

PD-ACG-893



PROSAGUAS

FINAL REPORT

1998—2002



Financed through USAID - El Salvador
Cooperative Agreement No. 519-A-98-00-00041-00
Project No. 519-0320 "Public Services Improvement"

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March 2003



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PROSAGUAS

(PROGRAMA PARA LA SALUD A TRAVÉS DE AGUA Y SANEAMIENTO)

Financed through USAID - El Salvador
Cooperative Agreement No. 519-A-98-00-00041-00
Project No. 519-0320 - "Public Services Improvement"
Implemented by CARE International in EL SALVADOR

FINAL REPORT

INTRODUCTION

On April 1, 1998, **CARE** El Salvador entered into a cooperative agreement with USAID/El Salvador in order to finance and implement a sustainable water and sanitation program in rural communities of El Salvador. The terms and conditions of this agreement are contained in Cooperative Agreement No. 519-A-98-00-00041-00. The financial terms of the aforementioned program are part of USAID Project No. 519-0320 - "Public Services Improvement". **CARE** El Salvador's application to lead the new program, which was presented to USAID on November 10, 1997 and its revisions made on January 19, February 17, and March 2, 1998 are hereby incorporated by reference and made part of the Cooperative Agreement.

The new program which was undertaken by **CARE** El Salvador in collaboration with partners with mutual interests, will hereinafter be called "**PROSAGUAS**", which stands for "Programa para la Salud a través de Agua y Saneamiento", and means "Program for Health through Water and Sanitation".

On April 5, 2001 and July, 31, 2002 the program was amended to permit further research and to extend the period of the agreement to December 15, 2002, respectively. Also, USAID increased the budget from \$9,050.00 to \$9,157,722 in the first amendment and the total program budget is \$12,174,722¹. Of this amount, USAID contributed with \$9,157,722. The remaining \$3,017,000 consisted of in-kind and cash contributions provided by **CARE** El Salvador.

¹ The initial \$12,067,000 budget was increased through the approval of modification No. 5 of the cooperative agreement, approved on April 5, 2001.





The **PROSAGUAS** program plan specified that the program would infallibly cause a reduction of diarrheal diseases in children under five years of age. This was accomplished by providing access to potable water supply and sanitation systems. At the same time, activities to promote the conservation of water resources, environmental awareness and protection, community organization, and health and hygiene education were developed in beneficiary communities together with the construction of infrastructure. A participative methodology was utilized in order to encourage community members and local government authorities to become active participants in the development process. Activities designed to increase municipal government capacities, community organization, and health education were facilitated in every beneficiary community. All of these efforts contributed to USAID's strategic objective of achieving sustainable improvements in maternal-child health.

To ensure sustainability of project impacts, **CARE** El Salvador employed an integral intervention. This intervention included community organization, management and participation, and **Municipal participations**. **CARE** El Salvador also worked to strengthen activities that have increased project impact and ensured sustainability of past experiences. To ensure the sustainability of the program's administrative impacts, **PROSAGUAS** provided assistance to every Water Board it serves on aspects such as administration, leadership, preventive and corrective maintenance, and system improvements, through the Technical Assistance Unit comprised of highly experienced **CARE** staffers.

Also, **CARE** provided as part of the program, short-term technical assistance to communities previously served with USAID-funded water and sanitation systems constructed by PCI, CREA and **CARE**, as well as to 8 projects constructed under AGUA (**Access to Clean Water for Rural El Salvador**) project, 11 projects constructed under MAS (the **Mitch Reconstruction Water and Sanitation Activities**), and 3 of the projects built by PROSPERAR (**Earthquake Reconstruction Water and Sanitation Activities**)





CHAPTER 1

SUMMARY OF ACTIVITIES:

PURPOSE, OBJECTIVES AND COMPONENTS

I. PROGRAM PURPOSE

The main purpose of the **PROSAGUAS** program was to reduce diarrheal diseases among children under five in communities where program activities were being carried out. This reduction in diarrheal diseases refers to a reduction of diarrheal (a) incidence²; and (b) prevalence³; this was accomplished by providing access to potable water supply and sanitation systems, as well as hygiene and health education, in rural communities that constitute the general target population of the program. Additionally, water resource and environmental conservation and protection activities were carried out in order to promote awareness among populations.

1. TARGET BENEFICIARY POPULATION

The program included several target populations, corresponding to different objectives.

The first and main target beneficiary population, served by new, rehabilitated, or expanded water supplies and sanitation facilities, consisted of 45,000 people living in poor rural communities. Women were especially targeted.

A second target beneficiary population was selected in communities previously provided with water and sanitation facilities by USAID programs numbers 519-320 and 519-394. This target population was provided with follow-up work to the previous USAID-funded programs.

A third target beneficiary population was selected from at least five communities being provided with water and sanitation by other USAID programs. The program provided technical assistance to this target population in areas such as the administration of systems in order to ensure their sustainability.

A final, tentative, and much smaller, target beneficiary population corresponded to the inhabitants of communities where the eventual construction of water supply and sanitation systems could be facilitated by providing them with hydrological studies, drilled water wells and/or designs for water supply systems.

² PROSAGUAS perceives diarrheal incidence as the percentage of children under 5 that were sick during the day of the interview, compared to the total number of children in the sample or census

³ PROSAGUAS perceives diarrheal prevalence as the percentage of children under 5 that were sick 15 days before the interview, compared to the total number of children in the sample or census





II. PROGRAM OBJECTIVES

All program objectives were designed to contribute to the achievement of the previously stated purpose of program. There were twelve specific objectives involved in the overall program. The first seven objectives had the same target population, which is the first target population in the list presented above, corresponding to 45,000 persons. These objectives were grouped according to six focus areas - a graph at the end of this section provides a clearer interpretation of these objectives.

The objectives of the program were implemented in beneficiary communities and each community was considered as an individual project. A community may consist of various cantons and their respective settlements.

The description of the six focus areas with their objectives is as follows:

1. FOCUS AREA A: CHILD SURVIVAL INTERVENTIONS

"Achieving a reduction of diarrheal illnesses in children under five years of age is considered to be a child survival intervention". Therefore, any activity that has a direct impact on achieving this reduction - such as the adoption of proper hygiene habits, proper use and maintenance of latrines, and the adoption of other good health habits - is also considered an child survival intervention".



CHILDREN BENEFITED THROUGH MULTIPLE LA
LOMA PROJECT: 1999

The global goal of **PROSAGUAS** in this focal area is defined in the verifiable indicator and Benchmark of objective No. 10, both - indicator and benchmark - state that the incidence, prevalence and mortality of diarrheal diseases would be reduced by 26% in relation to the baseline. When observing the general averages appearing in the chart below, by seasons and in total, it is evident that the global goal of diarrheal reduction by 26% in relation to base line averages was surpassed.





A reduction of 54.5%* was accomplished during the rainy season, and a 51%* reduction was obtained during the dry season, reaching a total average of 52.6%*.

After analyzing the first two years, we can observe that La Paterna, Analco, Istagua, and Santa Marta projects' results did not comply with the global goal of reducing diarrhea by 26% in relation to their base lines of children under 5, nevertheless, ascending tendencies are observed in the time of reduction, to an extent that by 2002 all projects – except for Santa Marta – accomplished the diarrheal reduction goal. Santa Marta as well as Múltiple La Loma, reflected setbacks in the reduction of diarrheas during the last year, the first one was due to the spring's low water yields, which led to a prolonged absence of water. The second setback coincided with the evaluation period in 2002, and was caused by the construction of the Pan-American Highway, which affected the continuous supply of water, as well as polluting enormously the environment with dust from the construction and relocation of houses, hindering the development of health actions. 3H Moncagua showed a favorable tendency at the beginning of the intervention, but decreased during the second evaluation, and then improved considerably during the third one, until reaching a much higher reduction in relation to the base line, showing a very irregular behavior.

However, a more detailed evaluation such as the one developed through monthly surveys for INCAP showed that the reduction of diarrheas in Santa Marta exceeded 49%, as explained in the annexed study, while biannual evaluations like the ones carried out by **PROSAGUAS** gathered information during two moments which could have possibly been the most unfavorable ones for data-gathering. This situation leads to reflect on finding better ways to evaluate diarrheal reduction data, even though this analysis is not within **PROSAGUAS'** reach.

As part of this report's annexes we have included the evaluations carried out during summer and winter seasons while the program was being executed, which include a more detailed analysis of the results herewith presented, as well as other indicators of interest (Annexes No. 5 and 6).

*Each one of these results (Average from each season) was been calculated as follows: the total addition of percentages from the last evaluation de divided by the number of communities in that specific area. Also, the program's average was calculated by adding up the average reduction percentages obtained in every season and divided by two.





Behavior of Acute Diarrheal Diseases According to Year and Seasons

Communities	Prevalence		Evaluation															
	Dry season	Wet season	1998				1999				2000				2001			
			Result	Obtained	Result	Obtained	Result	Obtained	Result	Obtained	Result	Obtained	Result	Obtained				
La Esperanza	---	33% (August 98)	4%	87%	6%	81%	0%	100%	10%	69%	11.4%	65%	11.7%	66%			11.1%	66.4%
3H	---	14% (September 98)			4%	71%	10%	28%	20%	-42%	7.4%	47%	13%	7%			5.0%	64.3%
La Paterna	---	20% (May 99)					15%	25%	15%	25%	30%	-33%	4.2%	79%			10.0%	50.0%
Múltiple La Loma	---	13% (May 99)									5.5%	57%	9.2%	29%			11.9%	8.5%
Analco	---	17% (July 99)							15%	12%	12%	29%	9%	47%			7.9%	53.5%
Conito	---	11% (October 99)							11%	0%	9.4%	14%	11.7%	-7%			2.3%	79%
Santa Gertrudis	---	29.4 (June 2000)															10.0%	65.9%
El Jutal		40.4% (August 01)															16.7%	58.7%
El Cerro		17.3% (September 01)															9.7%	43.9%
Average of rainy season		21.7%															9.4%	54.47%
Istagua	14% (November 98)	---			18%	-28%	8%	39%	13%	7%	6%	57%	15%	-7%	4%	69%		
Care Saca	17% (February 99)	---							10%	41%	9.4%	45%	11%	35%	8.8%	48%		
Los Concastes	42% (March 99)	---							10%	76%	15.9%	62%	12%	71%	7.5%	82%		
La Montañita	11.50% (March 2000)	---											7.8%	32%	8.1%	29%		
Cerro El Coyol	12% (March 2000)	---													1.3%	89%		
Santa Marta	9.40% (April 2000)	---											5.6%	40%	10.6%	-12%		
Average of dry season	17.7%														6.8%	50.8%		
BASELINE GENERAL AVERAGE: 19.7			RESULT: 8.1						AVERAGE DECREASE ACCOMPLISHED: 52.64%									

Source: CARE El Salvador. PROSAGUAS Impact Evaluation





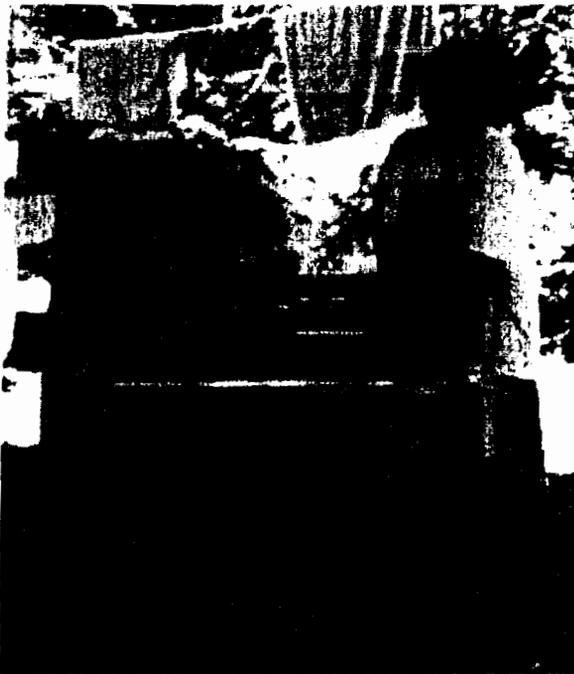
Because of the recommendations made in EHP's mid-term evaluation, the timely dissemination of data was intensified, as well as the use of results to formulate informed managerial decisions.

For this reason, as of 2001, the communications strategy to share information was carried out two-fold: 1) at a regional level, where shared information – through workshops and/or meetings with teams, partners and beneficiary population from each project – was the necessary information to make key decisions to improve project results; 2) and by means of national seminars through forums where **PROSAGUAS'** results, processes, methodologies and findings were presented for each intervened project. Three events were developed (March and November 2001, and August 2002) in Hotel Intercontinental Real with an average attendance of 100 participants in each event, representing different institutions as well as public in general. Regional technical teams organized regional events, and PROSAGUAS' Technical Assistance Unit together with personnel from different regional offices organized national events.



VIEW OF THE NATIONAL FORUM DEVELOPED IN AUGUST 2002

2. FOCUS B: TO PROVIDE WATER TO 45,000 PEOPLE



BENEFICIARY POPULATION FROM CERRO EL COYOIL 2001

*The provision of water to 45,000 persons can be achieved through the direct construction/improvement of water and sanitation systems by **PROSAGUAS**.*

PROSAGUAS' global goal for this focal area was defined in objective No. 1, in which the indicator and benchmark stated that the first target population (45,000 persons) would have access to potable water through the actions developed; the table in the following page shows in greater detail the location of all systems built, the type of system, and the beneficiary population covered at the end of the program, evidencing that this goal was exceeded by 2,890 persons.





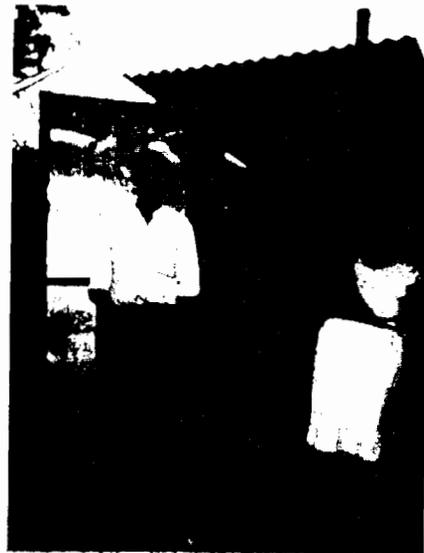
3. FOCUS C: PROVIDING LATRINES TO 23,500 PEOPLE

"The provision of latrines to 23,500 persons can be achieved by the direct construction of water and sanitation systems through PROSAGUAS".

PROSAGUAS' global goal for this focal area was defined in objective No. 4, in which the indicator and benchmark stated that the first target population (23,500 persons), would have access to latrines through the actions developed; the table in the following page shows the number of latrines built in each project, and the beneficiary population covered at the end of the program, evidencing that this goal was exceeded by 4,206 persons.



SANTA GERTRUDIS LATRINE
BENEFICIARIES, 2002



LA MONTANITA LATRINE
BENEFICIARIES, 2001



PROSAGUAS
PROGRAMA DE
SANEAMIENTO
RURAL



4. FOCUS D: PROVIDING TECHNICAL ASSISTANCE TO 48 COMMUNITIES PREVIOUSLY BENEFITED FOR USAID PROJECT NUMBERS 0320 & 0394.

"Providing technical assistance in administration, operation, and maintenance to water systems can facilitate and ensure the sustainability of USAID funded water and sanitation systems constructed in the past."



