

NATIONAL CONSERVATION FINANCE STRATEGY

COSTA RICA CASE STUDY

1994-1998

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Costa Rica made great strides in economic and social development beginning in the second half of the 20th century. With decisive political support, social issues such as education, basic health, child nutrition and drinking water were advanced to satisfactory levels during the period.

In parallel, the economic model passed from import substitution to an export-led growth. As in most developing nations, however, the industrialization and urbanization processes that accompany economic and social development brought about perverse trends in the environment front: the destruction of forests, soil degradation and air and water pollution. In this sense, Costa Rica was not an exception to modern societies in which the use of natural resources is characterized by the extraction of major economic benefits without any consideration of the environmental costs involved.

This case study discusses how Costa Rica was able to reverse this trend, mainly during the period 1994-1998. Although a policy and financial planning process was not undertaken as such, certain elements of these will be highlighted as lessons learned. This exercise may help other countries recognize and grasp political, technical and financial opportunities as they occur.

1. Background

By the middle of the 20th century dense forest cover in Costa Rica had been reduced to 64 percent of the territory, and in the following 40 years it was further reduced to less than 25 percent (SINAC, 1998). As a response to this pattern of loss of habitats and forest cover, initial steps were taken towards legally saving and delimitating large representative “set-asides” of wildlands beginning in the 1960s. Established under the Ministry of Agriculture, the legal and institutional toolbox consisted of the following:

- i. the Forestry Department created by the 1969 Forestry Law
- ii. the National Park Service, established by the 1970 National Parks Law
- iii. the Wildlife Service created by the 1966 Wildlife Law

These technical units were responsible for managing the protected areas, which were legally created and consolidated during the decade of the 1970s.

These three original conservation entities constitute the framework of the present Sistema Nacional de Areas de Conservación (SINAC). Administratively and financially these units were independent from each other:

- Financial support for the Forestry Department (Dirección General Forestal, DGF) came from the central government budget, and from fees and taxes that constituted the Forestry Fund.² This fund was used to support work plans and complemented by international aid projects.
- Financial support for the National Park Service came mainly from the central government budget and was complemented by charges and admissions fees, which constituted the National Park Fund. Other major sources of funding were international cooperation and grants.
- Support for the National Wildlife Service came from the central government budget and additional revenues generated through permits, fees, and fines, all of which constitute the Wildlife Fund.

Notwithstanding early action, by the early 1980s the damage done to the Costa Rican environment was evident in the following fields (MIDEPLAN 1998):

¹ The author is grateful to Luis Gámez for his guidance and valuable comments.

² Before the first Structural Adjustment Loan (SAL) from the World Bank in 1990 Costa Rica had earmarked revenues for specific purposes.

- the destruction of tropical forests outside protected areas
- moderate to extreme soil degradation, estimated at 15-20 percent of the territory
- pollution of rivers and catchment zones due to the dumping of agrochemicals, and industrial and organic waste
- air pollution exacerbated by the increase in the number of vehicles and industrial activities in and around San José, the capital
- solid waste disposal became a national emergency in 1991 because of its deficient treatment

As the Government (held by different administrations) and civil society became increasingly aware of this damage, important measures were taken during the 1980s to change the trend. Among those, the highlight is undoubtedly the creation of the Ministry of Natural Resources, Energy and Mines (MIRENEM) as a spin-off out of the Ministry of Industry, Energy and Mines in 1988. The Ministry later evolved to its present form, the Ministry of Environment and Energy (MINAE).

MIRENEM took charge of the three environmental responsibilities of the Ministry of Agriculture, and merged them into two main fronts: wildlife and forestry.

The new Ministry became a catalyst for the consolidation of Costa Rica’s conservation policy and for broadening public environmental awareness. During the second half of the 1980s the Ministry made the first serious attempt to incorporate environmental sustainability concepts in national development policies through the Conservation Strategy for Costa Rica’s Sustainable Development (Estrategia de Conservación para el Desarrollo Sostenible de Costa Rica – ECODES). Unfortunately, although ECODES was a state-of-the-art policy strategy, it lacked a financial strategy to support it, which eventually dimmed it down to good intentions.

The existence of the Ministry also facilitated the promotion of external financing support to the process. Besides bilateral contributions, the Government took advantage of Costa Rica’s external debt situation between 1982-1990 to successfully undertake debt-for-nature swaps.³ This source of funding became instrumental to finance the cost of legally acquiring the conservation “set-asides” mentioned earlier, as substantial amounts of money for these purposes was not available from the national budget.

