making regulations for the supply of water, in which community leaders, authorities and the committee participated.

With this experience the committee managed to legitimate itself because it made a regulation proposal with the support of a group of beneficiaries which was presented in assembly to all the community members. In the assembly some community members protested and disagreed because they supported and called for the regulation that UNEPAR had left them.

The beneficiaries held a second assembly. A commission of beneficiaries is elected that along with the committee and the advisors of the PAR team take responsibility for making the arrangements suggested by the assembly. The discussion that took place regarding the regulation allowed the people to inform themselves about the regulations as well as helping to improve them.

In this way, better attention was given to the maintenance of the water project by the committee. The problems that occurred in the projects were due to negligence or accidents; for example, "in the sector of the curve and white rocks, there was no water, and it was all because the men that laid the telephone cable damaged the general conduction tubing."

Another achievement was getting people to provide manpower. For example, time to revise all the conduction of the water project because there was a pool of stagnant water in the spring. Some residents went with the president to the spring to investigate what the problem was.

Don Alberto lent his car to buy the replacement part. This made the committee very happy because, as don Arnaldo notes, "the beneficiaries protest but they also collaborate. This experience had never happened before. Now we *do* have support from the people."

The beneficiaries wanted to reduce the fee because a full-time water engineer was no longer being paid, but an annual administration and maintenance budget was made that was also accepted in assembly.

On the organization end of things, the legal authorization of the new committee by the departmental government of Quetzaltenango came through. The committee was reorganized and the posts of treasurer and secretary were assumed by honorable people from the community. The committee was complete, with four women participating as members.

The participation of women in decision making was very positive, as the current president declares:

The work that doña Alma and doña Eugenia do visiting houses and inviting people so that they come to the meetings has been very good. It's worthwhile getting their ideas to make decisions. Those women aren't afraid to be criticized; on the contrary, now people speak well of them.

The relationship that the committee had with the local authorities was very beneficial. The auxiliary mayor had a presence in the communal assemblies and in the committee's internal meetings. The presence of this authority gave formality and respect to the agreements reached in the assemblies. It also represented respect from the community toward the committee.

Elsewhere, the municipal mayor of Palmar invited the Belén committee to share its experiences with twelve other committees of the same municipality. The municipality financed the food for this encounter and declared its interest in the exchanges continuing. It also solicited the members of the investigation team and the local investigators to support these other committees.

f. Collective decision making and management in the supply of water

In Belén, making decisions with all the beneficiaries of the water project was somewhat difficult, first because the members of the previous committee would not give anyone the opportunity in the assembly to talk about water matters; second, because the beneficiaries did not have responsibilities – they always waited for someone else to do it.

Within the work of the PAR project, the need to reach agreements in assembly was discussed, as well as for improving the effectiveness of the assemblies through participatory techniques. The new committee realized that making decisions

together guarantees the commitment to fulfilling the agreements for which all the beneficiaries were responsible.

From then on, the assemblies improved. The majority of the beneficiaries of the water project participated. In the assemblies, problems relating to the supply of water were posed and resolved. The decisions and agreements that were reached were respected and put into practice.

The election of the people that make up the water committee was done in assembly and put on record signed by all the participants. When one of the committee members resigned from the post to which he was elected, an assembly was convened to elect the substitute.

In the rehabilitation of the water project, the assembly was necessary to determine the economic contribution each beneficiary had to give. The committee presented clear proposals and budgets so that they would have credibility with the people.

The assembly served to validate the assessment, regulations and fee. The committee meetings were also improved through the support of the investigation team, especially in drawing up agendas, recording agreements, following up on agreements, and creating some techniques to make the meetings more efficient, especially regarding participation.

The committee also utilized the meeting to organize its administrative work, especially for the control of the system's human, financial and material resources.

g. The direct intervention of women in water management

In the previous twelve years of community work in water supply and sanitation, the women had not gotten directly involved in the management of the water supply; neither did they form part of the committee nor did they make decisions.

During the construction of the system, the participation of women was limited to making food for those charged with the work and receiving a few talks on the use of water, the latrine and on hygiene in the home.

It had been recognized that within the community there existed women with capability to administrate but without the space in which to do it. One limitation was the fact of being married, because the decision to participate did not depend on them, but rather on their husbands. (Además por todos)

Within the PAR project, women were taken into consideration, for it was they who made the greatest use of the water in daily life, using it to prepare food, bathe the children, wash the family's clothes. Consequently, they were the ones most affected by the situation.

From the very start of our project, the local investigation team that was formed in Belén was made up of five members, four of them women. Afterward, three of them joined the water committee currently in office. It is they who have motivated with the greatest force the work that the committee did.

