INTRODUCTION

The Shared Water for All project began in 2001 in two highly marginalized regions of Mexico: the Montaña and Centro regions of the State of Guerrero, both set in the Balsas River Basin. The goal is to contribute to strengthening the families, communities and organizations in their capacity to control their natural resources and to manage them in sustainable ways. The project works with a watershed focus based on the assessment of the multiple functions of the territory and the natural resources used in peasant economy.

The inhabitants, peasant men and women of Nahua origin, upon stating their priorities in Participative Appraisal Workshops, have pointed the growing scarcity of water as the most important problem they face on an every day basis: springs and streams are drying up and it is necessary to look for new sources, set further away, and to find ways to bring the liquid to their households or small-scale irrigated lands. Deforestation, derived from land-use change, overgrazing and extraction of firewood and material for charcoal, house-building, crafts and other uses in a region where human population is increasing in conditions of chronic poverty, has led to erosion and rapid diminishment of water tables. Oral testimonies also claim witnessing local climate change over the last thirty years, reflected in increasing drought and irregular rain cycles.

ORGANIZATIONAL ASPECTS AND METHODS

For years, local inhabitants have formed self-organized groups of users of springs,
collectively covering the costs of hose and maintenance to bring water to the household of each member of the group. These same groups were invited to join the project, through their community general assemblies, in order to work together not only for the extraction of water but also to improve and maintain their water sources and the watersheds that sustain them. Through workshops and a permanent training and learning process, 85 peasants from 14 communities, set in four watersheds, have actively become involved in the project.

Each group has identified and outlined its watershed on maps created from enlarged topographic charts and photoimages (a combination of digital ortophotos and Landsat images); they have also characterized their environmental and social problems. Based on their own experience, which stems from traditional knowledge and new information gained through workshops and visits to other experiences, each group has formulated an annual work plan for its watershed.

Each plan is presented to the general assembly for discussion and approval. After that, plans are presented to an assessment committee, formed jointly by peasants and technicians, who visit each site proposed in the plan for a specific water conservation project, suggest adjustments and approve it.

The next step is to sign a contract between the project and the group. The project offers part of the funding needed to carry out the plans (small gabion and stone dams, protection of springs, reforestation…); the group is in charge of the logistics. When it is necessary to work with communities upstream, they are invited to join through their authorities.

Throughout the year, the groups gather for visits and exchange of experiences, during which they analyze problems and possible solutions. At the end of the cycle, each group makes a formal delivery of its work to its general assembly.

During the first four years of this project plans have been carried out in 14 communities set in three watersheds:

- 431 filtering stone dams.
- 69 stone walls (2300 m³).
- 14 contour ditches.
- Three gabion sedimentation dams.
- Three cement dams.
- One breakwater.
- Seven protected springs.
- Nine hectares reforested with 7,500 plants.
- Nine hectares of soil restored in fields abandoned due to severe erosion, in process of transformation towards agroforestry systems.
- Dry latrines, economical wood stoves and one non-aerobic sewage digestor.
**IMPACTS**

**Social**

- 85 peasants have understood and are able to use the concepts of watershed and planning processes and are capable of carrying out small soil and water conservation projects.
- In 14 communities there has been a strengthening of local institutions in their capacity to plan and carry out the projects for water conservation.
- New agreements have been established at community level in order to protect soil and water resources, to clean out ravines and to enclose household livestock.
- New agreements have been established between neighboring communities for watershed management.
- Advances have been made towards integral watershed management plans.
- One local civil engineer, two peasant promoters and four technicians have been trained.
- Local indicators for monitoring and assessing the project have been developed.
- The concepts and importance of watershed and sustainable management have been disseminated in the region, at different levels.
- Local indicators for monitoring and assessing the project have been developed.
- Didactic materials have been produced and distributed.
- There has been a certain capacity created to re-direct federal and state funds towards the watershed management plans.
- Collaboration with formal research and education institutions have been established to generate useful information for the communities and their work.

**Economic**

- Around one thousand local jobs have been created during the four years.
- Economic alternatives from local resources like palm and mezcal agave have been supported.

