

## CASE STUDY 5

### Pioneering a system of payments for ecosystem services for carbon storage and watershed services: Costa Rica<sup>43, 44, 45</sup>

#### *The problem:*

In the late 1900s in Costa Rica, forest on privately owned land was rapidly being converted to agricultural land and pastures. This conversion was done without consideration of the value derived from these forests by others, both in Costa Rica and abroad. In response, Costa Rica adopted a law in 1996 that formally recognised the value of environmental services provided by these forests in terms of carbon fixation, hydrological services, biodiversity protection, and the provision of scenic beauty. The country has aimed to provide payments to forest owners for each of these values, but has so far only been successful for carbon fixation, hydrological services, and some biodiversity protection.

#### *What is the level of payment?*

Levels of payments have generally been set based on previous payment level provided to forest owners in a different form, and/or after consultation of stakeholders and negotiation. Environmental valuation studies were not used to determine the level of payments, even when available (e.g. the willingness to pay for water quality in Honduras). Payment levels typically tend to be fixed and at a lower level than the costs of provision (opportunity costs). Forest owners around Heredia (Central Valley of Costa Rica) are paid USD 51/ha/year for forest conservation, USD 124/ha for reforestation their first year, USD 100/ha for their second year of restoration, and USD 67/ha for the third to fifth years.

#### *Who pays?*

In the case of carbon and other greenhouse gases fixation, polluters (mostly fossil fuel users) foot for the bill – the “polluter-pays” principle. This is in accordance with the Kyoto Protocol on emission reductions which has now become mandatory. On the contrary, beneficiaries can choose to pay for hydrological services on a voluntary basis – the “beneficiary-pays” principle. The Global Environment Facility, which represents global users, granted a budget to fund agro-forestry contracts for biodiversity conservation and carbon sequestration benefits, but the local tourism industry has not yet committed any funds to conserve the ben-

efits of natural ecosystems. Users may or may not be aware of the available payment for ecosystem services in place.

#### *How is the budget levied?*

Most of the budget is levied through a mandatory, dedicated tax on fuel sales, with one third of the tax (5% of fuel sales in 1999) earmarked to forestry. A much smaller part of the budget comes from negotiated voluntary payments by water users such as bottlers, municipal water supply systems, irrigation water users, and hotels. This voluntary contribution changed in 2005 to a mandatory conservation fee earmarked for watershed protection as part of a water tariff.

#### *Who benefits?*

Costa Rican forest owners benefit directly from the scheme because they receive a financial compensation for forest maintenance. Evidence however suggests that the level of compensation is too low compared to the opportunity costs of conservation. Polluters benefit because they can keep operating on the global market while looking for less polluting technologies or inputs. Users benefit because of the improved environmental quality. They also have a way of expressing their voice through providing for these payments, which was not previously an option.

Ultimately, Costa Rica directly benefits as a country: new institutions have been set up to administer these payments with either with the government or NGOs acting as intermediaries, with the associated creation of employment opportunities and economic activities. Costa Rica has also received payments from other countries for this system of payments for ecosystem services (e.g. from the Norwegian government, private companies, Global Environmental Facility).

#### *Who administers the programme?*

The Costa Rican government and its administrations facilitate the budget collection and implementation of payments. Local-level intermediaries have been created in order to reduce the trans-