We can appreciate the value that the men give to the work of the women in what don Juan said: "These women are really determined; these women *pusieron pilas* ("put in the batteries" i.e. work energetically and with enthusiasm) in order to revive the water committee. Although it's difficult for us to accept, thanks to them, we have water." Another resident commented to us that "the women are more intelligent in obtaining and spending the resources. They know when to say 'yes' and when to say 'no.'"

h. Changes in the fee to guarantee the water supply

At first, UNEPAR left the cost of the fee at Q 17.00 a year per beneficiary without knowing how this cost was calculated. The treasurer made the fee collections, sending notes to the beneficiaries every three months to remind them of the payment. This cost was maintained until the system began to have defects. To fix the problems that arose in the water system, it was decided in assembly to increase the fee to Q 27.00 per year.

Only 45% of the beneficiaries were up to date with the fee payments. It's noteworthy that those who were up to date with their payments were the people with fewer economic resources and the community's elderly, quite unlike the young people and with those with more economic resources. The money that the committee collected for the fee only covered the pay of the water engineer. Not enough money remained to attend to the maintenance and repair that was needed in the project.

The local investigation team identified the most important problems in the diagnostic, among them the very low cost of the fee and the users' delay in paying it. With the support of the investigation team, a cost analysis was done by the committee. These costs included expenses for operation and maintenance, such as materials, equipment, tools, accessories, tubing, materials, the salaries of the water engineer and treasurer, and committee expenses.

According to the committee, by improving the water service, the beneficiaries would respond by paying the fees. The committee was right, for once the second rehabilitation was done, the beneficiaries contributed about 60% of the investment. From this moment on, the fee began to be paid regularly. In the first semester of 1998, the committee collected Q 3,777 by way of fees.

i. New water regulations

In the participatory assessment, it was established that the regulations were not up to date. They did not take into account the proper norms of the community, having

been made from a desk and thinking only of the interests of the institution that initially executed the project.

The old regulations did not talk about the rights and obligations of the beneficiaries. They referred more to the functioning of the committee and its commitment with the institution.

The lack of adequate regulation kept there from being norms for the participation of the community, the roles of the committee, and the fees and forms of collection. Water and latrine use did not have any control for twelve years. A few examples of bad water use include: a) use of cisterns (*pilas*) with large tanks that in turn were used by children and adults as swimming pools; b) hose line connections to other houses; c) new connections without taking into account the capacity of the spring; and d) use for production purposes.

As don Santiago observed about this situation: "Having regulations is necessary. The beneficiaries are not familiar with the ones left by UNEPAR, nor do they work. Better to make some of our own." It was by analyzing this situation that the new committee saw the need to normalize water and latrine use; the participation of the beneficiaries in the care of the system and; the rights and obligations of the beneficiaries as well as the functions of the water engineer and the committee.

The new committee and support group, with the help of the PAR team, drew up regulations through the following steps:

- a) In three- to four-hour meetings, the water committee, the users and the water engineer did a review of the previous regulations, especially the problems with understanding them.
- b) A list of problems was made about water and latrine use, especially those that most affected us and generated conflict. Also, the role of the committee, water engineer and beneficiaries was examined with help from the technique of *la placita* ("little plaza").
- c) Proposals of norms were established to help improve the process of supplying water.
- d) With the support of the investigation team, a draft was drawn up.
- e) The draft was presented in general assembly. It was analyzed, discussed and improved.
- f) The draft was presented to the assembly again. The points were approved by consensus.
- g) Some points wherein there was not consensus were reformulated and presented in the following assembly.

The contents of the new regulations look to clarify for the users of the water supply system the rights, obligations and sanctions as well as the principal norms for water use. The main functions of the committee and water engineer are considered for the administration of the water supply system.

The objective of the regulations is to guarantee that both the beneficiaries and the committee (and water engineer) are responsible for fulfilling their functions. It also looks to the beneficiaries themselves to take ownership of the water project and to be able to have strict control, applying sanctions that the committee itself and the beneficiaries have made.

The committee shared the experience of drawing up regulations with other communities that face the same problems and that have taken an interest in making their own norms.

CONCLUSIONS

1. When the committee assumed responsibility for the management of the water supply, it became independent from UNEPAR. It got rid of the conformity and dependency that came from waiting for others to solve the water supply problems. It permitted the beneficiaries and the committee to feel like the owners of the water system. It gave the possibility of making their own decisions and looking for alternative solutions, taking advantage of the resources that they had in the community and outside of it.
2. When the beneficiaries gave their economic contribution and actively participated in the activities to improve their water supply system, there was greater responsibility to care for the project and take advantage of the water without wasting it. Mechanisms of control and permanent monitoring were established.
3. Before, the concentration of power and technical ability permitted corruption, community discontent and frustration for those truly interested in supporting the project.
4. Attending to what the people want immediately, especially with regard to fixing the technical break downs in the project, is a good point of entry for analysis, discussion and training of people with regard to water.
5. The participation of women in the administration of the water project is many times more efficient because of the rationality that they have with respect to the use of resources. Their participation also permits the projects resources to be used.

6. The methodology, techniques and tools of PAR are easy to manage by the community for water management and other community development action.
7. The investigation team consolidated its idea regarding the applicability of new approaches and methodologies that empower community potential and guarantee sustainability of water.