**Environmental**

- Increase in water tables of rivers and streams in La Esperanza, Oxtoyahualco, Trapiche Viejo and Santa Ana.
- Guarantee of cleaner water for human domestic use, through protection of springs, and for livestock through small concrete dams: Santa Ana, Tlalcomulco, La Esperanza, Topiltepec, Oxtoyahualco, Agua Zarca.
- Possibility of emergency irrigation for small-scale agriculture and fish farm through concrete dams: Oxtoyahualco, Trapiche Viejo y Xocoyoltzintla.
- Rescue of species of flora in danger of local extinction: Las Joyas.
• Restoration of nine hectares of deteriorated soils: El Peral, Oxtoyahualco.
• Transition towards organic agriculture: Xocoyoltzintla.
• Improved management of human feces, diminishment of contamination of rivers and water tables and of risk of infectious diseases.

Indirect

Increase in the awareness of the inhabitants of the region, some 150,000 people, on the importance of integral watershed management as a way to maintain or improve life conditions, through dissemination of the project (exhibits, booklets, radio programs).

In the communities and the region there are different actors that the program has tried to involve at different levels. The communities that have taken part are:

*Chilapa-Zitlala watershed:*
• El Peral.
• Topiltepec.
• Santa Cruz.
• Santa Ana.
• Tepehuixco.
• Mazapa.

*La Esperanza watershed:*
• La Esperanza.

*Las Joyas watershed:*
• Xocoyoltzintla.
• Oxtoyahualco.
• Trapiche Viejo.
• Agua Zarca.
• Tlalcomulco.
• Acateyahualco.
• Ocotitlán.

**ACTORS**

**Community level**

• Community committees for water and reforestation.
• Groups of users of water springs.
• Community general assemblies.
• Local authorities.
• Peasant advisors.

**Regional level**
• SSS Sanzeken Tinemi, peasant organization.
• Group for Environmental Studies (GEA, AC), NGO.
• Municipal authorities (four municipalities).

National level

• Gonzalo Río Arronte Foundation, IAP.

NGO

• Alternatives and Social Participation Processes, AC.
• Network for Learning, Exchange and Systematization of Experiences for Sustainability (RAISES).

Users

The community water committees and the user groups, general assemblies, local authorities and peasant advisors are the main actors: they draw up and decide upon the plans, carry out the projects, monitor and assess each phase. They reflect, analyze, create rules for their participation, learn, exchange information, disseminate.

Technical support for the process

The technical team, formed by technicians of different disciplines and peasant promoters from the Department for Reforestation and Natural Resources of SSS Sanzeken Tinemi and the Program for Peasant Management of Natural Resources of GEA, offer technical assistance, logistic support and training.

Municipal authorities

The relationship with the municipalities has been intermittent; in the future we hope to build a more strategic alliance and to involve them more in the program.

Advice and research

The main advisor on technical aspects of soil and water conservation has been another Mexican NGO: Alternativas y Procesos de Participación Social, AC. The first visits made by the peasants to their work were decisive and very motivating for the project. Conabio has offered Quick Bird satellite images, basic for the maps on which watershed management plans are drawn out.

LONG-TERM COMMITMENT AND TARGETS
The Shared Water for All project is part of the Program for Peasant Management of Natural Resources, which includes several working lines and complementary projects, and which has had the following results:

- A reforestation program with nine community nurseries with capacity to produce over two million plants per year, supplied to 30 communities of the region.
- Nine community forest reserves which range from 30 to 100 hectares each.
- A floristic inventory listing species with potential to be included in agroforestry systems.
- Alternatives for extensive grazing and for the sustainable management of non-timber forest species of economic value (palm and mezcal agave).
- Transition processes towards organic agriculture (organic fertilizers and pesticides, conservation of native seeds).
- A regional social enterprise for the bottling and commercialization of mezcal, an alcoholic beverage, made from sustainable agaves.

Each work line has its specific mid and long term goals. All lines are interrelated; each line nourishes and is nourished by the others, including the water project.

The funds from the Gonzalo Río Arronte Foundation, IAP, will allow the team and the project itself to consolidate and continue at least for three more years.

In this time the same work pattern will be continued, slowly and carefully incorporating new communities. We also expect to carry out regional fora, in order to give more visibility to the work done in the communities and to involve the municipal authorities.

The emphasis of the project is placed on the strengthening of local capacities, in such a way that when the technical team leaves the region, the different members of the local committees will be capable to continue the projects on their own. For this reason the program itself is conceived as a continual training experience, where each phase is analyzed, lessons are extracted and used for the subsequent planning.