2. Towards a Comprehensive Environmental Policy (1994-1998)

The next articulated effort to promote environmental concerns within the county’s economic development came during the period 1994-1998. The environmental strategy promoted by the administration of President Jose Maria Figueres had three main objectives:

- To correct the economic biases that affected the low or non-existent valuation of natural resources.
- To revert environmental degradation of air, soils and water
- To change attitudes and habits of the population

Despite the conceptual clarity and considerable political support at the highest level, getting the process started was not an easy task, as reported by Dr. Rene Castro, Minister of Environment and Energy

<p>ELEMENTS OF COSTA RICA'S ENVIRONMENTAL POLICY (1994-1998)</p> <ul style="list-style-type: none"> • The human being as center of development • Inter-generation balance • Internalization of externalities • Environmental Impact Assessment • Adequate legal framework • Environmental responsibility and “polluter pays” principle • Civil participation and access to information • Precautionary principle • Gradualism in the adoption of processes that require cost adjustments <p style="text-align: right;">(MIDEPLAN 1998)</p>
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³ Costa Rica was in default with commercial banks during this period. The secondary market price of the debt reached a low of 11.5 percent in 1988, which allowed discounted transactions for environmental projects.

at the time.⁴

The planning stage was done by the Minister himself, together with a few advisers. The first step was establishing a long list of priorities and assigning “task managers” to each of them, under his personal coordination. Each task manager had the freedom to design and implement activities under her policy area, and in some cases the responsibility of financing these as well. After a reasonable period of time, task managers and their work were evaluated: the successful ones were kept and labeled as priorities, as presented in the following short list:

1. The consolidation of the National System of Conservation Areas
2. Sustainable use of biodiversity
3. Environmental services payments
4. Control of emissions (air) and effluents (water)
5. Solid waste management
6. Energy policy

Minister Castro was very involved in the political arena, where despite the President’s open support, much persuasion would be needed to convince other cabinet members and the private sector of the goodness of the proposed changes.

As is often the case in developing countries, the implementation of Costa Rica’s environmental policy was insufficiently funded. National budget resources are scarce, often contended for social programs. In addition, the practice of a unified window (*caja unica*) for fiscal revenues, albeit useful from a strictly economic standpoint, does not always fairly gratify the efforts made by environmental government entities in revenue generation, as will be illustrated in the following section.

International cooperation was also weak in the 1990s. By 1994 Costa Rica was deemed “graduated” from requiring external resources for development, and only a couple of debt swaps were initiated and later completed.

The section that follows deals with the details of the three policy areas related to conservation: protected areas, biodiversity and environmental services.

2.A THE NATIONAL SYSTEM OF CONSERVATION AREAS (SINAC)

As saving the country’s biodiversity by legal land protection became a state policy in the 1980s with the creation of the MIRENEM, private lands holding significant representation of endangered and valuable habitats and species were also included in the process. Expropriation of these territories implied complex legal negotiations and high economic compensation. The Government did not have these capacities at a time when Costa Rica was recovering from the most serious economic and financial crisis in the recent past, and had a civil war going on in neighboring Nicaragua.

By transforming these obstacles into opportunities, MIRENEM’s Minister, Alvaro Umaña, launched an ambitious project to attract international concern and financing for the protected areas’ land acquisition in 1986. Bilateral support, both through fresh money and commercial bank debt-for-nature swaps, and financial and technical assistance from international NGOs were key to the consolidation of the Costa Rican protected areas system.⁵ In addition, philanthropy, firms and individuals played a major role in providing cash and land donations to support the nation’s conservation goals.

In order to appropriately administer and execute this funding modality, the MIRENEM established the National Park Foundation (FPN). FPN became responsible for the creation and administration of trust

⁴ We are grateful to Dr. Castro for a frank and open assessment of the achievements during his term in office as Minister of Environment and Energy.

⁵ The Netherlands, Canada, the US, Spain, Sweden, Norway and TNC and WWF have been crucial and recognized partners in the process.

funds for the different protected areas' conservation goals.

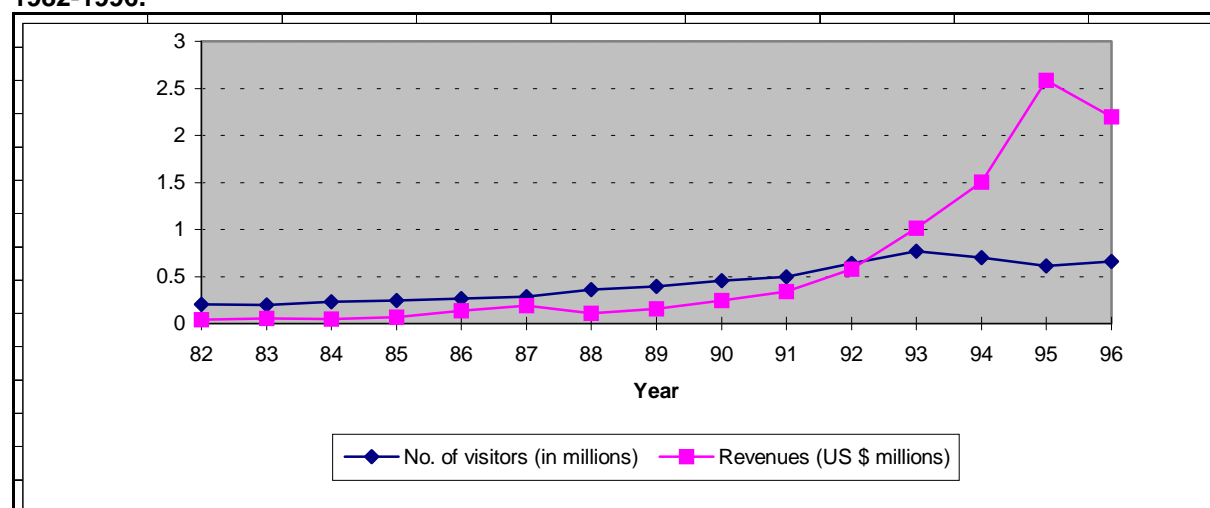
The early 1990s were a period of transformation and a new phase for conservation. The institutional organization had to move beyond the prevailing national parks scheme and reforestation efforts. Broader conservation goals required the involvement of civil society, and appropriate management practices had to be promoted in private lands.

