

## A Case of Voluntary Collection for Environmental Services, Zapalinamé, Mexico

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### Background

Sierra de Zapalinamé is located in Coahuila State, Mexico and is a part of the Oriental Sierra Madre Range. Ranging from 2000 m to 3100 m above sea level, it is mainly covered with pine forests and mixed forests with pines, oaks and brush. It lies south of the city of Saltillo, the state capital with about 750,000 inhabitants, who are using 70 percent of the underground water withdrawn from the mountain. Although water in Mexico is publicly owned, the water is extracted in state, federal and private land. As well as water, the mountains also provide other important services such as recreation areas for tourists, people who live in Saltillo and nearby cities, and biodiversity, including the endangered black bear (*Ursus americanus*), around 284 species of birds including the maroon fronted parrot (*Rhynchopsitta terrisi*), and a small population of spruces (*Pseudotsuga mensiesii*) high on the mountain.

In the mountains there are 13 rural communities with a total of about 8000 inhabitants. The watersheds have been negatively affected by intensive agriculture in the upper reaches, which has impacted upon quality and quantity of water used in urban areas. In recent years, there has been a reported increase in droughts in the city of Saltillo.

### Instigating the scheme

Part of the Sierra (25,000 h) is protected as a State Reserve. As in most Mexican protected areas, the land does not belong to the state, whether common or private land, so land owners and stewards are actively involved in conservation work such as reforestation and fighting forest fires. In Zapalinamé, the Governor decreed that management and conservation would be the responsibility of a non-governmental organisation called Protección de la Fauna Mexicana,<sup>1</sup> A. C. (Profauna). Profauna has ten staff members and a state budget.

To supplement the budget in order to carry out environmental education and conservation activities in the watershed, Profauna devised a mechanism to raise financial resources for the reserve. They asked the Mayor of the City of Saltillo for the opportunity to raise funds through voluntary payments on the water bill. The proposal was accepted, and the project began in 2002. The first phase was funded by the World Wildlife Fund (WWF) with US \$2000; surveys were made to measure the city population's awareness of the watershed site and its importance as a water source, and also their willingness to donate. Although only 5% of respondents knew the importance of the water source, 70% said that they were willing to make a contribution. At the same time, a campaign was implemented to publicise the site and the services it provided to the community.

Since 2003, non profit organisation Fondo Mexicano para la Conservación de la Naturaleza<sup>2</sup> (FMCN) has supported the "Watershed and Cities" project, also implemented in the

watersheds serving the city of Oaxaca and Mexico City. This programme aims to achieve public participation through donations in environmental projects. In the second stage of the project, the Gonzalo Rio Arronte Foundation were also involved in giving a donation of 1,000,000 pesos<sup>3</sup> over two years.

### Implementation

The project has four main components:

1. Collection of funds.
2. Management of the area, including conservation activities. These activities are executed by the landowners and park rangers.
3. Environmental education, including interactions with school, visitor and other groups.
4. Increasing public participation.

Deployment of donations is through a customised agreement between the donor and Profauna and a copy of that agreement is given to the institution administering the water supply service, in this case a joint venture between the municipality and a private company, Aguas de Saltillo (AgSal). The donated amount is determined by the donor and charged in the monthly bill as a "social contribution". Customers can choose to contribute anything from one to 1000 pesos. A form is filled out to assure consent and the agreement is terminated with a single phone call, although so far very few have left the programme. The company then delivers to Profauna the amount collected each month, with no administrative costs.

There are 230,000 water meters in Saltillo, including both industrial and commercial meters; 30,100 (around 15%) of them are currently enrolled in the programme with an average donation per family of around 3.20 pesos. Collectively, monthly donations are about 110,000 Mexican pesos (approximately US \$9000). From 2007, the State Government pledged to double the amount raised through a monthly payment in a project known as Peso por Peso. This amount complements the national scheme of water fee funded direct payments under Mexico's National Programme for Hydrological Environmental Services (PSAH).