ADMINISTRATIVE WORKSHOP ADDRESS TO WATER ADMINISTRATIVE BOARDS 2001

PROSAGUAS' global goal for this focal area is defined in objective No. 8, in which the indicator and benchmark state that the second target population would have access to potable water and their capacities to administrate, operate and maintain their systems would be improved and/or strengthened through the provision of technical assistance. The first step included a diagnostic study of 55⁴

communities and technical assistance was provided to a total of 42⁵ which needed support to improve or assure sustainability of the communities studied. The following chart lists the assisted communities, and accomplishments grouped under Activities and results by focus area.

No.	Department	Municipality	Assisted Communities
1	Chalatenango	San Isidro Labrador	Los Amates
2		San Miguel de Mercedes	San Antonio Los Ranchos
3			El Matazano
4			Conacastes
5		Santa Rita	Chilamate
6		Tejutla	Aposentos
7			Concepción
8	Cuscatlán	Tenancingo	Copalchán
9			Corral Viejo
10		Suchitoto	Rosario Tablón
11			La Conquista
12		Montepeque	
13	La Paz	Santiago Nonualco	Santiago Nonualco
14	San Vicente	Tecoluca	San Pablo Cañales
15			Santa Cruz Porrillo
16			San Ildelfonso
17		Santa Clara	Santa Clara
18	La Union	San Alejo	Hato Nuevo
19		Pasaquina	El Tablón

⁴ The investigation included 55 systems instead of only 48 as previously established, since 7 more systems supplied by water-wells and hand pumps were added from a list provided by USAID. Additionally, a copy of the complete study undertaken for these 55 systems can be found in Annexes.

⁵ PROSAGUAS provided technical assistance to 42 of the 55 diagnosed systems since 6 of them were found to be in good conditions, and the other 7 were the systems supplied through water-wells and hand pumps.





No.	Department	Municipality	Assisted Communities
20	Morazán	Cacaopera	Tierra Blanca
21			Torola
22		Perquin	Ocotillo
23		San Fernando	Platanares
24		Corinto	Barrio la Alianza
25		Yamabal	San Francisquito
26		Perquin	Perquin
27		Joateca	Joateca
28	San Miguel	Lolotique	El Palón
29			San Matías
30		Ciudad Barrios	Teponahuaste
31		San Miguel	El Jalacatal
32	Usulután	Santa Elena	El Nanzal
33			Los Amates
34		Jucuapa	Llano Grande
35	Ahuachapán	Tacuba	La Pandeadura
36			Sincuyo
37	Chalatenango	Nueva Concepcion	Santa Rosa
38	La Libertad	San Matias	La Puebla
39		Quezaltepeque	El Señor
40		Ciudad Arce	Zapotitán
41		San Pablo Tacachico	Atiocoyo
42	La Union	Pasaquina	Piedras Blancas

5. FOCUS E: SUSTAINABLE INTERVENTIONS

The sustainability of program interventions was ensured through a proper operation, administration, and maintenance of the entire system by members of the administrative organization through the participation of beneficiary communities. The administration of water and sanitation systems included considerations for the sustainability of water sources by means of proper watershed management activities. At the same time, the sustainability of these interventions was reinforced by providing assistance to the MSPAS⁶ health promoters and to other NGO's working in community health. Said community health promoters will continue to work with beneficiary populations even after **PROSAGUAS** completes its objectives and leaves the community.

PROSAGUAS requested permission from USAID to change the strategy established to obtain the desired results of Objective No. 3 in the penultimate Operating Plan. This new approach will take place by educating beneficiary community schoolchildren, and planting fewer trees in the geographical areas pertaining to these communities. The new description for Objective No. 3 was: "To promote a cleaner

⁶ MSPAS means Ministry of Health





environment through the provision of educational activities to schoolchildren and beneficiaries, as well as with reforestation activities”.

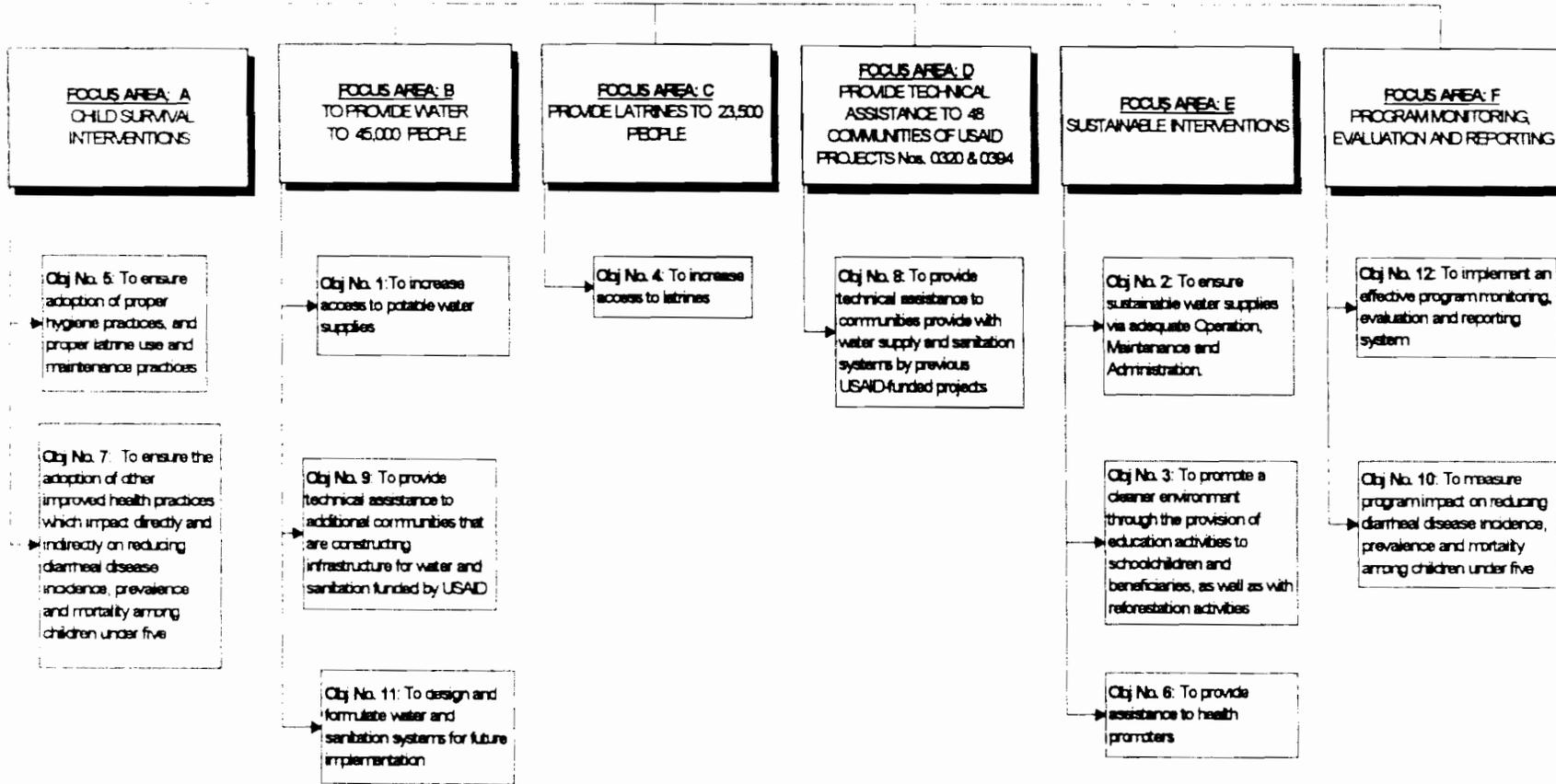
6. FOCUS F: PROGRAM MONITORING, EVALUATION AND REPORTING

The evaluation and reporting of program activities is necessary in order to manage the progress.



PROSAGUAS

PROGRAM FOR REDUCING DIARRHEAL DISEASE INCIDENCE AMONG CHILDREN UNDER 5 YEARS OF AGE BY MEANS OF PROVIDING WATER AND SANITATION SYSTEMS (FOCUS AREAS)



III. PROGRAM COMPONENTS

The implementation process for each one of the projects executed by PROSAGUAS demanded an integral approach, considering four technical components: **Health Education** component, **social promotion and organization** component, **infrastructure** component and the **environmental** component. For this reason a strategy was created to integrated these four components, assuring that each one acted interdependently with the other three.

1. HEALTH EDUCATION



A VIEW OF DIFFERENT HEALTH INTERVENTION ACTIVITIES, MULTIPLE LA LOMA AND LOS CONACASTES

The purpose of this component was to change attitudes and practices towards basic sanitation and health practices, to improve the population's health in relation to achieving a reduction of diarrheal illnesses among children under 5. The program promoted changes in attitudes in the following areas: environmental sanitation; health practices at a household level; gray water disposal.

Health and basic hygiene education were developed parallel to the construction of water systems and sanitation infrastructure in beneficiary communities. Organizational structures were formed and trained to promote a sustainable educational process among every family in the community, especially with families having children under five.



The education for health component defined its strategy in five main areas: I) community organization, II) community awareness of health practices, III) Health committee coaching, IV) Inter-sector coordination, V) Gender approach in every educational process.

A health committee was formed in each project developed by **PROSAGUAS** in order to facilitate the educational process for the health area, and a training process was implemented through workshops and educational sessions, covering topics related to the Education for Health component, including basic environmental sanitation addressed to the health committees. These workshops covered theoretical and practical aspects to provide committee member's practical tools to become efficient health facilitators in their communities. Health committees replicated these topics through educational sessions addressed to community families to update and enrich the community's knowledge in topics such as the adequate use and maintenance of latrines, Mother to Child seminars for pregnant, nursing mothers and mothers of children under 5. Once this training process was finalized, the committees supervised how families put these seminars into practice through household visits.

Many of the activities developed in this component required the use of the sanitary education module⁷ - containing the topics developed in different workshops— as well as other educational material created for this purpose. Training sessions were provided by **CARE** staff in coordination and participation of **MSPAS** health promoters; together with local partner institutions who always supported project activities.



2. ORGANIZATION



SANTA MARTA ADMINISTRATIVE BOARD, 2001

The main objective of this component was to facilitate a community organization process, in order to promote an active participation among the families integrating the community to involve them in decision-making processes related to the project; this strengthened leadership and promoted new leaders to create solidly structured organizational entities. This implied

promoting a systematized educational process based on personal development to foment collective responsibility towards the adoption of decisions and action planning, thus guaranteeing that infrastructure works would be used with a sustainability approach.

⁷ This is the second of nine educational modules elaborated with **PROSAGUAS** funds, these modules were utilized to facilitate an educational process conducive to developing skills and abilities among leaders participating in the execution of projects.



This component was the core for the other three, which were articulated systematically to select trained and strengthened personnel and promote them to become part of the administrating entities regulating the water, health and environmental systems.

A series of procedures were established in three different stages to develop the strategy: pre-feasibility, feasibility and project execution.

- The main activities involved in the pre-feasibility stage included coordinating actions with project leaders, local authorities and institutions in order to explain **PROSAGUAS'** goal, get to know the community's expectations, identify resources and carry out studies such as census to obtain key information.

- The main activities involved in the feasibility stage included presenting and elaborating, together with communities, the design for the system to be built, searching for partners to obtain financial and technical contributions, and the development of an interinstitutional and community agreement to execute the project, as well as a presentation during a general assembly to gain the community's acceptance of the project.



PRESENTATION OF LOS CONACASTES PROJECT TO COMMUNITIES

- Tasks developed during the execution of the project, such as the formation and training of organizational structures were a little more complex. Training sessions included integrated workshops that covered methodological aspects and the necessary tools to prepare committee members for teamwork.

Water committees were required to include a minimum of 33% of women participating as active members.

All relevant information concerning the formation of committees was described in the first four educational modules –



AN EXAMPLE OF PARTICIPATION OF WOMAN IN LA MONTAÑITA ADMINISTRATIVE BOARD



from the collection of nine⁸ – elaborated by **PROSAGUAS**. Each topic suggests development techniques based on participative education methodologies used to train community leaders. These techniques were enhanced with the incorporation of elements such as gender, community participation, and empowerment. The methodological participation was utilized to actively involve community members and local government representatives in the development of the process. Activities designed to increase the municipal government and community organization's capacities such as health education were facilitated to beneficiary communities.

The organization module⁹ covers topics related to social participation and necessary procedures to provide sustainability to the interventions. Part of these procedures involved legalizing plots of land and obtaining legal permits for pipeline rights of way. All acquired goods were transferred to the administrative entity once it was constituted, reason for which, when legal procedures were carried out, the documentation was edited in an explicit manner to ensure that these acquired goods and assets were transferred to the administrative entity as soon as the construction process was ready to be executed.

Part of the responsibilities of this component included: the formation and constitution of the administrative board in each system built and/or improved; elaboration and interpretation of statutes and internal regulation together with the administrative board, orientation and coaching of Boards of Directors to obtain their legal representation from the Municipal Council, and training to Board of Directors, vigilance board and contracted staff on technical, managerial and financial/accounting aspects to guarantee an adequate administration, operation and maintenance of every water and sanitation system.



3. ENVIRONMENT



ENVIRONMENTAL ACTIVITIES INTO THE MICROWATERSHED OF LOS CONACASTES, 2000

This component is one of the most important when referring to water and sanitation. Micro-watershed protection becomes relevant due to the relationship existing between quality and quantity of water. Additionally, sanitation has to be approached with an adequate management of garbage and wastewater treatment. Hence, the purpose of

⁸ Six of nine modules elaborated by **PROSAGUAS** have already been published, and the remaining three are being reviewed, after which they will be immediately published under **PROSPERAR** project.

⁹ This is the third module from the collection of nine elaborated with **PROSAGUAS** funds; these modules were utilized to facilitate an educational process conducive to developing skills and abilities among leaders participating in the execution of projects.



this component was to develop an educational process to promote changes in attitudes related to practices such as garbage management, wastewater treatment and micro-watershed protection through organized community participation as an Environmental Committee.

To accomplish this objective, an intervention strategy was developed for the environmental committee and community to undertake. Some of the



EDUCATIVE ENVIRONMENTAL ACTIVITIES IN LOCAL SCHOOLS OF MULTIPLE LA LOMA



WASTE MANAGEMENT TRAINING IN ANALCO



LIVE BARRIERS IN LA PATERNA



LABOR IN DEMONSTRATIVE PARCEL IN LA MONTAÑITA

action included in this strategy involved organizing and training the environmental committee to carry out environmental protection activities, elaborate community tree-nurseries, reforestation actions, construction of infiltration ditches, hillside irrigation ditches, and construction of hedges and stone barriers. Educational sessions were carried out with students and teachers in schools to promote an adequate management of garbage at a household level.