The constant use of maps and watershed management plans increases the capacity of the local inhabitants to negotiate with the different official programs that come to the region, to suggest investments are directed in a more orderly fashion and in response to the needs previously identified and agreed upon by the general assembly. The normal situation is that official agencies impose projects that respond to their own political logic and do not consider the community and its opinions.

Transparent bookkeeping and complete report rendering to general assemblies are basic for conflict prevention and solving. This is basic for building long-term confidence. For this reason a great deal of emphasis is put on training in this aspect.
Identifying and training young professionals from the region, who are more likely to stay and become committed with their own people, is another strategy for the long term.

Jointly developing clear rules for participating in the project and implementing them, also help the groups bind and work together on long term basis.

**INNOVATIVE ASPECTS**

- Building from the bottom up, with the users of water in the communities at the center of the action.
- Respect for community institutions (norms and authorities), working with the committees that already existed and had worked together for years; respect for local forms of organization.
- Social participation in every phase, from the planning to the implementation of the projects.
- Local actors developing rules for participation in the project and indicators for monitoring and assessing it.
- Emphasis on training for building local capacities in technical, organizational, planning, learning and bookkeeping aspects.
- The photoimages used for planning, scale 1:4,000, were developed by mixing digital ortophotos with a color composition of a Landsat ETM + scene. This product, which rescues the spatial resolution of orthophotos (two meters) and the color tonalities of the satellite image, has been very useful for developing the plans, as it allows direct and clear identification of land use areas by the peasants and local technicians.
- The water project is part of an integral program for management of natural resources and watersheds, including actions for soil restoration, reforestation, sustainable management of native species, dendroenergy production, and organic agriculture.
- Participation of multiple sectors (civil, private, and government), at different levels: local, watershed, regional, state, national, and international.

It has been important to understand that watershed management plans and their implementation, if done together with the community groups, imply continual processes of learning, reflecting, planning, monitoring, assessing and planning again. For this reason the program must be conceived as a mid and long term process, with successive levels of approximation to the problems. Basic funding is necessary to allow stable conditions to be created for these processes.

Concrete actions are carried out with those communities which express interest and where basic necessary conditions exist, which are not necessarily the most ideal. Sometimes work on a watershed will have to begin downstream and gradually move...
up, inviting other communities to work through example, even though manuals say one must begin upstream and move down.

Each plan is different, as it responds to specific environmental, socioeconomic, land tenement and land use history as well as to different interests. There are no recipes; it is necessary to move case by case, step by step.

It has been fruitful to combine the work of a civil society organization with that of a peasant organization of strong regional presence, each one recognizing its role and place without trying to represent or substitute the other.

Concrete results motivate participation of new actors; therefore regional dissemination is very important. Visits, regional tours, exchange of experiences from peasant-to-peasant motivate and inspire new thoughts and initiatives. Creating specific manuals and didactic material, based on local conditions makes the training process more effective.

Creating systems for transparent accountability and spending reports delivered to each general assembly creates conditions for building trust among the groups and from other citizens. It also helps to establish healthy relationships between all people involved in the project.

It is important to establish synergies with several actors including local, municipal, state, federal governments. However, often the logic and the agendas of official agencies make it difficult for them to integrate into community watershed management plans, and they tend to impose their own agendas. Communities which have plans they have designed, with the adequate technical advice, which they understand and believe in, are more capable of negotiating and defending them in front of official programs.

REPLICABILITY

The model is replicable in other peasant regions of the dry tropics, but it is necessary to:

a) Form a multidisciplinary team, with technical and social skills, committed with the projects and the communities; a team that is technically knowledgeable and sensitive to social situations.

b) Respect the local institutions, norms and organization mechanisms of the peasant communities.

c) Begin by recognizing and assessing what already exists in traditional knowledge, organizational capacities y material resources in the communities.

b) Promote peasant participation in all phases of work, from planning through to assessments, in order to consider their proposals and knowledge and above all, to develop the appropriation of the process by them and their communities.
e) Place emphasis on strengthening the local capacities needed for developing the community work plans, abilities in transparent administration of economical resources destined for water conservation projects, training in simple techniques for calculation, and building of projects for water conservation as well as abilities for negotiating funds.

f) Create and maintain mechanisms for fluid communication on the progress of work being carried out, including problems faced and adjustments. Also for transparent contracts and reports to general assemblies from the local groups as well as from the technical team.