



## Using market mechanisms to protect biodiversity at the Panama Canal basin



### The business case

To answer freshwater supply challenges caused by population growth and increase of productive activities, the Panama Canal Authority (ACP) is designing new biodiversity protection and restoration projects that are to be financed by market mechanisms such as carbon credits and REDD+.

### The issue

#### The Panama Canal basin, an area to protect

The Panama Canal Authority (ACP), an agency of the Government of Panama, is the body responsible for the operation, management, preservation and maintenance of the Panama Canal so that it can operate in a safe, continuous and profitable manner. This man-made canal is the only waterway in the world draining into two oceans, and it runs solely with freshwater stored at the Panama Canal basin. Each time a ship crosses the canal, freshwater from the basin flows by gravity from Gatun Lake -85 feet above sea level- into the



locks, thus preventing salt water intrusion which could destroy the canal ecosystem. Given its proximity to the country's largest cities, the Panama Canal basin is a territory influenced by population growth and a variety of productive activities that occur in its environment – industrial, maritime, touristic, agricultural, livestock, forestry, and fisheries, among others. However, population growth and development activities have put pressure on the area's natural resources, and in particular, on freshwater availability. Being highly dependent on the basin freshwater availability, ACP has a major role to play in the conservation and protection of the region's water resource, in coordination with the stakeholders.

### The response

#### Using market mechanisms to finance conservation activities

To address this situation, ACP established in 2008 a 20 year project called "The Environmental Economic Incentives Program", aimed to protect the quantity and quality of the water resources. The final objective is to ensure the availability of freshwater for more than half of the country's population, for the Panama Canal operation, and other human activities.

The conservation program is based on three main aspects:

1. The protection of existing forest cover and regulation of land use, according to the area's ability to preserve the quality and quantity of water resources in strategically important sites of the basin;
2. The recovery of specific areas through the implementation of agroforestry, silvopastoral systems, and reforestation activities at community-level continuous sites, and
3. The inclusion of commercial reforestation activities, involving local farmers in a long-term basin conservation scheme.

ACP made the initial investment to design and implement the first phase of these ecosystem restoration projects. In the midterm, it will be financed through market instruments that will allow the assignation of an economic value to the natural resources. Among other mechanisms, ACP is working on the possibility to obtain certified emissions reductions in voluntary markets for its forest conservation programs. If ACP succeeds in selling such carbon credits in the carbon market, it will then obtain additional funds for replicating the model in other areas of the basin.

In addition, ACP is considering integrating other compensation schemes, such as the Reduced Emissions from Deforestation and Land Degradation (REDD+) program. This scheme has the potential to mitigate millions of tons of CO<sub>2</sub> in protected forest areas.



## The results

### A great potential in both extent and value

The credit compensation program will cover an estimated area of 20,000 hectares and should reduce tons of CO<sub>2</sub> emissions in a 20-years period by incorporating forestry activities. The REDD+ scheme could also potentially cover forested areas at sites located primarily in two national parks (Soberania and Camino de Cruces).

The use of market mechanisms will help the Panamanian government to replicate this model at a larger scale, therefore having a broader impact, and ultimately helping to secure the water supply in the region for its activities and for the country's population.

#### FURTHER INFORMATION

Esteban G. Sáenz  
ESaenz@pancanal.com