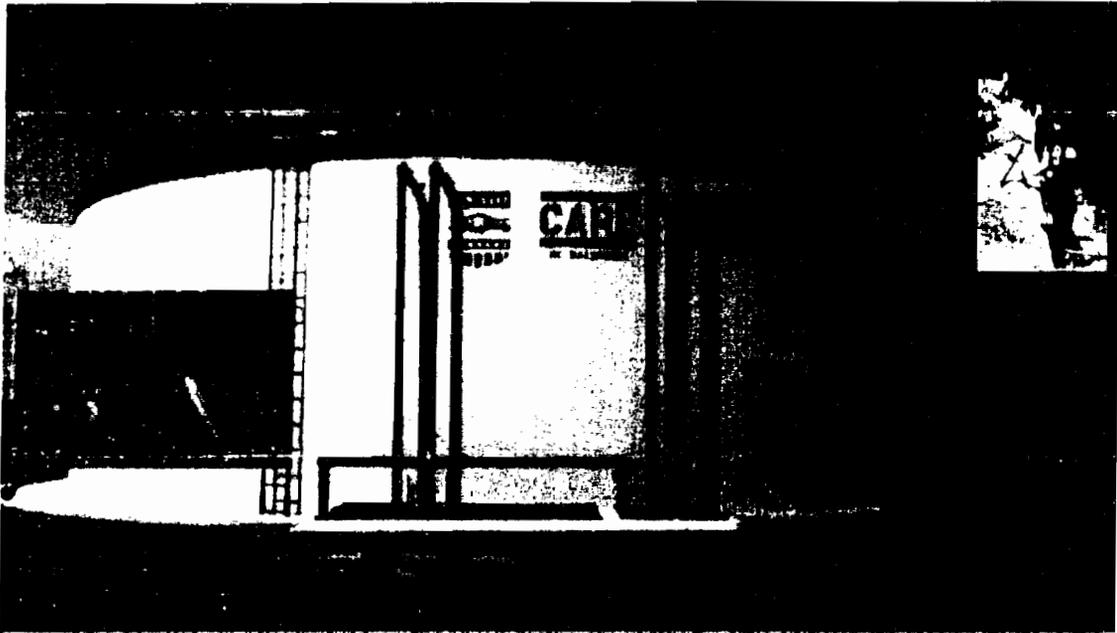
The Environmental Component promoted the adoption of new conservation practices for natural resources to protect water sources and environmental surroundings.

Additionally, a micro-watershed management plan was elaborated jointly with each environmental committee for water sources supplying each water system built by **PROSAGUAS**; the responsibility of developing and providing continuity to this plan fell on the administrative entities; part of **PROSAGUAS'** global strategy envisioned each beneficiary paying a monthly water fee, including a percentage destined to upkeep the environment; these funds would finance the administrative entity's annual programmed plan activities.



Just as with the other components, a more detailed description of the topics developed together with the committee and the tasks developed in the community are described in the environmental education module, which covers the environmental area.

4. INFRASTRUCTURE



EXAMPLE OF INFRASTRUCTURE ACTIVITIES AND FINAL RESULTS



The Infrastructure Component coordinated the construction of water and basic sanitation (latrines and waste water disposal devices) systems jointly with the community. The objective of this component was to ensure the sustainability of water and sanitation systems built by **PROSAGUAS**, through the construction of quality facilities and training to the administrative entity on the proper way to operate and maintain the systems.

Infrastructure interventions were carried out in three stages:

- At the moment of elaborating the designs, executing them and supervising the construction of potable water systems, latrines and absorption pits for each project executed by **PROSAGUAS**. Project engineers and/or civil technicians provided direct supervision of skilled masonry work and community labor.
- The supervision of the latter included a strategy that involved forming work groups to support labor in the areas of: ditch excavations, construction of tanks, material-delivering assistants and plumbing assistants, masonry, etc; nevertheless, due to the program's objective, work groups also supported actions related to the construction of infiltration ditches and other necessary works. A head of group



was elected for each group to monitor work sessions on a daily basis. These groups were normally formed 45 days after the community had approved the project.

- Operation and Maintenance community staff from each potable system (plumbers, operators, and members of the administrative board) was trained through workshops during the construction process as well as during the follow-up process provided to the administrative, operation and maintenance areas.

Part of this component's responsibilities included installing fully trained community members in the areas of plumbing, warehouse management, system operation and maintenance, including a user's manual on system operation and maintenance for trained personnel to use in every system that was built.

All training embraced a gender approach in close relation with the social organization component to guarantee a complete community participation during the construction process, from the moment of deciding which type of water system, type of latrines and wastewater elimination systems to build, to the analysis of water fees and water consumption blocks to be implemented.



WAREHOUSE WOMAN

A process was followed to control the introduction and exit of materials, equipment and tools to and from the warehouse, involving the community during the execution of the project, and selecting a warehouse manager and warehouse assistants. Once elected they received a complete training in order to efficiently carry out their responsibilities, and their work was overseen throughout the entire life of the project together with water committee and social organization component.

5. MONITORING AND EVALUATION OF INTERVENTIONS CARRIED OUT IN EACH PROSAGUAS PROJECT:

As mentioned earlier, **PROSAGUAS**' goal was to accomplish a reduction of 26% in the incidence, prevalence, and mortality due to diarrheal diseases in relation to the baseline; for this reason **PROSAGUAS** measured this impact indicator since the startup of projects through its monitoring and evaluation department by means of base lines and impact and effect evaluations. This was carried out to monitor the reduction of diarrheal diseases and to keep updated information indicating the prevalence of diarrhea among children under 5 years of age, and to have data explaining effect indicators designed according to criteria from technical program personnel.



Evaluations were carried out biannually, one per season (dry and rainy), and were applied in those projects that had already concluded. Once a project was inaugurated, two evaluation studies were developed once a year, each utilizing the record cards used during the base line study, but this time applied once during the dry season and once during the rainy season.

Two types of studies were carried out before the interventions: the base line study and the analysis of Knowledge, Attitudes and Practices (KAP's):

- The former consisted of surveys using record cards for a sample or census¹⁰ of homes targeted in each project. The survey always included six modules: social and demographic characteristics, housing, water and sanitation characteristics, wastewater and excreta disposal, jobs and income and the health module. This base line study was elaborated to identify the conditions of the community before the project's intervention.
- The latter consisted of a qualitative study employed in each of the projects, which involved focal group techniques applied to different groups constituted by: mothers, fathers, grandparents and community leaders. These analysis explored all nine basic components considered in the education for health interventions: 1) Adequate use and maintenance of latrines; 2) Personal hygiene; 3) Domestic Hygiene; 4) Adequate storage and use of drinking water; 5) Maternal breast-feeding; 6) Handling and storage of food; 7) Oral rehydration therapy; 8) Nutritional education; 9) Immunization. This study determined the *Information for the Education and Communications System* (IEC) to be developed in the community.
- Educational interventions were monitored to guarantee that inadequate hygiene practices were being changed for the better. The monthly monitoring of diarrheal bouts among children under 5 was carried out during the execution of each project, and besides monitoring the incidence of diarrheas in a specific group it also aimed at sensitizing parents and tutors on this issue. This study was developed utilizing a modified technique of the **Self esteem - Associative strength - Resourcefulness - Action planning - and Responsibility - SARAR methodology** denominated record bags, comprised of a bag per child to deposit a card each time they became sick with diarrhea. Each month a Health Committee member would visit each household to count every card deposited in the bags and would later return the bags to the children's care giver.

Changes in attitudes were monitored two-fold:

- 1) At a community level: Use of posters with families, and use of bags to count diarrheal bouts among families.
- 2) At a program level: Analysis of base line, and analysis of KAP's surveys.

¹⁰ The decision to implement a census or a sample was determined by PROSAGUAS' Monitoring and Evaluation Unit.





A) METHODOLOGY UTILIZED FOR THE INVESTIGATION

PROSAGUAS' Monitoring and Evaluation department, in coordination with CARE's Monitoring and Evaluation Unit, carried out the evaluations. An instrument called "information record card"¹¹ was used in every community to carry out the evaluation once the project ended.

The decision to develop an aleatory census or sample depended on the size of communities; a census was developed in communities having fewer than 300 households, and aleatory samples were developed in larger communities; these were carried out in selected conglomerates. The level of accuracy of the work resulted in 95%, with a maximum probable error of 5.7%. The selection process for the samples involved a topographic study, facilitated by CARE El Salvador's Design Unit, and the houses were later identified in the map to define the population to be surveyed.

Skilled workers trained on the use of the instrument, were hired temporarily to execute each investigation and were organized in work groups with a respective Head of Group and Head of Field Personnel in charge of the entire group. Notes were sent to each Administrative Board through the Monitoring and Evaluation Department and held meetings with the surveying team before the execution of activities to inform about the study.

Information was processed at the Headquarters, in a statistical system called SPSS program (Statistical Package for the Social Sciences) and results were analyzed by PROSAGUAS' Monitoring and Evaluation department

To analyze the *impact results* obtained in communities it was necessary to consider the weather conditions in which the base line and evaluation studies had been elaborated. Each community reflected a different behavior in this indicator, but the accomplishment of goals could generally be determined by comparing the evaluation results from the dry season with base lines from the dry season, or in the other case, during the rainy season.

¹¹ A sample of this card can be found in the Annexes section.



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IV. CROSS CUTTING AXES

PROSAGUAS promoted four strategic approaches to achieve community empowerment: 1) gender approach; 2) work in partnership; 3) community participation; and 4) sustainability.

1. GENDER APPROACH

Gender approach was one of the main transverse axes in **PROSAGUAS**. The program was very specific on including a gender approach in community participation as a transverse axis, since there are many different needs, preferences and behaviors in relation to water and sanitation among men, women, boys and girls.



A MEETING OF COMMITTEE IN CERRO EL COYOL 2001

Men's and women's participation in every committee activity at every decision-making level was adopted in many ways, starting with the selection process. Awareness was introduced in the procedures and educational materials used by **PROSAGUAS** – these materials aimed at promoting gender equality in

relation to women's participation in the project – in an effort to provide the necessary conditions for everyone to become involved and participate. The **SARAR** methodology was utilized in the mobilization and training areas since this methodology is designed to offer a balanced participation and motivates persons who usually tend to stand behind the lines to participate.

Active population participation was promoted equally between men and women during the entire cycle of the project, developing the following activities:

- Participation, promotion, and facilitation for both men and women in every organization created in the project, emphasizing in providing at least 33% representation in Water, Sanitation and Environment System Administrative Boards.
- Educational material was elaborated to promote gender equity.
- **CARE** work teams were organized with gender equity criteria for each sub-project.
- Leaders were trained on gender equity topics and training sessions in general included gender equity.
- Training sessions were defined based on availability of men and women.



2. WORK IN PARTNERSHIP

In its effort to provide better living conditions to the most needy communities, **PROSAGUAS** sought – as one of its transverse axes for project implementation and to better ensure long-term sustainability of built water systems – the implementation of projects in coordination with other institutions such as the central government, municipal governments, NGOs, other donors, and communities, which enhanced the achievement of established objectives and goals.



A PARTNERSHIP MEETING IN SANTA GERTRUDIS. 2001

The level of interdependency in each partnership relationship established by **PROSAGUAS** was determined by context. **PROSAGUAS'** experiences prove that work in partnership provides value added to the work through the simple fact of facilitating products with less strain from each party, and also allows sharing institutional learning to strengthen each other. On the other hand, the

efforts contributed by every part inspired undertaken, or in other words, fomented commitment to guarantee the sustainability of all actions developed.

a sense of ownership of the work

Some of the institutions that established a partnership agreement to develop projects with **PROSAGUAS** include the following: Rotary Clubs; Lions Clubs; US Peace Corps; European Union; UNICEF; MSPAS (at a departmental level or SIBASIS, health Units); ISSS; ANDA (with Decentralization, Rural Systems Offices); MAG, CENTA, FUSAI, and all communities and municipalities covered in the intervention.



LA MONTAÑITA PARTNERSHIP AGREEMENT. 2000

Contributions by Municipalities and ANDA, for the majority of **PROSAGUAS** projects consisted of in-kind contributions, and on the other hand, communities contributed with cash and labor. Additionally, MSPAS Health Promoters were trained on health topics related to child survival and the appropriate use of latrines and SARAR methodology, since they will be in charge of developing these activities now that **PROSAGUAS'** interventions have concluded. US Peace Corps volunteers worked in several projects (in diverse areas such as health and infrastructure) helping communities in their daily activities. Other entities such as the European Union, International Rotary Club and the International Lions Club participated in some projects as partners, providing contributions in cash, in kind, and technical assistance.

The steps taken to accomplish successful interventions in partnership with other institutions include the following:

- i. Identification of potential partner organizations and institutions.
An "inventory" of organizations and institutions inside and outside project target areas was carried out, especially those working in **PROSAGUAS'** areas of intervention. This identification of possible partner institutions was executed during the pre-feasibility stages, and institutions at a local level were identified with the help of local communities; those institutions not present in the area of intervention were generally identified beforehand and coordination was carried out at a **PROSAGUAS** managerial level.

- ii. Presentation of **PROSAGUAS** to the institutions/organizations present in the community area.
This served as an introduction and allowed institutions to learn about the program and possible interventions to be developed in the area, and allowed us to learn about the projects they were already developing in the area. This activity was undertaken by regional technical teams or in some cases by management at an institutional level.



PROJECT PRESENTATION TO COMMUNITIES OF EL
JUTAL 2001



- iii. Identification of institutions interested in participating in the projects and their probable contributions.
This stage served to identify those institutions that reflected much interest in the program's actions. After learning about the program's intervention and objectives, they were invited to state their possible participation in the implementation of projects, through economic contributions to directly or indirectly build infrastructure of through technical assistance or materials, abiding to agreements, principles and institutional policies.
- iv. Establishment of principles to regulate the relationship and communication system.
Once potential partners were identified, a close relationship was established considering principles to create a healthy partnership. This was always accomplished after clearly defining partnership guidelines, processes and norms to execute each project; and it was necessary to establish communication mechanisms to ensure continuity of the relationship, contacts, dates, places, etc. To achieve a greater involvement and commitment from all parts, **PROSAGUAS** decided to involve them in the investigations that determined project feasibility, obtaining a greater commitment and clarity of objectives from each partner.





- v. Elaboration of documents or technical portfolios describing all project interventions.

This stage was an individual process for each project, and required much coordination and decision-making. Once the health and environmental interventions were considered, and the designs and budgets for water and sanitation systems had been elaborated (latrines and gray water elimination systems) and the contributions from each institution had been defined, the Technical Project Portfolio was elaborated. This document contained all interventions, budgets and specific contributions to be provided by each institution and community for every target area.

Besides the Technical Portfolio, specific portfolios were elaborated according to the requirements of each institution in order to negotiate funds and formalize the contributions proposed to the project. An example of this are the municipalities and ANDA who have to negotiate funds with the central government; in cases such as these, **PROSAGUAS** regional staff together with these institutions elaborated specific technical portfolios according to the format (FISDL or ISDEM).

- vi. Establishment of Agreements.

Once the feasibility was defined and the levels of participation had been agreed for each part, the accords were consolidated through the signature of an agreement that formalized the commitments acquired by each party, in some cases involving a public act before beneficiary communities.

- vii. Participation during project execution

Actions were carried out during the implementation of projects in order to establish agreements between each participating party included: periodic progress evaluation and meetings to evaluate compliance with commitments; the frequency of these sessions was determined by the needs in context. Activities were coordinated with each partner institution according to the commitments defined in the agreement, to ensure that contributions (materials or technical assistance) were delivered in a timely manner.

- viii. Follow-up

During the follow-up stage, institutions continue working and coordinating activities with the Administrative Board, even though working agreements are no longer in place, in order to guarantee the sustainability of all the work that was implemented during the execution stage. All of the work developed is evaluated during this stage, a balance of investments is elaborated, and liquidation minutes on project investments were elaborated in the case of municipalities.





3. COMMUNITY PARTICIPATION

Community participation is decisive if they are to be protagonists of their development process. To achieve this, it is necessary to utilize appropriate methodologies, which is why **PROSAGUAS** employed participative methodologies in every process of the project's execution, which consequently influenced educational materials utilized to promote changes in attitudes to be based on the **SARAR** participative methodology and educational materials utilized to train Administrative Boards, which were based on the - Competency based Economies through Formation of Enterprise - **CEFE** methodology.



BENEFICIARIES TRANSPORT MATERIALS IN LA PATERNA. 1999



HOME VISIT BY COMMITTEE MEMBER IN LOS CONCASTES. 2000

For **PROSAGUAS**, beneficiary population participation was a cornerstone which proved that successful results can be obtained when communities intervene in every phase of water and sanitation projects, from the planning stages to their execution, evaluation and feedback; this participation was strengthened through timely information that resulted in a greater commitment to the decision-making processes and the priorities and technologies to adopt.

