



FONAG – The Fund for the Protection of Water, Ecuador

Thomas Chiramba, Silas Mogoi and Isabel Martinez (UNEP), Tim Jones (DJEnvironmental)

Type of tool: investments and fiscal measures for biodiversity protection

Issue: watersheds

Location: Ecuador, LAC

Introduction

The Fund for the Protection of Water (Fondo para la protección del Agua – FONAG) is a private trust fund established in 2000 for a period of 80 years and regulated under Ecuador's stock market law. In essence, the Fund is an example of payment for the environmental services provided by ecosystems (commonly referred to as Payment for Ecosystem Services or PES).

Challenge and objectives

FONAG works to ensure the provision of a *sufficient quantity* of water of *good quality* by supporting actions directed at protecting water resources, based on the principles of long-term natural sustainability.

FONAG focuses on the Upper Guayallabamba river basin, the Antisana river basin, the Oyacachi river basin and the Papallacta river basin which are crucial for maintaining the water supply to the Metropolitan District of Quito and its surrounding area. FONAG's area of operation covers some 5,025 km² and held 1.96 million inhabitants at the time of the 2001 census.

Oyacachi and Papallacta river basins

In order to avoid the degradation of these river basins, FONAG is supporting actions directed making the activities of local communities more sustainable but also more productive.

Antisana River Basin

Activities in the Antisana River basin are directed towards protecting the quality of water entering the Mica Quito Sur reservoir, part of the system that provides potable water to the city of Quito. The main problem in this basin is related to poor livestock management practices in surrounding properties, which cause water pollution, soil erosion and adversely impact nature conservation in the Antisana Ecological Reserve. Preparatory studies at an estimated cost of USD 22,000 are currently underway, with equal contributions by FONAG and TNC, and additional counterpart funding from the implementing institution.

The approach: how did PES help overcome barriers to dealing with the challenge?

Establishing a fund



A pilot project was set up in 1998, payments to FONAG began in January 2000 and financing of watershed protection projects was initiated in January 2002. The trust provides a stable, long-term financial mechanism, using revenues (interest and investments) derived from its equity to co-finance activities aimed at maintaining the hydrographic basins that supply the water needs of Quito Metropolitan District and its surrounding area of influence.

Establishing a clear mission, and vision

FONAG's Mission was established as: FONAG rehabilitates, cares for and protects water basins that supply water to the Metropolitan District of Quito and surrounding areas.

Vision: to be the mobilising agent that involves all actors in exercising their citizenship responsibly on behalf of nature, especially water resources.

A consensus and dialogue participatory approach

To lead processes and consensus through dialogue, proper decision-making, strengthening research and the appropriate use of technology to achieve integrated management of water resources in which active, responsible participation based on solidarity leads to sustainable water management.

FONAG implements programmes and projects that meet the institutional challenges of building a new 'water culture' (where the active and responsible participation of all stakeholders and actors creates a more just, shared and sustainable use of water resources with improved health and development outcomes) and achieving integrated water resource management.

Communities particularly targeted by FONAG programmes and projects include:

- Communities in the Cayambe-Coca Ecological Reserve (Oyacachi river basin)
- Communities in the Antisana Ecological Reserve (Papallacta river basin and La Mica Lagoon)
- Communities in the Cotopaxi National Park (Pita sub-basin of the Upper Guayallabamba)
- Communities in the Los Ilinizas Ecological Reserve (San Pedro sub-basin of the Guayallabamba)

The activities implemented by FONAG are the result of various consensus-based processes carried out among the participating institutions.

Collaborate with institutions

Through the Ecuadorian Centre for Agricultural Services (CESA), FONAG is seeking to conserve water resources, improve animal husbandry and agricultural practices, strengthen local resource management and provide access to financial services. All these components



will be developed during an initial implementation phase lasting fifteen months, at an estimated cost of USD 78,000, with part-funding provided by FONAG and co-financing from The Nature Conservancy and CESA.

Among other practical actions, work is being done to genetically improve livestock herds living around the Oyacachi basins, through a campaign to vaccinate, identify and execute a programme to provide these herds with vitamins and rid them of parasites.

Implementing specific programmes and projects

These programmes and projects are carried out in FONAG's geographical area of operation (see below) with the participation of various community actors, local authorities, governmental bodies, non-governmental organisations, and educational institutions.

FONAG implements its programmes directly, conceiving them as a way of building processes that are capable of changing people's attitudes toward nature and encouraging responsible water management.

The *programmes* have a minimum time scale of 20 years and cover all six key areas of FONAG's activities:

- Water Management
- Site surveillance and monitoring
- Restoration of vegetation cover
- Environmental education
- Training in Integrated Water Resource Management (IWRM)
- Communication

The Water Management Programme has two parts: technical and social. The first aims to develop water management tools, while the second seeks to achieve better governance and administration of water resources. The technical work is being implemented by IUCN and the social component is led by the Fundación Futuro Latinoamerica with the support of the Tinker Foundation.