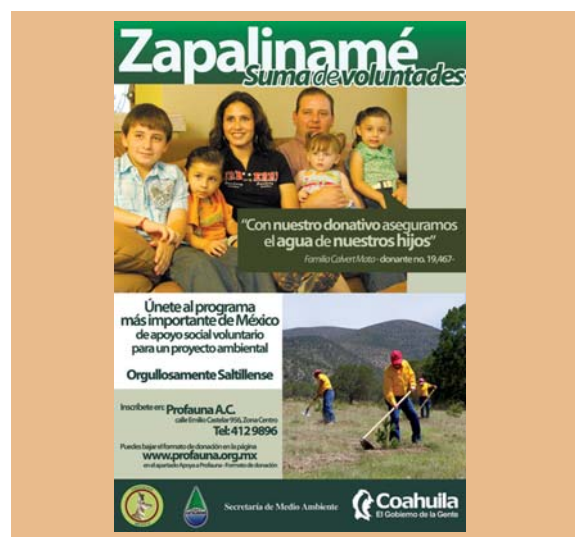


Figure 1. Marketing the voluntary PES programme in Zapalinamé.

<sup>1</sup> Protection of the Mexican Fauna

<sup>2</sup> Mexican Fund for the Conservation of Nature.

<sup>3</sup> US \$1=12.91 Mexican Pesos, as of 1/12/09

## Latin America

The money is used mainly to pay salaries to the community brigades that fight forest fires, reforestation, monitoring of species and the water, and other conservation activities requested by rural communities, e.g. garbage collection, solid waste management, cattle fencing, project development for ecotourism and backyard orchards (see Box 1). Profauna pays salaries to the “*ejidatarios*”, the legal landowners to create secure income and incentives to steward the land. Water quantity and quality of the springs in the upper basin of Zapalinmé are being measured every two months.

50%	Environmental management of the Reserve (soil conservation and forest fire control)
20%	Constitution of the Water Fund
10%	Environmental Education
10%	Social development projects for landowners and communities
10%	Monitoring and Research

Box 1: Disbursement of funds

To provide security and transparency of the project since it began, there are two support groups: a Technical Committee (Grupo Técnico) to supervise projects and a Citizen Committee (Grupo Ciudadano) to monitor income and expenditure. These groups are citizens who are interested in protecting the area and are invited to participate as volunteers; some of them work in state and federal agencies in charge of conservation. The Grupo Técnico consists of professionals involved in managing natural resources and conservation such as foresters, biologists, soil conservation specialists, wildlife specialists and so forth. This group qualifies and approves each of the conservation activities using a priority list. Grupo Ciudadano is comprised of distinguished citizens of Saltillo that participate in civic actions and are recognised for their services to the community. They approve the level of investment in requested resources, review the project's accounts and provide information using the local newspaper, including expenditure and budgets.

### Conclusion

The example of a voluntary donation programme to support an environmental project is not very common in our country. It has been criticised mainly because it is not mandatory. However, we consider as it a long-term project, sustained by the goodwill of citizens, the municipal administration and its partners, many of whom take ownership of conservation of the mountain areas and become actively involved in the City and the Reserve. Growing awareness of the need for conservation and active engagement is demonstrated by the rapid rise in the number of households electing to participate in the programme: in the first year only about US \$3000 (38,249 pesos) was collected in fees, rising to US \$28,000 (310,100 pesos) in 2005. By the end of 2009, it is hoped that there will be 35,000 participating families; at present, there are 30,000 families registered in the Profauna database. In order to ensure long-term sustainability, this number of registrants must continue to rise, especially as funds received under the national PSAH programme may end after the initial five-year contract period.

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<sup>1</sup> Own elaboration from CONEVAL data.

<sup>2</sup> Some forest loss might be due to landslides including those caused by Hurricane Stan in 2005, which may or may not have been influenced by land use.