PROSAGUAS increased community participation, from labor contributions for physical and educational activities, to the provision of facilities for warehouses (to store materials, tools and equipment valued in hundred of thousands of dollars), getting them to assume responsibility for their administration, obtaining right-of-way permits, donations or procurement of land to drill water-wells or containing water springs, land to build tanks and other works that each project required, including economic contributions in cash to complement budgets to execute projects. A clear example of this is the participation obtained from the community in



LABOR CONTRIBUTION BY WOMEN AND MEN IN MONCAGUA AND CORINTO



CHIEF OF WAREHOUSE IN MULTIPLE LA LOMA 2000



Cara Sucia project, where the population provided not only in-kind but also cash contributions, resulting in a considerable amount of cash collected by the community (\$114,285.71). Cara Sucia's success story "Cara Sucia, an example to the rest of communities" can be found in the Annexes section (Annex No.11).

PROSAGUAS' community participation approach called for a strategy in which communities focused their efforts on: 1) defining how the community and existing organized groups would participate; 2) selecting the potable water project's level of service; 3) selecting the type of latrine; 4) selecting the community-managed administrative model for the potable water system; 5) participating in the elaboration of designs, reception of works, etc; 6) participating in water-spring protection activities; 7) providing community labor; 8) providing existing local materials; 9) paying in cash a percentage of the cost of project materials (this was determined based on the results of the community diagnostic and service desired); 10) legalizing necessary water-springs, plots of land and rights-of-way; 11) providing local warehouses and warehouse keepers to store and control construction materials; 12) guaranteeing men's and women's participation in all organizational structures formed in every project; 13) promoting the modification of habits related to environmental health.

Some **PROSAGUAS** projects presented problems while attempting to engage the community to participate, especially in urban populations and marginal areas within big urban centers, since community participation activities have been traditionally carried out in rural areas where community work for collective well being is a common practice. Nevertheless, the low financial capacity of central governments prompted communities to participate since the cost of the facilities had to be financed by users through fees or contributions.



4. SUSTAINABILITY OF INTERVENTIONS.

Sustainability as conceived by **PROSAGUAS**, seeks long-term maintenance of the potable water system as well as for every social process developed in the areas of organization, health and environment, through the execution of actions grouped in three main categories:



SOME EXAMPLES THAT ENSURE SUSTAINABILITY

- The cornerstone to sustainability is **community demand** to solve their health problems through the construction of potable water infrastructure and improvement of sanitary systems, analyzing carefully this community demand, environmental needs and existing technology to develop a design aimed at adequately tackling these three factors, and guaranteeing the sustainability of built systems.



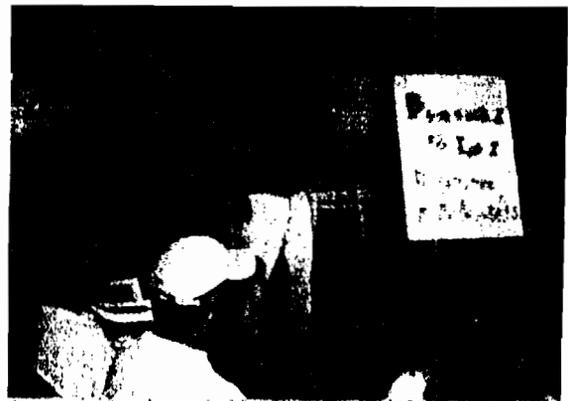
- Formation of **solid organizations**, having a legal constitution and legal support.
- Promotion of **water fees**, including a percentage covering environmental health costs. In order to promote these fees, social-economic studies were developed in



WATER COMMITTEE MEMBER PRESENTING WATER FEES AND CONSUMPTION LEVELS IN CERRO EL COYOL, 2001.

each project, establishing possible consumption blocks and levels of payment, which were later presented to communities who would adjust and ultimately define the final consumption blocks; this process included the promotion to install micro-meters to ensure that families only paid for actual consumed water; establishing also a minimum level for low-income families. A copy of the study "Rural metering" can be found in the Annexes section, which is an independent study on **PROSAGUAS'** strategy to achieve the installation of micrometers in its projects.

Once the 6-month follow-up phase provided by the regional technical team concluded, **PROSAGUAS'** **Technical Assistance Unit** took over and *reinforced the knowledge* they acquired throughout the project. This included reinforcing administrative, financial and accounting topics. Additionally, **PROSAGUAS** carried out work to guarantee the sustainability of board-managed systems including the creation and development of a computerized billing system for small systems (having a maximum of 5 thousand users) denominated "**CARE Water**". This software was designed by **CARE** under the water system's self-management concept, and can be operated using computers operating with Windows 98 as a minimum and low capacity printers; a copy of this software was donated to each administrative board, including the donation of a computer and a printer, as well as training sessions to operate the software; **PROSAGUAS** ensured this way a better administration during monthly billing processes and overall improved accounting procedures.



ADMINISTRATIVE WATER BOARD OF SANTA GERTRUDIS WERE TRAINING ABOUT LEGAL AND ADMINISTRATIVE TOPICS 2001.

PROSAGUAS considered that it was necessary to develop skills among leaders in order for jointly developed interventions to become sustainable; this would only be



possible if a real educational process was implemented, and for this reason the **collection of nine educational modules** was created. Each module covers specific topics and suggests techniques based mainly on **SARAR** and **CEFE** methodologies.

PROSAGUAS' Intervention sustainability depended greatly on a series of actions developed around three key moments:

1- A determining moment – before the execution of each project – social feasibility, technical and economic studies were presented during General Assemblies for communities to discuss and approve projects and ensure sustainability of activities.

These studies provided information regarding population, health and environmental conditions, organizational experiences and community participation, quantity and quality of water, current supply, cost of supply, revision of the design, environmental study impact, payment conduct and willingness to pay for water, sanitation and environmental services.

Another important element before the execution stage was the elaboration of a technical portfolio, and the Community Interinstitutional Agreement (fulfillment of established agreements guaranteed the sustainability of interventions).

2- Interventions were carried out in accordance to technical portfolios and component strategies during the execution of every project (including health, organization, environment and infrastructure areas).

3- Follow-up activities to ensure sustainability of interventions. This was necessary to verify and complement knowledge facilitated during workshops including the following:

- a) Work developed by every board of directors (in the areas of Administration, Operation and Maintenance of Potable Water Systems, Health and the Environment);
- b) Board's Annual Work Plan on the Administration, Operation and Maintenance of Potable Water Systems. **PROSAGUAS** made sure that the physical constructions endured through the preventive and corrective maintenance included in this plan; and,
- c) Health intervention plans and micro-watershed management

In conclusion, **PROSAGUAS'** Water, Health and Environmental interventions were executed with a sustainable approach that required consistent Social Feasibility, Technical and Economic studies. A technical Portfolio reflecting interventions to be developed in each component and signing of Community Interinstitutional Agreements defining participant commitments.





The following table shows cost sharing obtained by PROSAGUAS as result of partnership work.

No.	Municipality	Town	Project	Population	Beneficiaries	Total Cost	Community	Municipality	ANDA	European Union	Rotary Club CARE	Lions Club CARE	PAEE Project	CAMPO Foundation	ADEL Morazan	FUNDARUN	TOTAL	
1	SAN MIGUEL	MONCAGUA	SH (Health, hunger and humanity)	2,592	523	ELECTROMECHANICAL PUMPING	3,903	712	\$237,143			\$520,261						\$757,404
2		EL TRANSITO	MULTIPLE PRIMAVERA			EXISTENT WATER SYSTEM WILL BE IMPROVED	2,828	603	\$10,857									\$10,857
3	LA UNJUA	CONCHAGUA	LA NUEVA ESPERANZA	254	50	ELECTROMECHANICAL PUMPING	278	54	\$3,000	\$20,000								\$23,000
4		EL CARMEN	EL PICHE	361	50	ELECTROMECHANICAL PUMPING	1,080	184	\$2,454									\$2,454
5	USulutlan	EREGUAYQUIN	LOS ANALCO	1,835	371	ELECTROMECHANICAL PUMPING	2,061	474	\$132,542	\$22,857	\$412							\$155,811
6	MORAZAN	CORINTO	TOWN OF CORINTO	0		COMBINATION OF ELECTROMECHANICAL PUMPING AND SPRING GRAVITY	3,944	708	\$239,192	\$18,528					\$457	\$800		\$258,977
7			LA PATERNA	243	43	SPRING GRAVITY	216	38	\$10,441			\$30,000						\$40,441
8		OSICALA	LA MONTAÑA	945	184	SPRING GRAVITY	717	143	\$45,495	\$84,252	\$47,949			\$24,000	\$8,714			\$211,411
9			CERRO EL COYOL	1,213	233	SPRING GRAVITY	1,717	375	\$61,365	\$56,303	\$6,781			\$2,266				\$126,655
10			TOWN OF OSICALA	0		EXISTENT WATER SYSTEM WILL BE IMPROVED	1,570	400		\$19,945								\$19,945
11		SAN SIMON	EL CERRO	198	43	SPRING GRAVITY	729	142	\$36,517	\$19,429	\$29,500							\$84,946
12	AHUACHAPAN	SAN FRANCISCO MENEDEZ	LOS CONACASTES	1,795	359	SPRING GRAVITY	1,979	399	\$99,112		\$14,071							\$113,183
13			CARA SUCA	3,666	618	ELECTROMECHANICAL PUMPING	6,984	1,300	\$404,876		\$124,515							\$529,391
14	SANTA ANA	SANTA ANA	SANTA GERTRUDIS	1,643	443	ELECTROMECHANICAL PUMPING	2,197	514	\$118,794	\$66,686	\$4,516	\$50,000	\$15,000					\$254,996
15	CUSCATLAN	SAN PEDRO PERULAPAN	ISTAGUA	1,710	342	PUMPING	2,750	580	\$158,636	\$6,318	\$6,891							\$171,843
16			MULTIPLE LA LOMA	8,740	1,749	ELECTROMECHANICAL PUMPING	11,715	2,343	\$480,702	\$18,510	\$11,563							\$510,875
17	CABANAS	VICTORIA	SANTA MARTA	2,400	505	SPRING GRAVITY	2,880	436	\$212,523									\$212,523
18			EL JUTAL	122	27	SPRING GRAVITY	342	53	\$34,553	\$48,203								\$82,752
CARE CONTRIBUTIONS IN CASH FOR VEHICLES AND COMPUTERS																	\$177,500	
TOTALS				27,706	5,640													





V. GEOGRAPHIC PROGRAM AREAS AND RESOURCES

Project management and coordination for **PROSAGUAS** took place in four levels: **USAID** official in San Salvador, **PROSAGUAS** headquarters in San Salvador, regions/municipalities, and at the project community level. **CARE** decentralized project management by placing regional coordinators in each regional country area. This is expected to enhance project implementation and strengthen impact by facilitating closer coordination and communication with **PROSAGUAS** staff, municipal/NGO counterparts and project communities. Intervention geographic areas cover 3 regions in the country: East, West and Central.

The staff that participated during **PROSAGUAS'** implementation of different projects was the following:

<i>Connie Johnson</i>	<i>USAID Health Office Director</i>	<i>Karen Welch</i>	<i>Health Office Deputy Director</i>
<i>Terrence Tiffany</i>	<i>Former USAID Health Office Director</i>	<i>Mari Sinnitt</i>	<i>Former Health Office Deputy Director</i>
<i>José Antonio Ramos Chorro</i>	<i>Cognizant Technical Officer</i>		
Ricardo Antonio Mancia	Manager	Arely Francisca Reyes Reynado	Regional Coordinator
Isai Jonathan Claros Alvarez	Assistant Manager	Marvin Elizabeth Mejia Pineda	Regional Coordinator
Indira Ines Escalante Mendoza	Office Administrative Assist	Rafael Guerra Benavides	Regional Coordinator
Paul Enrique Garcia Castellanos	Editor	Roberto Alexander Hernandez S.	Regional Coordinator
Evelyn Yanira Martinez Ascencio	Secretary	Martin Segovia	Monitoring & Evaluation
Marco Vinicio Cañas Calderon	Warehouse Auditor	Eduardo Artiga Martinez	Monitoring & Evaluation
Luz Angelica Fuentes	Janitor	Luis Clavel	Monitoring & Evaluation Assist
Rodolfo Pacheco Paz	Architect	Balter Antonio Zelaya	Social Promotor
Francisco Antonio Guevara Ch.	Accounting Promotor	Jose Inocente Umaña Menno	Social Promotor
Ricardo Ernesto Mejia Zelaya	Accounting Promotor	Paris Aguirre Castro	Social Promotor
Alvaro Enrique Sanchez Turcios	Social Promotor	Roberto Iraheta	Social Promotor
Wistong Romeo Dos Cruce	Social Promotor	Romulo Carranza Isleño	Social Promotor
Miguel Angel Padilla Saravia	Civil Technicians		
Ana Gloria Alvares	Health Promotor	Flavio Omar Quezada Salazar	Engineer
Blanca Marlene Gavidia Palacios	Health Promotor	Genoveva De Jesus Lopez	Engineer
Celia Virginia Cuellar Recinos	Health Promotor	Hector Wilfredo Mejia Martinez	Engineer
Evelyn Patricia Hernandez De R.	Health Promotor	Jorge Alberto Herrera Valencia	Engineer
Flor De Maria Rodriguez M.	Health Promotor	Leoncio Orlando Romero Rios	Engineer
Margarita Maribel Ruiz	Health Promotor	Roberto Guillermo Castro Neira	Engineer
Marina Antonia Siliezar De R.	Health Promotor	Gabriel Peña	Engineer
Marta Estela Castro Figueroa	Health Promotor	Francisca Del Carmen Orellana L.	Enviromental Promotor
Oscar Armando Rodriguez	Health Promotor	Sonia Elizabeth Batres Ortega	Enviromental Promotor
Celia Palacios	Health Promotor	Victor Manuel Mendez Apancio	Enviromental Promotor
Marta Emperatriz Romero G.	Regional Secretary	Antonio Blanco Viera	Logistics
Morena Guadalupe Hernandez E	Regional Secretary	Luis Salvador Menjivar Mancia	Logistics
Sonia Esmeralda Chavez Orantes	Regional Secretary	Nelson Eddy Moreno Ramos	Logistics
		Salvador Edmundo Sanchez C	Warehouse Man



Resources included the following: 19 Vehicles 4 x 4 (type Pick Ups and Land Cruseirs), 21 Computers (18 desktop and 3 laptop) and 8 Printers (Laser and Color Inkjet)





1. WESTERN REGION:

Integral projects have been executed in this region, including Cara Sucia, Los Conacastes and Santa Gertrudis, benefiting a total of 11,160 persons / 2,173 families. (For more information, see **PROSAGUAS'** project annex No.1)

2. CENTRAL REGION:

Four projects were executed in this region: Istagua, Múltiple La Loma, Santa Marta, and El Jutal, benefiting 17,687 persons / 3,385 families. (For more information, see **PROSAGUAS'** project annex No.1)

3. EASTERN REGION:

Projects developed in this region include 3H - Moncagua (Health, Hunger And Humanity), La Nueva Esperanza, Los Analco, El Piche, La Paterna, Corinto Town, La Montañita, Cerro El Coyol, Town of Osicala, El Cerro and Múltiple Primavera, benefiting a total of 19,911 persons / 3,966 families (For more information, see **PROSAGUAS'** project annex No.1)

4. SAN SALVADOR HEADQUARTERS

This office served as headquarters for **PROSAGUAS'** management and for administrative, financial and technical assistance staff as well. The later surged as a response to **PROSAGUAS'** needs, since it carried out a study for fifty-five systems, identifying the need for technical and organizational support in rural water systems. As a response to this situation, **PROSAGUAS**, with support from **USAID**, created its **Technical Assistance Unit** specialized in solving problems in any system built with USAID funds since 1993 through institutions such as CREA, PCI and **CARE**.