The *projects* are interventions undertaken by supporting institutions, communities, educational organisations and local governments. They are short-term, with a maximum duration of two years. There are currently 20 such projects covering all of the sub-basins within FONAG's area of operation. Of the institutional budget, 20% is assigned to these projects.



Financing and financial approach

The capital assets of the FONAG are composed of contributions from local businesses, private and international institutions.

Concerned with the conservation of water resources and committed to finding solutions for the problems resulting from inadequate management of these resources, the Metropolitan Water and Sewerage Company of Quito (EMAAP-Q) and the international environmental NGO The Nature Conservancy (TNC) entered into a contract establishing the Fund in January 2000. The Electric Power Company of Quito (EEQ) joined in May 2001; the private brewery company Cervecería Andina S.A. (now Cervecería Nacional S.A.) participated with effect from March 2003; Swiss Development Cooperation (SDC/COSUDE) from January 2005; and The Tesalia Springs Co. from April 2007.

Of FONAG's investments, 80% are allocated to developing and strengthening these programmes.

Specific projects are an integral part of FONAG's six programmes, which are led by like-minded institutions with co-financing provided by FONAG.

FONAG's financial development is illustrated in Figures 1 to 3 below. FONAG's success is based in large part on:

- A philosophy of modest but steady growth
- Limiting its financial support for programmes/projects to the revenue (interest and income on investments) derived from its equity capital
- Attraction of increasingly significant counterpart funding

By 2009 FONAG was making financial contributions of almost one million USD per year and leveraging counterpart funding to fund programmes and projects with total expenditure of nearly four times this amount.

Evaluation: economic, social and environmental benefits

FONAG is contributing to securing present and future water supplies for Quito. Through the fund, more than 65,000 ha of watersheds are now under improved management. Upstream farmers receive support for watershed protection programmes, as opposed to cash payments. More than 1800 people are estimated to have received increased economic benefits associated with watershed management and conservation.

Scaling up and lessons learnt from implementation



FONAG has served to inspire the development of similar schemes elsewhere in Latin America and beyond.

Lessons learnt

- Governments, NGOs (including international NGOs), development assistance agencies, the corporate sector and local communities can work effectively together on PES schemes if the benefits for all stakeholders are clear.
- Relatively modest expenditure can leverage much bigger overall investment through counterpart contributions.
- Restricting use of the fund to yields from interest and investments – NOT capital – means that the fund grew slowly but sustainably.
- Strong capacity building and communications/ awareness-raising components have been vital to FONAG's success.
- A stable, long-term financial mechanism provides the security, stability and sustainability needed for partners to feel confidence in participating in FONAG and enables FONAG to operate.

Reference

<http://www.fonag.org.ec/portal/> downloaded 1 September 2011

Figure 1: FONAG equity yield 2000-2009 (USD)

Year	Total equity	Revenue from equity (interest investments)	from Reserve fund &	Total available	Yield (%)
2000	164.046	5.990	Not yet established	5990	3.65
2001	443.502	20.306	Not yet established	20306	4.58
2002	837.111	56.059	3.433	59492	7.11
2003	1.450.053	82.605	84.594	167199	11.53
2004	2.112.553	133.774	377.716	511490	24.21
2005	2.693.452	281.980	251.784	533764	19.82
2006	3.588.514	540.456	599.220	1139676	31.76
2007	4.193.784	467.123	96.434	563557	13.44

2008	5.162.206	1.014.447	26.480	1040927	20.16
2009	6.437.743	1.140.345		1140345	17.71

*A reserve was established in 2002 so that FONAG could be in a position to cover unforeseen but legitimate cost increases for projects already underway.

Figure 2: Programmes and Projects funded (USD) – comparison of 2000, 2005 and 2009

Programmes & Projects	2000		2005		2009*	
	TOTAL	FONAG contribution	TOTAL	FONAG contribution	TOTAL	FONAG contribution
FONAG Programmes:	–	–				
Water management	–	–	98,931	28,931	576,677	58,977
Site surveillance and monitoring	–	–	78,809	23,809	324,564	95,719
Restoration of vegetation cover	–	–	351,952	109,952	774,149	248,649

Environmental education	–	–	35,757	20,757	311,257	79,016
Training in IWRM	–	–	350,000		50,276	32,776
Communication	–	–	25,832	5,832	83,290	55,370
Programme support	–	–	36,091	16,091	1,082,266	49,728
FONAG Programmes subtotal	–	–	977,372	205,372	3,202,479	620,235
Community Projects	–	–	113,108	69,108	369,186	152,394
Operational management	690	690	136,560	76,560	119,026	52,318
FONAG administrative costs	5,078	5,078	51,770	51,770	97,350	83,350
Overall total	5,768	5,768	1,278,810	402,810	3,788,041	908,297

Figure 3: Steady growth in FONAG’s investment in programmes and projects and the more rapid growth in counterpart funding leveraged (vertical axis, USD), comparing the situation in 2000, 2005 and 2009 (horizontal axis).

