

## LOCAL SPOTLIGHT

### Cauca Valley, Colombia—A range of well-being benefits



Photo: © Timothy Boucher



South America



### The challenge

Nearly 2,750 family-run sugar plantations and 13 sugar mills fill the narrow fertile flatlands of Colombia's high valley of the Río Cauca (Cauca Valley). These sugar plantations—stretching some 230,000 hectares—represent a major portion of Colombia's essential sugarcane industry. Agriculture, including sugar and other crops, requires clean and abundant water supplies throughout the year. However, increasing water demand for irrigation and for a growing population, in combination with climate change, has led to water scarcity, particularly between June and September. Deforestation and agricultural expansion in the upper watersheds is additionally thought to exacerbate this dry season water shortage while also reducing water quality.

The sugarcane growers have long believed that the amount and quality of their water depends on how the upper watersheds are managed, which, in turn, depends on the well-being of local farmers and communities. For almost 30 years, the sugarcane growers and sugar mills have supported the work of 13 community-based river associations and five NGOs, to work with local communities and farmers to protect the watershed while also improving rural livelihoods and well-being. These river associations have worked tirelessly to establish relationships and trust with landowners and communities in a region plagued by instability and conflict. For example, in the Bolo watershed a river association, Asobolo, has worked with over 700 landowners since 1993 to protect 212 springs, fence 100 hectares of stream, protect 1,500 hectares of forest and improve agricultural production in 30 hectares. The leader of Asobolo, Amalia Vargas, fundamentally believes that achieving long-lasting conservation requires a combination of projects focused on environmental and social outcomes.

From 1989 to 2009, 15 river associations and NGOs, like Asobolo, have protected watersheds and improved local livelihoods. However, they largely did so in a context of insufficient resources and lacked a coordinating network to be able to strategically invest in new watershed areas and activities. It soon became clear that a new funding and governance institution was needed to connect and amplify the work of river associations in protecting watersheds and improving well-being.

“The water fund helped me by giving me trees. They educated us on how the trees aided preservation of water. Avocado trees have been good for the soil, and also to feed ourselves, to sell and to support my family. Water gives us life, because without water there is no life.”

*Maria Esmeralda Marcillo, local farmer*

## Action and opportunity

The need became a reality in 2009, nearly 30 years after river associations like Asobolo first began working in the upper watersheds of Valle del Cauca. The sugarcane industry, 18 river user associations and NGOs, The Nature Conservancy, Bavaria (a beer company), EcoPetrol (oil company of Colombia), Mexichem (a production company), EPSA (an electric power generation company) and the Colombian government environment authority united to form the water fund, Fondo Agua por La Vida y La Sostenibilidad (“Water for Life and Sustainability”).

Reflecting the diversity of its stakeholders, the water fund has multiple goals, including reducing dry season water shortages, reducing erosion for water quality, improving rural livelihoods and protecting biodiversity. For the last seven years the water fund has been strategically building upon and amplifying the work that river associations have been doing for many years. In addition to traditional source water protection activities (riparian buffers, forest protection, etc.), the water fund focuses on building environmental awareness and capacity around the sustainable management of natural resources. For example, Asobolo, with new funding and capacity supported by the water fund, carries out environmental education activities in seven schools with over 2,000 children, has conducted 40 workshops related to protecting critical water sources and has helped strengthen 10 community organizations focused on watershed management. While many of the farmers they work with immediately see the benefit of protecting their water sources (e.g., for drinking, irrigation and trout production), the water fund also provides incentives in the form of capacity and materials for agroforestry and silvopastoral systems (including home gardens), which contribute to food security and household well-being. In an Indigenous community in another watershed where the water fund works, silvopasture techniques, including fodder banks, have doubled milk production, allowing for substantial increases in cheese production.

To date, over 1,500 families participate in Agua por La Vida activities through river associations like Asobolo, and an estimated 18,000 families may experience indirect

benefits from improved watershed management. The water fund has worked on more than 10,170 hectares, including protecting 795 freshwater springs and fencing more than 802 kilometers of riparian forest. It has also supported nearly 400 home gardens, 610 hectares of agroforestry (coffee, banana and avocado), 1,500 hectares of silvopastoral systems, provided educational programs in 66 schools and supported over 25 local organizations dedicated to sustainable agriculture. Growing numbers of neighboring families and farmers are eager to join—a clear testament to the benefits the water fund provides to its upstream participants.

In 2014, Asobolo, Agua por La Vida, The Natural Capital Project and The Nature Conservancy carried out a pilot social monitoring project to document program outcomes from the perspective of water fund participants. Their first step was mapping out the perceived environmental and social benefits associated with each of the water fund’s activities. A range of benefits were expected, including reduced erosion and improved water quality, improved agricultural production, enhanced nutrition (from agroforestry systems and home gardens) and reduced social conflict.

Many of these expected benefits will take years to manifest, but interviews, household surveys and focus groups carried out in a pilot study (of 27 participants) demonstrate that participants already perceive benefits from the water fund. For example, in the Agua Clara River area, after just three years of the program, over one-quarter of respondents thought there had already been improvements in agricultural production and over three-quarters said they thought that water fund activities increased land value through protecting water supplies. It turns out that, in this area, environmental actions to protect water sources, like fencing and reforestation, increase the value of the land—both from a natural heritage standpoint and from an economic standpoint. Almost all (96 percent) said they had participated in environmental workshops and engaged in a conservation/environmental action (e.g., reforestation, proper waste disposal) as a result of training, which they fundamentally see as beneficial for both the environment and for people.

## FONDO AGUA POR LA VIDA DASHBOARD

Water fund start date	Number of upstream participants to date	Number of potential downstream beneficiaries	Number of partners to date	Primary funding sources	Activities	Anticipated co-benefits
2009	2,165	Between 1,000,000 and 5,000,000	22, including 16 watershed associations	Private NGO Regional environmental authority		