A) TECHNICAL ASSISTANCE UNIT

The **Technical Assistance Unit's** responsibility was to strengthen existing water systems by developing local capacities among leaders and provide support to water and sanitation administrative boards in the rural and municipal context.

Taking into consideration the lessons learned in the water and sanitation sector at a national level, the unit determined that 4 phases had to be considered in order to facilitate technical assistance to communities already administrating their systems.

- a) Elaboration of a participative diagnostic with a gender approach,
- b) Promotion of community organization,
- c) Planning of interventions, and
- d) Training.



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As a result of this Unit's work, **76 water and sanitation systems** received **technical strengthening in administration, finance, social organization, engineering, operations, and maintenance** since the year 2000. Its work was focused on beneficiary communities from past programs executed by CREA, PCI and CARE, and also assisted current programs developed by CARE El Salvador (PROSAGUAS, AGUA project, and MAS). Table below shows which systems receive assistance:

No.	Department	Municipality	Assisted Communities	
<i>Communities from past programs executed by CREA, PCI and CARE</i>				
1	Chalatenango	San Isidro Labrador	Los Amates	
2		San Miguel deMercedes	San Antonio Los Ranchos	
3			El Matazano	
4			Conacastes	
5			Santa Rita	Chilamate
6			Tejutla	Aposentos
7				Concepción
8	Cuscatlán	Tenancingo	Copalchán	
9		Suchitoto	Corral Viejo	
10			Rosario Tablón	
11			La Conquista	
12	Montepeque			
13	La Paz	Santiago Nonualco	Santiago Nonualco	
14	San Vicente	Tecoluca	San Pablo Cañales	
15		San Vicente	Santa Cruz Porrillo	
16		Santa Clara	San Ildelfonso	
17	La Union	San Alejo	Santa Clara	
18		Pasaquina	Hato Nuevo	
19		El Tablón		
20	Morazán	Cacaopera	Tierra Blanca	
21		Perquin	Torola	
22			Ocotillo	
23			Platanares	
24			Barrio la Alianza	
25			San Francisquito	
26			Perquin	
27			Joateca	Joateca
28	Lolotique	El Palón		
29	San Miguel	Ciudad Barrios	San Matías	
30		San Miguel	Teponahuaste	
31	Usulután	Santa Elena	El Jalacatal	
32		Jucuapa	El Nanzal	
33			Los Amates	
34	Tacuapa	Llano Grande		
35	Ahuachapán	Tacuba	La Pandeadura	
36	Chalatenango	Nueva Concepcion	Sincuyo	
37			Santa Rosa	
38	La Libertad	San Matias	La Puebla	
39		Quezaltepeque	El Señor	
40		Ciudad Arce	Zapotitán	
41		San Pablo Tacachico	Atiocoyo	
42	La Union	Pasaquina	Piedras Blancas	





No.	Department	Municipality	Assisted Communities
Communities from PROSAGUAS			
43	San Miguel	Moncagua	3H Moncagua
44		El Tránsito	Multiple La Primavera
45	Usulután	Ereguayquín	Los Analco
46		Corinto	Corinto Town
47	Morazán	Osicala	La Paterna
48			La Montañita
49			Cerro El Coyol
50			Osicala Town
51		San Simon	El Cerro
52	Ahuachapán	San Francisco Menéndez	Los Conacastes
53			Cara Sucia
54	Santa Ana	Santa Ana	Santa Gertrudis
55	Cuscatlán	San Pedro Perulapán	Istagua
56			Multiple La Loma
57	Cabañas	Victoria	Santa Marta
58			El Jutal
Communities from MAS			
59	Usulután	Usulután	La Poza
60		San Agustín	La Bendición
61		Zacatecoluca	San José de la Montaña
62			El Pichiche
63		Concepcion Batres	Hacienda Nueva
64		Puerto Parada	Puerto Parada
45	San Miguel	Chinlagua	Santa María
66		El Tránsito	La Pradera
67		El Cuco	El Cuco/Las Flores
68	San Vicente	Tecoluca	Santa Fe
Communities from AGUA			
69	Usulután	San Francisco Javier	Jobal Homos
70		Usulután	Buena Vista
71			El Cerrito
72		Mercedes Umaña / Merlín	Merlín
73			El Júcaro
74		Mercedes Umaña	El Caulote
75			El Tercio
76	Ahuachapán	San Francisco Menendez	El Jocotillo

Some assistance activities carried out by the unit included providing training in the areas of administration, resource management, billing processes (training on the use of the CARE water billing software), organizational strengthening, financial-accounting administration, potable water systems maintenance and operation, as well as providing consultancies related to obtaining the approval of statutes and publishing them in the El Salvador Official Gazette.





As part of unit activities, unit staff carried out community visits to provide counseling on their needs, provided support to install the **CARE** Water billing system and trained them on its use. In some cases, administrative boards were provided with assistance to promote and install water meters, as well as with the elaboration of consumption blocks.

The unit's strategic axis consisted in community participation to ensure that the processes it facilitated were sustainable, which meant that every intervention was planned with the local organizations.

The **Technical Assistance Unit** worked in the following areas to guarantee sustainability of water systems:

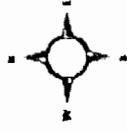
- A broader community vision of sustainability, which involved their willingness to invest in non-traditional areas to maintain and improve results.
- Communities with an organizational level to allow a sustainable management; a legal framework for the administrative boards was a determining factor.
- Formation of an administrative entity elected by the community in coordination with local actors.
- Administrative Boards having system operation, maintenance, and internal regulation manuals to facilitate actions.
- Communities having adequate accounting systems as well as practical and functional billing systems.

In order to be consistent with the participative processes being promoted, this Unit utilized **SARAR** and **CEFE** participative methodologies, and 4 of the 9 educational modules developed by **PROSAGUAS**: The Management for System Administrators Module, Resource Management Module, Financial-Accounting Module, and Billing Module.





GEOGRAPHIC LOCATION OF WATER AND SANITATION PROSAGUAS PROJEC



PROSAGUAS PROJECT
1997



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PROSAGUAS WATER AND SANITATION PROJECT LOCATION MAP

Department	Municipality	Project	Nº
San Miguel	Moncagua	3h (Health, Hunger And Humanity) April/98 - May/99	1
	El Transito	Multiple Primavera April/02 - Aug/02	2
La Union	Conchagua	La Nueva Esperanza April/98 - Dec/98	3
	El Carmen	El Piche Jul/00 - Sep/01	4
Usulután	Ereguayquin	Los Analco April/99 - Mar/00	5
Morazán	Corinto	Town Of Corinto Jan/99 - Dec/00	6
		La Paterna April/99 - Feb/00	7
	Osicala	La Montañita Jul/00 - March/01	8
		Cerro El Coyol October/00 - November/01	9
		Town Of Osicala Oct/01 -	10
San Simon	El Cerro Jul/01 - Aug/02	11	
Ahuachapán	San Francisco Menendez	Los Conacastes July/98 - April/00	12
		Cara Sucia July/98 - May/00	13
Santa Ana	Santa Ana	Santa Gertrudis Oct/00 - Jun/02	14
Cuscatlán	San Pedro Perulapán	Istagua July/98 - Jun/99	15
		Multiple La Loma July/98 - Oct/00	16
Cabañas	Victoria	Santa Marta Jul/00 - April/01	17
		El Jutal Jul/01 - Feb/02	18





VI. INCAP STUDY

INCAP's Objective: To find the impact caused by the introduction of water and sanitation at a community level, as a contribution to the alimentary and nutritional security of the population.

The objectives are: 1) to improve the process of evaluating the effects that **PROSAGUAS'** intervention programs have on the introduction of water and sanitation at a community level; 2) and to evaluate the effects of introducing water and sanitation programs, in relation to health, nutritional stages and means of life of the beneficiary population (children under five years of age).

1. BACKGROUND

This study was undertaken to analyze the prevalence of diarrheal illnesses in communities benefited by **PROSAGUAS**, as well as the number of diarrheal bouts among the population of children under 5 years of age, especially among girls and boys under 2 or 3 years of age, and the nutritional and health conditions of this population. This study also served to estimate changes in food security and quality of life, family income or food production for the family's consumption, which were expected to increase as a result of better time management derived from the introduction, availability and quality of water.

The purpose of carrying out a household water introduction project was to prove that just the fact of introducing safe water at a household level was enough to reduce the prevalence of diarrheas. This supposition assumed causality without much evaluation.

The main motive of the study was to prove not only the association between diarrheal prevalence and water introduction by **PROSAGUAS**, but also that the association was based on causality, so that it was necessary to cross-examine and evaluate this supposition. In order to carry out said causality evaluation it was necessary to prove that any changes occurring in the prevalence of diarrheas was really produced by the intervention in itself and not by causality or external factors, for which a control group was established. A control group can be defined in many ways, and may or may not execute different interventions, just as long as it is not involved in the main intervention being cross-examined, being in this case the presence of water at a household level.

According to the latter, and searching for the causality association, the evaluation design proposed to include a control group that was established by uninvolved communities having similar characteristics as those being intervened, located in the same geographic region, where the difference would reside in the intervention itself.





The communities chosen for the study were located in the Department of Cabañas and in the Department of Morazán, chosen – in relation to **PROSAGUAS**' projects – for their social – economic and health characteristics, since they are located in geographic areas that according to State and National indicators, present the worst conditions for human development in the entire country. Additionally, **PROSAGUAS** has information on the social organization conditions presently found in these communities.

The design formulated to evaluate the effects of the water and sanitation introduction project – as a contributing factor for food and nutritional security in the population – included a follow-up design, that initiates with a base line prior to the intervention executed in the year 2000, and ends with a final base line approximately two years later in the year 2002. The base line was designed transversely, selecting three communities being intervened and other three as control communities (not being intervened). These last ones were selected considering their similarity with communities chosen for the intervention. The results presented in this report correspond to the final base line evaluation study compared to the initial base line, considering only the same homes surveyed during the first base line.

2. EFFECTS

A) DIARRHEA

➤ **Effect indicator: diarrheal prevalence among children < 5 during the last 15 days.**

The effect indicator exceeded the proposed goal, and the final base line also surpassed the initial base line's findings. The diarrheal prevalence among children < 5 during the last 15 days in intervened communities reflected a significant reduction in relation to the base line and the proposed goal reflecting that **PROSAGUAS** outreached the desired results, with an average reduction of 49.7%. Additionally, the proposed goal to reach was adequate in relation to the data initially found in the base line, reflecting a reduction of 26% provided by the program.

PROSAGUAS' main goal is to reduce diarrreas in children < 5. Results obtained in this indicator reflected a striking improvement in the prevalence of diarrreas in all intervened communities.

Therefore, we can conclude that there is a direct and causal relation between water, hygiene education and basic sanitation programs at a community level with a positive effect on the reduction of diarrheas among children < 5, improving their quality of life and significantly increasing food and nutritional security in the population





B) NUTRITIONAL CONDITIONS. MALNUTRITION

These indicators and goals were established for study purposes only, since they are not part of the strategy of PROSAGUAS. Even though PROSAGUAS did not state having direct influence over nutritional indicators, (since no food was distributed nor economic contributions awarded to beneficiary families), the results of these indicators reflect an enormous improvement in the nutritional condition of children under 5, by reducing the predominance of malnutrition and insufficient weight for height and retarded growth.

⇒ **Effect indicator: Prevalence of malnutrition in relation to weight vs. age: Insufficient weight for a determined age group consisting of children < 5.**

The effect indicator exceeded the proposed goal and in the final base line outreached the initial base line's findings. The prevalence of children < 5 with a malnutrition and insufficient weight in relation to age in all intervened communities reflected a considerable reduction in relation to the base line, indicating that PROSAGUAS outreached the desired results, with an average reduction of 27.9%.

Even though PROSAGUAS has not yet directly influenced this indicator, and considering that it did not promote a food distribution or supply nor did it provide economic incentives directly to intervened communities, the results obtained in this indicator reflect a striking nutritional improvement in children under 5, by reducing the prevalence of insufficient weight in relation to age. Therefore, INCAP conclude that there is a direct and causal relation between water, hygiene education and basic sanitation programs at a community level with a positive effect on the nutritional conditions of children < 5, improving their quality of life and significantly increasing food and nutritional security in the population.



⇒ **Effect indicator: Prevalence of malnutrition in relation to weight vs. age and size vs. age among children under 5.**

The effect indicator outreached the proposed goal, and the final base line exceeded the findings of the base line. The prevalence of children under 5 with malnutrition related to weight vs. age and malnutrition related to size vs. age in all intervened communities reflected a significant reduction in relation to the base line and proposed goal, reflecting that PROSAGUAS exceeded the desired results with an average reduction of 40.8%. Additionally, the goal proposed to reach was adequately established in relation to the findings of the base line for this nutritional condition indicator.

Effect indicator: prevalence of malnutrition resulting in retarded growth of children < 5. The effect indicator outreached the proposed goal as well as the findings in the base line. Prevalence found of 19.2% malnourished and emaciated children < 5 in intervened communities during the final base line, reflected a significant reduction in relation to the base line, with a reduction of 26.9% compared to initial findings.





Therefore, we can conclude that there is a direct and causal relation between water, hygiene education and basic sanitation programs at a community level resulting in a positive effect on the nutritional condition of children under 5, improving the quality of life, as well as alimentary and nutritional security of the population.

3. GENERAL CONCLUSION

CARE El Salvador's **PROSAGUAS** project proved the causality relationship existing between a significant diarrheal prevalence reduction and the introduction of water, education and environmental sanitation into communities, as well as the positive effect it caused in the nutritional condition of children under 5, by improving their quality of life, contributing significantly to the population's food and nutritional security. In addition, the accomplishment of intervention indicator goals that pretend to modify attitudes or practices in intervened communities through adequate knowledge can be reinforced, can be empowered and sustained through a community monitoring process.





CHAPTER 2

ACTIVITIES AND RESULTS BY FOCUS AREA

PLANNED AND ACTUAL

The analysis of program results will be developed by focal areas since all twelve program objectives (as mentioned in the Program Objectives section, chart in page No. 15) were grouped in six focal areas, so that the scope of the objectives could impact directly one or several focal areas, thus contributing to accomplish PROSAGUAS' global goal.

I. FOCUS AREA A: CHILD SURVIVAL INTERVENTIONS

Achieving a reduction in diarrheal illness in children under five years of age is considered to be a child survival intervention. Therefore, any activity that has a direct impact on achieving this reduction – such as the adoption of proper hygiene habits, proper use and maintenance of latrines, and the adoption of other good health habits – is also considered an intervention in child survival.

Two of the twelve objectives initially established by PROSAGUAS respond to what was established in this focal area, and have contributed enormously to the accomplishment of the global goal.

⊗ Objective 5:

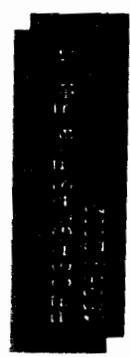
To ensure adoption of proper hygiene practices, and proper latrine use and maintenance practices.

Knowledge, attitudes, and practices ("KAP") among program participants reached an adequate level regarding proper personal, household and environmental hygiene. Women and children were the main focus but the entire family was targeted.

Benchmark Indicator:	Persons	
Number of beneficiaries with adequate hygiene and latrine use & maintenance practices.	Total Planned	23,500
	Total Result	27,706

Final result: This indicator reflects 27,706 latrine beneficiaries who expanded their knowledge and practices related to the use and maintenance of latrines.

From the analysis point of view, the health component strategy envisioned household visits as a means to ensure the comprehension of knowledge acquired and that beneficiary families adopted latrine use and maintenance practices.





Key practices monitored under this objective by health committees were focused on personal and domestic hygiene (hand washing, garbage disposal, disposal of cleaning materials, disposal of stagnant water); similarly, the evaluations carried out by the monitoring and evaluation unit included those same practices, and monitoring results – community and program – allowed us to conclude that latrine use and maintenance practices among beneficiaries improved at the end of the program in every community where **PROSAGUAS** executed projects. Additionally, the summer evaluation report of 2001¹² stated that several evaluation studies reflected that 95% of households in studied communities utilized the latrines provided, and that the program had influenced positively in changing use and maintenance practices.

⑤ Objective 7:

To ensure the adoption of other improved health practices that impact directly and indirectly the reduction of diarrheal disease incidence, prevalence, and mortality among children under five years of age

Knowledge, attitudes, and practices (“KAP”) among program participants reached an adequate level regarding health practices, which impacted directly or indirectly the reduction of diarrheal mortality and morbidity among children under five years of age. Women and children were especially targeted.



Benchmark Indicator:	Families	
	Number of households with other improved health practices	Total Planned
	Total Result	9,391

Final result: As evidenced in the benchmark, 9,391 families improved their health knowledge and practices related to diarrheal diseases.

To analyze this result, a similar consideration must be made for the result of objective No. 5: in that the health strategy considered besides sessions and educational workshops, household visits to reaffirm the knowledge acquired by families and at the same time monitored practices undertaken. Health committees followed up practices such as the preparation of rehydration oral salts and rehydration practices in the case of diarrhea, and breastfeeding among families having children under 6 months of age.

It is worth mentioning that one of the criteria – established by the program – stated that families earned their right to a household connection if at least one family member participated in the training sessions, this guaranteed that families would improve their knowledge and practices related to diarrhea. Community monitoring as well as program monitoring indicated that knowledge and practices among program beneficiary families had been positively improved.

¹² A copy of this document is included in the Anexes section.





II. FOCUS B: TO PROVIDE WATER TO 45,000 PEOPLE

Providing water to 45,000 persons was achieved through the direct construction/improvement of water and sanitation systems within the **PROSAGUAS** program.

Three from all twelve objectives initially established by **PROSAGUAS** respond to what was established in this focal area, and its scope of reach has contributed to accomplish the global goal.

⊗ Objective 1:

To increase access to potable water supplies

Access to potable water was provided to approximately 45,000 persons via the construction of water supply systems. This usually involved the construction of new systems, but it may include some communities where rehabilitation of existing water supply systems, that are very deficient, is undertaken. Such water supply systems consisted of household connections, public tap connections, or hand pumps, depending on the local conditions and technical, social, and economic analyses.

Benchmark Indicator:	Families *	
Number of people with access to potable water	Total Planned	45,000
	Total Result	47,890



Final result: PROSAGUAS benefited directly 47,890 persons (9,391 families) by providing them access to potable water through the construction, extension and improvement of 18 water systems.

Coverage accomplished by **PROSAGUAS** in each intervention area amounts to 97%. Data collected in evaluation reports (included in Annexes Nos. 5 and 6) reflect that 13 from all 18 executed projects reached a coverage of 100%, some of them exceeding initial population estimations, the rest accomplished a coverage of 78% - this group corresponds to bigger projects and/or the last projects executed which still have the possibility of including more beneficiaries, and extend the number of **PROSAGUAS'** beneficiary families reflected in this report.

⊗ Objective 9:

To provide technical assistance to additional communities that are constructing infrastructure for water and/or sanitation funded by USAID.

As requested by USAID, **CARE** provided to a maximum of five communities constructing infrastructure for water supply and/or sanitation, specific technical assistance in community organization, health promotion, and education. Funding to accomplish this objective was provided by USAID under other Strategic Objectives.





Benchmark Indicator:	Communities	
	Number of communities that have received technical assistance.	Total Planned
Total Result		18

Final result: PROSAGUAS, through its technical unit, facilitated assistance in areas such as organization, operation and maintenance to a total of 18¹³ water and sanitation systems built with USAID funds apart from PROSAGUAS funds. 8 of these systems correspond to those executed by AGUA Project (USAID/WE), the other 10 were built by MAS Project.

Just as mentioned in section V.4.a) assistance was provided in the areas of administration, accounting and human resources. The strategy included group training and direct service to communities, as well as training and assistance on the **CARE** Water billing system. Training sessions were facilitated utilizing the CEFÉ methodology, using educational modules elaborated by **PROSAGUAS** related to administrative board strengthening.

Training sessions were aimed at providing adequate administrative tools that each system required, including manuals for each topic imparted. Human resources assistance was provided to select ideal staff to carry out administrative roles and assistance in finance – accounting, as well as a guide to elaborate new accounting books, and training on the use of the **CARE** water billing program in systems where this program was installed.



With all these types of assistance, PROSAGUAS guaranteed that all 19 systems recruited personnel having appropriate knowledge and expertise to adequately manage those systems.

⑤ Objective 11:
To design and formulate water and sanitation systems for future implementation.

Where appropriate and possible, hydrologic studies, designs and/or formulation of programs were elaborated for communities to facilitate external fund raising from other financial sources to construct water and sanitation systems not constructed by **PROSAGUAS**. Funds were available in the amount of \$100,000.00; **CARE** and the Agreement Officer's Technical Representative (AOTR) jointly determined which communities were benefited by such assistance.

¹³ See a detail of these communities in page No 37 – Table showing communities that received assistance from the Technical Assistance Unit.





Benchmark Indicator:	Systems	
	Number of water systems that have been designed and formulated for future implementation	Total Planned
Total Result		4

Final result: a total of 4 water systems were designed during the life of PROSAGUAS: two of them in the western region –Planta Vieja and Aldea Bolaños – which were retaken and later implemented by municipalities; one in the central region– Huisiltepeque – which was retaken and later executed by PROSPERAR; and one in the eastern region – El Volcancillo.

During the life of **PROSAGUAS**, technical, social and economic pre-feasibility and feasibility studies were carried out as part of the processes to execute projects; **PROSAGUAS** carried out 8 technical, social and economic pre-feasibility and feasibility studies in the same number of communities apart from the 18 executed projects and the 4 mentioned above. This information was handed to local leaders to continue searching for water solutions.

5 out of the 8 communities belong to the western region and three belong to the eastern region. The western communities included El Castillo in San José La Cueva; feasibility studies carried out by **PROSAGUAS** were handed to this community, including a hydraulic study and initial negotiations with the municipality to drill a water-well, since the one drilled by **PROSAGUAS** was not productive enough. Sisimitepeque, in Sonsonate: similarly, technical feasibility and social-economic studies were handed to local leaders including a measurement conducted to the water spring. El Castaño, Sonsonate: the information provided to the community was obtained from pre-feasibility studies, and initial negotiations were undertaken with the municipality to drill another water-well. The other two (El Resbaladero and Rancho y un Lucero) were provided with information that was received by local leaders. Eastern communities included: Múltiple Berlin, where technical, social and economic feasibility studies were carried out, and the information was handed to AGUA Project personnel to execute the system, the other two communities (Guaynac and Pinalito) received the information as well.





III. FOCUS C: PROVIDE LATRINES TO 23,500 PEOPLE

Providing latrines to 23,500 persons was achieved by constructing latrines in communities where a water system was constructed by **PROSAGUAS**.

⊗ Objective 4:

To increase access to latrines.

Among the 45,000 persons to be provided with water supplies, those who lack access to adequate sanitation will be provided with access to a latrine. It was estimated that this required the construction of new latrines to serve approximately 23,500 program participants (4,700 households).

Benchmark Indicator:		Households	Beneficiaries
Number of households with access to new or rehabilitated latrines	Total Planned	4,700	23,500
	Total Result	5,640	27,706

Final result: the goal of 4,700 homes benefited with latrines was exceeded by building 5,640 latrines (3,686 VIP and 1,954 LASF) in an equal number of homes, benefiting 27,706 persons.

Latrines were built in 15 of all 18 systems built by **PROSAGUAS**, this intervention was not carried out in the remaining three because work involved improving the municipal towns (Corinto and Osicala) or because enough latrines were available already (Multiple Primavera Project). By building latrines, **PROSAGUAS** guaranteed that beneficiaries had access to better sanitary conditions since latrines responded to already established technical and health standards; a latrine diagnostic was carried out in each project as well as a soil analysis to define the most appropriate type of latrine to build in each home.





IV. FOCUS D: PROVIDE TECHNICAL ASSISTANCE TO 48 COMMUNITIES OF USAID PROJECT NUMBERS. 0320 & 0394.

Ensuring the sustainability of water and sanitation systems constructed in the past with USAID funding can be facilitated by determining the current status of the administration, operation, and maintenance of the subject systems and then providing technical assistance if necessary and appropriate. A community diagnostic determined if further technical assistance was necessary and the feasibility of actually making a correction or other intervention.

⊗ Objective 8:

To provide technical assistance to communities provided with water supply and sanitation systems by previous USAID-funded projects.

Conditions related to water supply and sanitation were diagnosed in communities previously provided with water supplies and sanitation by USAID program Numbers. 519-0320, and 519-0394. This was done with 48 community water supply and sanitation systems. Including: (a) the 39 communities which were provided with piped water supply systems; (b) the 3 communities that were provided with the greatest number of domiciliary hand pumps; and (c) 6 other communities randomly selected, which were provided with public hand pumps. This diagnosis included recommendations on interventions that may be needed to correct weaknesses related to sanitation and hygiene practices or to the operation, maintenance, and administration of the water supply systems. Adequate technical assistance was provided to correct weaknesses to the extent that this was feasible. If the diagnosis indicated that, the estimated total cost of all such interventions was reasonable and within the budget of the proposed program, then all such interventions were undertaken. Otherwise, priorities were established in consultation with the AOTR of USAID. All such priority interventions were undertaken within the limits of the budget of the **PROSAGUAS** program.



Benchmark Indicators:	Systems	
	Number of previously completed systems which have been diagnosed	Total Planned
Total Result		55
Number of previously completed systems which had weaknesses that were corrected	Total Planned	Not defined
	Total Result	42





Final result: a diagnostic on all 55 rural water and sanitation systems – built by three institutions¹⁴ funded by USAID projects No. 519-0320 and No. 519-0394 – was carried out in 1999 (a copy of the final document is included in the Annexes section No.2). As a result PROSAGUAS' Technical Assistance Unit assisted 42 systems.

Just as mentioned in section V.4.a) assistance provided by this unit included the areas of administration, accounting, human resources and infrastructure; the strategy employed consisted of group training sessions and specific assistance to communities in order to learn about their infrastructure, health and administration situation. Training and assistance was also provided to operate the **CARE** Water billing system. Training sessions were facilitated utilizing the CEFE participative methodology, utilizing the last 4 educational modules elaborated by **PROSAGUAS** related to strengthening water system administrative boards. Technical Assistance Unit staff held informational meetings with ADESCO Directive members and Water Administrative Boards before the interventions to facilitate the assistance. Training sessions aimed at providing adequate administrative tools required by each system.

- Financial-accounting assistance included support in the elaboration of accounting books and records; each trained community was handed a copy of the Financial Administration bibliographic material, which specifies every necessary financial procedure to efficiently manage system financial and accounting areas.
- Human resources assistance was provided to recruit qualified personnel to administrate the systems.
- Administrative and Board staff were trained on **CARE** Water billing software in every community that installed it in their system; the advantage of installing this software is that it facilitates a more efficient and effective fee-collection, control over defaulting users, income, bank accounts and consumption records per user, as well as the water used up by the entire system.

Continuity was provided to communities having problems once the training process had been developed. Technical assistance for the infrastructure component sought to propitiate optimum operation conditions for the systems; whenever an administrative board requested assistance to install water-meters, a complete service was provided including the dissemination and approval of modifications to the original project, executed by Unit personnel in coordination with each System Board of Directors.

Throughout these actions, **PROSAGUAS** ensured that all beneficiaries received quality and quantity of water, containing adequate residual chlorine and appropriate fees and consumption blocks. An annexed table No.3 reflects the activities developed in all 42 systems.

¹⁴ Project Concern International (PCI); Creative Associates International Inc. (locally known as CREA Internacional), and CARE Internacional en El Salvador





V. FOCUS E: SUSTAINABLE INTERVENTIONS

The sustainability of program interventions was ensured through proper operation, administration, and maintenance of the entire system by members of the administrative organization and with the participation of the beneficiary community. The administration of water and sanitation system includes considerations for the sustainability of the water source by means of proper watershed management.

At the same time, the assistance provided to MSPAS health promoters and other NGO's working in community health, reinforced the sustainability of every intervention. These community health promoters will continue to work with beneficiary populations when PROSAGUAS program completes its objectives and leaves the community.

Ⓢ Objective 2:

To ensure sustainable water supplies via adequate Operation, Maintenance, and Administration.

Each water supply system will become sustainable by ensuring that a local entity is capable of effectively operating, maintaining and administering it. This entity may either be based at a community level, at a municipal level, or a combination of both. Where appropriate and feasible, the participation of the local municipality will be included in the administration of the water system. The appropriateness and feasibility of this will be determined through a local democratic and participatory process.



Benchmark Indicator:	Systems	
	The system provides an adequate quantity of water to at least 95% of the households in each community.	Total Planned
Total Result		18
At least 90% of program households in each program community pay their water fees on a regular and acceptable basis	Total Planned	All the benefited communities
	Total Result	18
In the beneficiary communities, the number of women working in organizations responsible for water and sanitation systems is at least 33% of the total number of people who comprise these entities.	Total Planned	
	Total Result	13

Final results:

- 1- Just as mentioned in the result of objective No. 1, 18 systems were built in which PROSAGUAS aimed at providing a coverage of 100%, accomplishing this objective in 13 of them as shown in the following chart:





No.	Communities	Connected Households	Active Coverage
1	Cara Sucia	1,353	79%
2	Istagua	550	78%
3	La Loma	2,343	78%
4	3H Moncagua	712	100%
5	Corinto	708	99%
6	Analco	474	100%
7	Los Conacastes	359	100%
8	Santa Marta	460	91%
9	Cerro El Coyo!	375	100%
10	La Montañita	143	100%
11	La Paterna	38	100%
12	El Jutal	53	100%
13	Santa Gertrudis	514	100%
14	Cerro San Simón	142	100%
15	Casco Urbano Osicala	400	100%
16	El Piche	184	100%
17	Conchagua	54	100%
18	La Primavera	603	82%
	Totals / X	9,465	97%

The analysis carried out for the results of objective No. 1, in relation to the reasons for 5 of the systems reaching a coverage of 95% applies also to this result. In relation to customer satisfaction related to water service and quality, the results of the evaluations reflect that at least 90% of all homes in communities expressed their complete satisfaction.



A more extensive research was carried out for coverage and other indicators such as the following: permanence of a plumber in every water system; standard chlorine levels; income vs. outcome, are included in the document containing the results and analysis of evaluations carried out by the monitoring and evaluation department of **PROSAGUAS**. (A copy of this evaluation is included in the Annexes section No.6)

2- As observed in the benchmark table, payment of water fees is applicable in all 18 water systems built.

As mentioned in the organization and infrastructure component, an analysis on the payment capacity of each beneficiary family was carried out, and as a result, a consumption block table including related fees was elaborated, through which **PROSAGUAS** ensured users paid regular water consumption fees in every system. The strategy included promoting awareness among users on the importance of paying this fee in order to guarantee the system's sustainability.





It is worth mentioning that communities have developed a water-saving habit as a substantial result of this awareness promotion and the community's payments under consumption blocks utilizing water-meters.

A broader analysis of the investigation carried out on this indicator is included in the document containing the results and analysis of the evaluations carried out by the monitoring and evaluation department of **PROSAGUAS**. (A copy of this evaluation is included in the Annexes section)

3- **The benchmark shows that as a final result, 13 of all 18 administrative boards formed by PROSAGUAS include 33% or more women as active board members.**

It is necessary to clarify that 3 of all 18 systems built decided that the municipality should manage the water system, which means that an administrative board was not formed, and no beneficiary participation (men or women) is reflected. The remaining 15 systems included the formation of administrative boards, which included a democratic electoral process carried out during general assemblies to elect board members and type of administration desired, in the case of electing a community administration they would proceed to elect board members. The following table and graph show the distribution by gender of each administrative board formed during the life of **PROSAGUAS**, reflecting women's participation in these organizations.

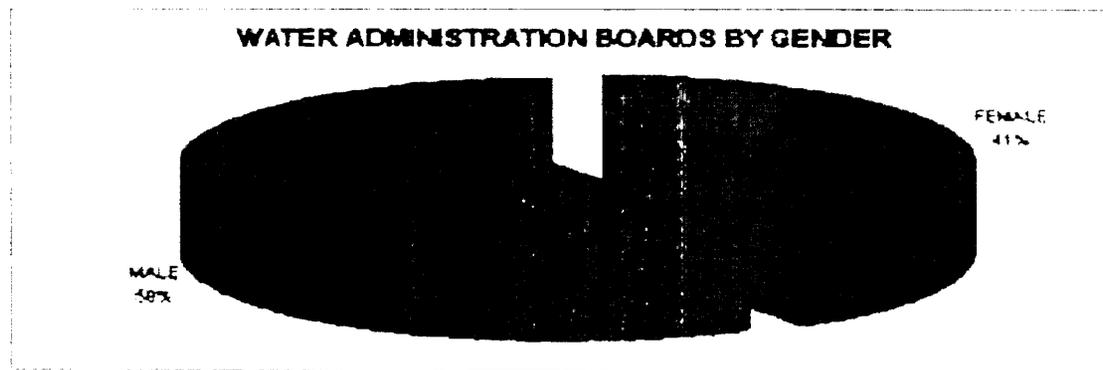
A broader analysis of the investigation carried out on this indicator is included in the document containing the results and analysis of the evaluations carried out by the monitoring and evaluation department of **PROSAGUAS**. (A copy of this evaluation is included in the Annexes section)



WATER ADMINISTRATION BOARDS BY GENDER

NO.	REGION	DEPARTMENT	MUNICIPALITY	PROJECT	WATER ADMINISTRATIVE BOARD		NUMBER ADMINISTRATION MEMBERS BY GENDER			
					BOARD	ACRONYM	FEMALE	MALE	TOTAL	
1	EASTERN	SAN MIGUEL	MONCAGUA	JH MONCAGUA	La Asociación Comunal Unión y Fe	ACASAPIFE	6	6	12	
2			EL TRANSITO	MULTIPLE PRIMAVERA	Asociación Rural de Agua Potable La Primavera	ARAPLP	2	9	12	
3		MORAZAN	CORINTO	LA PATERNA	La Asociación Comunal del Sistema de Agua Potable Municipal de Agua Viva Vasquez Benitez	ACMAVB	2	7	9	
4				CASCO URBANO	La Asociación Comunal Administradores de Agua Potable y Medio Ambiente Privada de Corinto	ACORINCO	6	6	12	
5		OSICALA	LA MONTAÑA	LA MONTAÑA	La Asociación Comunal Administradores de Agua Potable, Salud y Medio Ambiente Fuente El Cacao	ACOMFUCA	2	5	7	
6				CERRO EL COYOL	La Asociación Administradora de Agua Cerro El Coyol	ASCOFAN	3	5	8	
7				TOWN OF OSICALA*				-	-	0
8		LA UNIÓN	SAN SIMÓN	EL CERRIO					0	
9				EL CARMEN	EL PICHE			3	6	9
10		USulután	EREQUIYUQUIN	CONCHAGUA	LA NUEVA ESPERANZA*				0	
11	ANALCO			La Asociación Administradora de Esfuerzos Comunitarios	ASAFSMAEC	5	7	12		
12	CLISCATLAN			IBTAGUA	La Asociación Comunal Mar de Plata	ACMARDEPLATA	3	1	4	
13	SAN PEDRO PERULAPAN			MULTIPLE LA LOMA	La Asociación Comunal de Salud, Agua y Medio Ambiente	ACOSAMA	2	6	8	
14	CABANAS	VICTORIA	SANTA MARTA	La Asociación Administradora del Sistema de Agua Solididad 17 de Mayo	ACOSAMASOL	2	2	4		
15			EL JUTAL	Comité específico amparado por la ADESCO	ADESCO JUSAN	1	2	3		
16			DARA BUCIA	La Asociación Comunal El Progreso del Siglo	ACEPROS	4	5	9		
17	WEST	AHUACHAPAN	MENENKEC	LOS CONACASTES	La Asociación Comunal Fuente de Vida	FUENTE DE VIDA	5	2	7	
18			SANTA ANA	SANTA ANA	SANTA GERTRUDIS	La Asociación Comunal Fuente de Bendición	ACOFUBEN	6	7	13
							TOTALS	53	76	129

* These are projects administered by the Municipality.





③ Objective 3:

To ensure sustainable water sources via micro-watershed management.

Water sources were made sustainable via micro-watershed management, including soil conservation and reforestation measures. The **PROSAGUAS** program undertook activities designed to protect Micro-watersheds with an emphasis on environmental education and reforestation.

However, **PROSAGUAS** requested permission from USAID to change the strategy established to obtain the results of Objective No. 3 in the penultimate Operating Plan. This new approach was accomplished through the education of schoolchildren in beneficiary communities, and planting fewer trees in the geographic areas pertaining to these communities. The new description for Objective No. 3 was:

To promote a cleaner environment through the provision of education activities to schoolchildren and beneficiaries, as well as with reforestation activities

The goal was to plant 835,000 trees, but considering that **PROSAGUAS** planted 260,000 trees until the year 2001, **CARE** requested to re-program this goal from 835,000 to 310,000 trees to be planted during the entire program.

Benchmark Indicator:	Communities	
	Number of trees planted to protect micro-watersheds from erosion and to promote aquifer recharge.	Total Planned
Total Result		284,486
100% of the water system administrative boards and environmental committees created as part of the program will receive training on how to protect their water sources.	Total Planned	Not defined
	Total Result	18



Final results:

1. Achieved objective from 1998 to 2000:

In each project, one of the main environmental activities was the establishment of one or more community tree-nursery; promotion of tree nurseries and reforestation of the micro-watershed were encouraged between environmental committees formed in each project implemented by **PROSAGUAS**. As a result, **284,486 trees of different species from nurseries** (Madrecacao, Flor Amarilla, Flor de fuego, Chaquiro, Leucaena, Caoba, Cedar, Papayo, Marañon) **were planted in the defined areas of the different micro-watershed**. A plant distribution strategy was prepared according to a community diagnosis based on the need to protect the micro-watersheds, planned by each Environmental Committee.

Environmental Committees were trained on micro-watershed management, environmental laws, rational use of water, and water contamination, quality of water for human use and possible solutions for the problem of garbage contamination, garbage management, and integral management of plagues; this last one includes





topics such as: agrochemical effects, soil conservation practices, erosion, solid waste management concepts, how to build a composting ditch, how to classify garbage; also field visit to observe water source and soil conservation models were conducted, and tree nursery activities were implemented with the participation of these Committees.

Activities to elaborate the Micro Watershed Management plan included: training environmental promoters, revising the strategy proposed. These activities were conducted in coordination with partnership personnel.

2. Achieved objective from 2001 to 2002

The greatest impact of this objective was achieved while the water and sanitation systems were being built, and the activities being developed concluded once the systems under construction were finished. An environmental committee in every project was organized, and trained on the conservation of water resources, reforestation, and soil conservation. In addition, absorption pits were promoted among every beneficiary to provide a solution to the gray water problematic.

Members of the administrative board were trained on the elements to identify for the elaboration of the micro watershed management plan.

To make beneficiary communities and local government entities conscious of the needs and benefits of environmental activities to improve health conditions, especially to reduce environmental pollution produced by gray water and garbage, it was necessary to educate beneficiaries (especially schoolchildren) in natural resource protection with emphasis in water.

The topics covered, as part of the Environmental Educative Process for local schools (teachers and students) were extracted from the "Water House" program; The main training activities included: workshops for school teachers on "La Casa del Agua", techniques for a successful environmental education, three environmental lectures for students of schools and High schools. The new strategy for this component includes weekly visits to each school in order to follow up the educative process, and to monitor school activities.

⑥ Objective 6:

To provide assistance to health promoters.

The capacity of both Ministry of Health and local NGO health promoters working in the program communities was strengthened in regard to their ability to carry out health and hygiene education activities. This was accomplished by means of training and coordination as appropriate and necessary in each specific community.





Benchmark Indicator:	Promoters		
	Number of health promoters who have been assisted	Total Planned	
Total Result		MSPAS Promoters	16
		Communal Promoters	14

Final result: 48 MSPAS Health Promoters were expected to be strengthened by their permanent involvement in the projects, but only 16 of them participated on a permanent basis; the rest of them were also trained, but on a non-permanent basis. PROSAGUAS' training efforts were also aimed at local health promoters as shown in the previous.

The information presented in the benchmark reflects that at least one health promoter in each project increased their knowledge and capacities to develop health promotion activities in their communities. Reality is that a greater number of promoters strengthened their knowledge in education, planning and coordination of activities related to health and organization, but this data was not quantified due to the nature of the projects. Certainly, in big projects such as Múltiple La Loma or Cara Sucia, coordination with MSPAS health units and ISSS was enormous, involving more than one health promoter.

The level of participation of local promoters in projects was representative, since their involvement contributed to enhance health activities. In each project, promoters participated in planning and facilitating – together with **PROSAGUAS'** technical staff – workshops used to share the health education module elaborated by **PROSAGUAS**, contributing also to form health committees in charge of facilitating other health topics such as dengue prevention. In order to guarantee Board health actions, **PROSAGUAS** made sure that these promoters participated in the elaboration and revision of statutes and regulations.

The participation of local health promoters in projects was possible through the establishment of local agreements, which allowed for the following results to be accomplished: health units and communities supported each other, donations of oral rehydration salts, puri agua and Temephos were obtained in communities covered by **PROSAGUAS**, support from communities to health committees in health prevention, protection, and direct attention, establishing a closer relationship between both parties, as well as providing an opportunity for health committee members to participate in the reference and counter reference system at a community level.





VI. FOCUS F: PROGRAM MONITORING, EVALUATION AND REPORTING

The creation of a system to monitor, evaluate, and report program activities was necessary to manage the progress and objectives of the program. This system emphasized health-related statistics and issues.

Ⓢ Objective 12:

To implement an effective program monitoring, evaluation, and reporting system.
Program management was adequately informed on program progress and impact.

Benchmark Indicator:	Reports	
	Number of quarterly & annual reports presented to USAID	Total Planned
Total Result		18

Final result: Every quarterly report was presented to USAID, each including information related to the progress attained in benchmark indicators, goals and descriptive information of all developed activities. Annual reports summarized all of the information contained in the quarterly progress reports, and described the different activities undertaken during each year; these reports were presented together with the last quarterly report of the year. These reports include all indicators on Project progress, and results were monitored and evaluated.

Ⓢ Objective 10:

To measure program impact on reducing diarrheal disease incidence, prevalence, and mortality among children under five years of age.

Data collection was carried out with the greatest precision and frequency as possible among children under five years old of the 45,000-person target population. Initially, data collection took place twice a year: once in the rainy season and once in the dry season. However, once health committees were formed and trained, their cooperation made it possible for this to be measured on a quarterly basis.

Data collection and reporting involved the population provided with 48 water supply and sanitation systems under previous USAID program Nos. 519-0320 and 519-0394. However, this was done with less precision and less frequency than for the main target population of 45,000 people.

Benchmark Indicator:	Communities	
	Number of communities in which a 26% reduction of diarrheal diseases was accomplished	Total Planned
Total Result		13*

* Only 15 systems from all 18 that were built were measured, 13 of which achieved a reduction of more than 26%. Nevertheless, the number of communities represented by this total is 21 cantons (more than 48 settlements)

Final result: When observing the general seasonal and total averages presented in the table in section II.1 it is evident that the global goal of reducing diarrhea by 26% was achieved in relation to the base lines. A reduction of 54.5 was achieved during the rainy season and 51% during the dry season, reaching a total of 52.6%. The analysis presented in this section II.1 applies to understand the results obtained in this objective.





CHAPTER 3
FINANCIAL STATUS

I. LINE ITEM EXPENDITURES AND OBLIGATIONS

Description	Initial Budget	Amendment	New Budget	Actual Total Expenditures	Estimated to be return to USAID
Personnel	2,324,227	-	2,324,227	2,278,762.44	-3,762
Equipment and Supplies	4,253,333	-	4,253,333	4,327,066.91	-42,419
Travel Lodging and per Diems	245,787	-	245,787	92,412.73	30,587
INCAP Study		107,722	107,722	106,998.60	723
Other Direct Cost	520,277	-	520,277	667,982.31	-6,088
Evaluations	6,000	-	6,000	83,738.93	15,711
Project Support Cost Allocation	951,605	-	951,605	942,592.95	9,012
Indirect Cost Recovery: A-133 Audits and Indirect Cost Recovery	748,771	-	748,771	658,167.12	-3,764
Total	\$ 9,050,000.00	\$ 107,722.00	\$ 9,157,722.00	\$ 9,157,722.00	\$ -
CARE contributions In Cash & In Kind	\$ 3,017,000	\$ -		\$ 3,744,896.36	





The initial budget was set at \$12,067,000, of which \$9,050,000 (75.0%) was financed by USAID. The remaining 25% corresponds to cost sharing funding¹⁵, from CARE, the Communities and different institutions.

The personnel item, travel lodging and per diem item, the INCAP study item, the other direct costs item, the project support cost allocation item, and the indirect cost recovery item: A-133 Audits and Indirect Cost Recovery item incurred in less monetary expenditures than expected, especially the travel lodging and per diem item because CARE El Salvador reformed its regulations regarding this subject.

However, the initial budget for the evaluation was underestimated from the beginning, and the reduction of the other budget lines served to increase this item by 1,396%.

In the end, if the percentage of indirect cost recovery: A-133 Audits and Indirect Cost Recovery does not exceed 7.722% for FY-03, CARE will return \$3,351.34 to USAID.

The in-kind and cash contribution of \$3,017,000 was exceeded by 30.15% because institutions such as municipalities, ANDA and FISDL, together with Community in-kind and cash contributions, cooperated with more than the expected amount.



¹⁵ See details in page No. 33





CHAPTER 4 EVALUATIONS AND AUDITS

I. EVALUATIONS

USAID/EI Salvador requested that the Environmental Health Project (EHP), a technical assistance project funded by USAID/Washington, carry out an evaluation of **PROSAGUAS** in July 2000 when the program was at its midpoint.

The purpose of the midterm evaluation and assessment of the **PROSAGUAS** program was to undertake the following:

- Evaluate the current **PROSAGUAS** program and assess progress to date in achieving the expected results.
- Recommend improvements for the second half of the **PROSAGUAS** program.
- Identify possible inputs for the second half of **PROSAGUAS**.

1. FINDINGS AND CONCLUSIONS

The evaluation Team's general conclusion stated that **PROSAGUAS** staff made vigorous efforts to include new approaches and to modify existing elements of the program design, incorporating lessons learned during the previously executed programs. These modifications include adding an environmental education component to the program; extending the post-construction program presence in communities to six months; increasing the number of women involved in project management; monetizing work on health and environmental committees; creating paid positions for health promoters; and requiring a universal installation of water meters.

The overall conclusion of the Evaluation Team stated that the **PROSAGUAS** program was successfully implemented and met most of the targets set out for each objective. More specifically, **PROSAGUAS** was ahead of schedule in reaching the planned number of beneficiaries with installation of both water supply and sanitation infrastructure. Equally important, significant progress was made in establishing viable and effective community management structures, including an increased participation of women, to ensure the sustainable operation and administration of water supply systems.

They recognized that **PROSAGUAS** achieved considerable progress in the overall health component, both in numeric terms and in qualitative impact on awareness, improved hygiene practices and changes in behavior among the target population. Limited progress was made in providing technical assistance to communities following the construction phase. The objective of developing designs for future water supply and sanitation systems had not been addressed at the time of the evaluation.





Overall, the EHP team found that **PROSAGUAS** had for the most part been successful in terms of achieving an appropriate balance between meeting physical outputs and investment in the qualitative, or “software,” aspects of project implementation, but commented that it was premature to draw any conclusions about the sustainability of community projects initiated by **PROSAGUAS**. However, based on the strong performance of the Phase I community-managed systems and the improvements made to the **PROSAGUAS** program’s approach, the team was confident that the current projects would be viable in the long term.

2. SUMMARY RECOMMENDATIONS FOR CARE

The team considered **PROSAGUAS**, overall, to be a success. Nonetheless, there were a number of areas where weaknesses were identified and the program could be further improved. The recommendations summarized below are based on the detailed findings and conclusions presented in the report.

A) PROSAGUAS PROGRAM MANAGEMENT

- ▶ Improve program monitoring to analyze and disseminate the data in a timely manner and use the results to inform managerial decisions. Ensure feedback of monitoring data to both the field staff at regional level and the communities and individual households also in a timely manner.
- ▶ Improve horizontal lines of communication and provide mechanisms to share lessons learned between regional teams.
- ▶ Systematize, document and disseminate **PROSAGUAS** program methodology for a wider audience both nationally and regionally.
- ▶ Include the integration of relevant health, rural WS&S coverage and poverty indicators in community selection criteria.

B) COMMUNITY DEVELOPMENT AND HEALTH EDUCATION

- ▶ Strengthen involvement of water committees in the project’s design and construction for communities to value and participate more in design decisions and strategies.
- ▶ Refocus the health monitoring and evaluation system to include greater analysis of health results and ensure feedback to the community and individual homes.
- ▶ Revise the KAP surveys to identify the most important, highest-risk behaviors related to diarrheal incidence and focus educational interventions on those key behaviors.
- ▶ Assess the impact of the educational materials for different target populations (urban and rural) and adapt the materials as necessary to increase their effectiveness.





C) WATER SUPPLY AND SANITATION INFRASTRUCTURE

- ▶ Broaden the current **PROSAGUAS** menu of sanitation options to include technologies that are more appropriate for semi-urban areas.
- ▶ Begin to assess the financial and management impact of providing wastewater services in more semi-urbanized locations (an inevitable offshoot of the program).
- ▶ Develop and promote the use of performance benchmarks for small-scale community-run utilities.
- ▶ Calculate and document the full costs for both the water and sanitation systems by specific project system and per beneficiary.
- ▶ Reduce the household subsidy for latrines; make household subsidies of water supply dependent on household income level.

D) ENVIRONMENT AND SOURCE WATER PROTECTION

- ▶ Retarget environmental activities to reflect priority issues related to the watershed, including gray water discharge.

II. AUDITS

1. A-133 INTERNAL AUDIT REPORT

CARE USA Audit Manager Theri Enriquez, Auditors Noel Assis and Chad Kochenderfer, and CARE El Salvador Internal Auditor Balmore Perez completed an internal audit of CARE El Salvador on June 8, 2001.

Statistics for the CARE El Salvador operations during the period under audit were:

	FY 2001*
Budget	\$12,500,000
Actual Expenses	\$10,906,894
US Government assistance	\$8,071,378
Number of donors (including CARE USA)	21
Number of donors providing more than 10% of total assistance	2
Number of projects (including Mission Development)	10
Number of sub-offices	5
Number of international staff	2
Number of national staff	201

*Through April 20, 2001

SCALA, new accounting software, was implemented in October 2000





A prior internal audit of CARE El Salvador was conducted in September 1997. Of the 14 applicable recommendations, the Country Office has fully implemented five (36%), partially implemented six (43%), and not implemented three (21%).

A) OBJECTIVES AND SCOPE

The audit covered CARE USA unrestricted and restricted funds programmed from July 1, 2000 to April 30, 2001.

The objectives of the audit were to:

- a) Assess means of safeguarding funds, food, and property from loss and misuse.
- b) Review reliability and integrity of expenses statements, balance sheets, and subsidiary ledgers.
- c) Review systems established to increase compliance with grant agreements, CARE USA policies and procedures, USAID Standard Provisions, CRFs 226 and 211, OMB Circulars A-133 and A-122, and applicable non-USAID donor regulations.
- d) Make recommendations to reduce risk and increase effectiveness and efficiency of operations.

The functional areas reviewed were cash disbursements and receipts, procurement, property management, accounting, information technology, human resources management, and grants and contracts management.



B) OBSERVATIONS AND RECOMMENDATIONS

The audit report discusses weaknesses noted and recommendations for improvement and does not comment on the various favorable aspects of the office. All the observations and recommendations in the audit report have been discussed with Country Office management, who have agreed with the issues and risks noted in each observation and will address them either by implementing the recommendations as stated or by identifying alternative corrective action, within three months, unless otherwise stated.

The observations and recommendations may apply to the field offices we did not visit. Therefore, we recommended that the Country Office implement the recommendations mentioned in the audit report at all the field offices to which the recommendations apply.

The audit report, that covers all activities and funds, is available at the Finance Department of CARE El Salvador.





CHAPTER 5 SUMMARY OF LESSONS LEARNED AND RECOMMENDATIONS

There are key variables determining that similar interventions cause different impacts over the prevalence of diarrheal diseases. However, an acceptable impact can be obtained when all potable water, latrification and health education interventions are integrated into one; High infrastructure coverage can be obtained; administrative boards control the quality of water distributed in homes; An educational program is carried out to motivate persons to change their health attitudes and behaviors. This is a determining factor to consider, because communities have been trained by technical teams with motivations, interests, experiences and different ways to approach educational work.

Results obtained in behavioral changes will be sustainable if administrative organizations retake educational work. In time, persons return to their old habits due to the lack of educational messages.

I. ACCOMPLISHMENTS

-  **The training process** generated security for empowerment and increased the sense of ownership among community leaders. This broadened the vision as well as the search for cooperation in other areas of human development.
-  Women carried out leading roles in the planning and construction phases of the projects and were part of administrative board.
-  At the end of the program, the majority of the Boards of Directors were fully knowledgeable of their statutes and internal regulations, and attempts have already been made – E.g. the ACOPINCO handouts – to teach families about their statutes and internal regulations for them to identify their rights and obligations.
-  Municipal governments consider successful experiences to be examples that should be replicated by other local experiences; this is a significant step forward towards the consolidation of a promotion and territorial management of water municipal network. **The Inter-American Development Bank – IDB – is financing ANDA to develop water projects in rural areas, following PROSAGUAS' experience.**





- 👍 **Diarrheal diseases prevalence were decrease in the benefited communities which will enjoy better health, environment and economic conditions.**
- 👍 Health and environmental education activities have influenced people's awareness, to an extent that they include environmental services costs and health related services in the water fees, thus generating economic capital that allows environmental protection activities aimed at preserving water to be developed permanently and a better health conditions for the community members
- 👍 Administrative Boards have the capacity to manage projects valued in more than \$500,000.00, which are also electrically and hydraulically complex.
- 👍 Community organizations are more motivated and capable to solve their needs.

II. LESSONS LEARNED

1. HEALTH

- i. Monitoring of diarrheal diseases in the population of children under five years of age has to be executed permanently, preferably by the community itself in order to obtain immediate responses when results are not the ones expected or whenever eventual epidemic situations alter normal indexes.
- ii. Recognizing effort and time contributed by community members participating in Health Committees as part of the community's matching contribution, as well as the efforts carried out by other community members working in the infrastructure component, guarantees expected results to come across, provides a deeper involvement of the community in health concepts and allows to develop human capital that can later continue developing sustainable vigilance and health education processes.
- iii. The health education program developed in each community was not executed parallel to the execution of physical works, but rather implemented at its own pace in an average time of 18 months per community in order to reach the desired results.
- iv. The health education program strategy must be flexible in its approach, and adapt to each community according to the base line results and the diagnostic on knowledge, attitudes and practices (KAPs).





- v. Water and sanitation interventions with a health approach enable communities to cover educational program costs utilizing their own resources to achieve the consolidation of changes in health attitudes and practices among beneficiary populations.
- vi. Health promoters replace health committees in small communities, so it is important to hire a promoter for a longer period than the life of the project when agreements are signed with municipalities or partner institutions. At the same time, this guarantees that a skilled person will continue working in the community.

2. SOCIAL PROMOTION

- i. Social promotion activities become the backbone of the water and sanitation implementation process, and are the core of all other intervention activities and components.
- ii. Health through water and sanitation projects must be thoroughly analyzed and planned together with local actors such as communities and municipalities, in order to increase their probabilities of participating in project activities.
- iii. Local arrangements developed to involve local actors in the implementation of processes and search of other sources of funding involves a negotiation period that lasts approximately six months, but at the end, results are unquestionably better.
- iv. More extensive gender and diversity promotion and education processes than the ones presently developed in water and sanitation interventions are necessary to accomplish an equality of opportunities between men and women, as well as an equal opportunity to participate in key administrative positions.
- v. One of the reasons why women's participation as Administrative Board presidents cannot be accomplished through elections or consensus is that at the time of carrying out elections, men have more presence, and this is a fact throughout the project life.
- vi. It has been evident that training processes for community leaders during the execution of water and sanitation projects increases their probabilities of subsequently applying to municipal administration positions.
- vii. Selection technical criteria, pre-design elaboration, preliminary fee and the level of service must always be reviewed together with the community in order to proposed and adequate solution to the community needs and avoid inconveniences during the presentation of the project, which may interfere with its execution. "The project's presentation meeting represents the culminating stage for the technical, social and economic analyses, as well as the moment where the project's viability is really decided".





- viii. Better results are obtained when the community leaders, the entire technical team and partner institutions participate in the elaboration of legal documents (statutes, regulations, manuals, contracts, profiles).
- ix. The statutes must reflect a process to partially retain trained leaders for a period of time for them to train new leaders after the elections.

3. INFRASTRUCTURE

- i. Develop quality standards for water and sanitation technical solutions to ensure their proper operation that respond to the population's interests and payment capacities, contributing to achieve sustainable solutions.
- ii. Wastewater disposal is a topic that needs to be further addressed to find other efficient and low cost alternatives.
- iii. Documents such as the Community Warehouse Management Strategy and the Chief of Warehouse Manual elaborated by **PROSAGUAS**, improved significantly community warehouse administration in projects and boosted social auditing by communities.
- iv. The low academic level of some community members playing different roles demanded extra time to implement an efficient community involvement.



4. ENVIRONMENT

- i. Reforestation activities cannot be easily carried out in communities if they lack areas to reforest or create forests, since people cultivate the land or use it as pasture fields.
- ii. It is always necessary to elaborate a plan to manage the micro watershed in order to guarantee the Administrative Board's commitment after the project has been finished, and to verify – during the follow-up phase – if the administrative entity is abiding to the management plan.

5. MONITORING AND EVALUATION

- i. A consistent and timely monitoring allows obtaining valuable inputs to improve the approach and make adjustments during the implementation, contributing to the sustainability of health interventions through water and sanitation.





6. SUSTAINABILITY

- i. Training and empowerment of community leaders during the implementation process of rural water and sanitation systems, as well as the formation of social structures with defined legal frameworks are key elements to achieve sustainability of these types of interventions.
- ii. The strengthening of relationships between the community and the permanent institutional network linked to health has allowed for actions developed around water and sanitation systems to be consolidated and maintained through time.
- iii. W&S community administration models developed by PROSAGUAS, communities and local governments are an alternative way to provide local services during decentralization processes.
- iv. Joining many communities around one water source, without exceeding the source's production, allows systems to have more economic resources to finance health, environmental, and operation activities.
- v. The use of water micrometers at a household level and the collection of fees reduce water consumption and pollution caused by wastewater. Also, the operation costs decrease.
- vi. It is necessary to train administrative board members on national, municipal and institutional laws related to the roles they will be executing.
- vii. The minimum fee has contributed to obtain considerable income to operate and maintain the system.
- viii. All the Water and sanitation associations tend to have valuable structures in their communities regardless of their financial situation. Their nature and needs they satisfy – safe water supply – provides them a wider range of opportunities once they stabilize, and in many cases they have greater influence than the local ADESCOS, because it utilizes funds that depend from the same community dynamic, and not only projects that have a beginning and an end. This situation has to be reasoned as a potential strength.





III. RECOMMENDATIONS

1. DURING THE IMPLEMENTATION PHASE:

- ✎ Training workshops must be developed with groups of young men and women, and incentivate –especially women– to participate in system operation and administration tasks.
- ✎ Plots of land with a water-spring or destined for the construction of tanks must be legalized in order to strengthen the sustainability of systems.

2. DURING THE ADMINISTRATIVE BOARD FOLLOW-UP PHASE:

- ✎ It is necessary to provide technical assistance to Administrative Boards in order to increase participation of beneficiary families in community assemblies, possibly by utilizing existent intermediate groups, to become participation structures for intermediate decision-making and to disseminate internal regulations and statutes to improve communications.
- ✎ Administrative Boards must prioritize within their operative costs, the procurement of adequate plumbing and masonry tools as well as accessories for corrective works.
- ✎ It is important to analyze the correct way of orienting Administrative Boards on the use of reserve funds, to identify other forms of social benefit and make them profitable and sustainable.

3. AT A MUNICIPAL LEVEL:

- ✎ It is advisable to promote a local and regional exchange of experiences between water administrative boards supported by the municipal government. This activity can favor community and municipal promotion, conservation and exploitation of water resources, and transcend its importance to a community health level and natural resources conservation.
- ✎ It is evident that community administration of water systems is a very popular decision taken by communities, municipalities and local leaders. It is strategic to seize the opportunity to advocate local water use and management policies.

4. AT AN ADMINISTRATIVE BOARD LEVEL:

- ✎ Associations must have a mid-term plan to motivate and increase women's participation in the organization in general. Additionally, it has to provide development opportunities to women.





- ✎ It is advisable that the same associations hire private firms to carry out annual audits to assess the Board's work, and more specifically, organizational and financial audits to improve its performance.
- ✎ Administrative Boards should:
 1. *Design a program to increase potable water coverage*, to allow poor homes to connect to the system without having to pay in cash, but rather through their work in different committees serving the community related to the project. Families without a latrine can be motivated to build one, reducing significantly safe water connection costs. This requires flexibility from the Boards to analyze each case.
 2. *Elect a responsible person to provide follow-up to health interventions*. The payment for this person must be included in the water fee: this resource becomes a key element that must be included at the moment of analyzing the water fee.
 3. *Carry out an annual evaluation of key indicators*.
 4. *Create a revolving fund*, to finance sanitary infrastructure deriving from the fee and pay it by installments.





CHAPTER 6
ANNEXES

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