As a response to these new demands, a national system of conservation areas was conceived, which integrated the entire spectrum of management categories. The system also coordinated the work of the three technical units (forestry, wildlife and National Parks) and decentralized the decision-making process to regional levels. This constituted the National System of Conservation Areas (SINAC), established in 1995 and comprising 11 conservation areas covering the entire continental territory and a small part of the territorial waters (tenfold larger than the continental area).

Against the backdrop of declining international aid and an inflexible central government budget structure with restricted use, the need to switch to a self-sustainable scheme became evident. Capturing and reinvesting the economic benefits of protected areas and environmental services became the instrument to support the new concept of conservation areas in Costa Rica in the 1990s.

The need for financial innovations for SINAC coincided with a tourism boom to the country, and particularly to national parks. Visitation rates increased in this period, generating a considerable flow of revenues for SINAC (See Table 1).

Table 1. Growth in visitors and revenues from admission fees to protected areas in Costa Rica, 1982-1996.



Based on data from the MIRENEM, 1991 MINAE, 1996 and Bermúdez 1997

In 1994 admission fees to conservation areas were increased with the aim of providing SINAC with an independent budget: fees for non-residents increased from US \$1.27 to \$15.00 in 1994, and were brought down in March 1996 to \$6.00. The fee for residents increased to approximately \$1.20.

Two important obstacles emerged in the implementation of this measure:⁶ the tourism sector (National Tourism Institute, Chamber of Tourism) was fervently opposed to the increase in entry fees, arguing that higher costs would be a disincentive to demand. The political fight was tough within Government circles, which forced Minister of Environment to give up a portion of the increase. On the financial side, although initially park entry fees were captured by an independent body and reinvested, this modality was questioned and suppressed. Park entry fees became national revenues destined to enlarge the unified

⁶ Personal communication with Dr. René Castro

revenue window, which means that the income generated through this mechanism was not automatically allocated to SINAC and does not trickle down to the national parks that have increased their visitorship.⁷

Finally, one financial mechanism that worked partially is the one called “hotel dollars”. Some hotels have entered formally into negotiations with their local protected areas to transfer direct economic benefits to public conservation efforts, acknowledging the added value provided by the scenic beauty they provide. With this purpose, a Spanish hotel & resort chain has established a private trust fund for the Tempisque Conservation Area. An estimated US\$1 million has been generated by the direct contribution of one additional dollar/night from hotel customers. Similar modalities have been adopted by local and smaller hotels, except that the funding is generated by the hotel operational costs, not from visitor contributions. This funds, estimated at US\$150'000, are used to support additional habitat protection of species. Other efforts from tour operators or hotels have been set-up in the Osa and Tortuguero Conservation Areas. Although modest in its extent, such revenues become vital in providing ‘oxygen’ to the funding of national conservation areas. These efforts illustrate healthy partnerships that can directly fund conservation areas as visitation increases.

2.B SUSTAINABLE USE OF BIODIVERSITY

The Instituto Nacional de Biodiversidad (INBio, founded in 1989) has developed a bioprospecting program through which INBio, international industries and academia collaborate in the exploration of compounds and genetic material produced by living organisms that give added value to biodiversity.⁸

Bioprospecting has been integrated into the creation of a National Biodiversity Inventory. An agreement between MINAE and INBio regulates the sustainable collection of biological material in public protected areas to increase knowledge of biodiversity in Costa Rica, and to share the benefits from bioprospecting between INBio and the Ministry (Nader and Mateo, 1998).⁹

The history of INBio bioprospecting agreements to date is described in Table 2 below. Generally these contracts stipulate that 10 percent of direct contributions to INBio be transferred to MINAE, and that 50 percent of any eventual royalties received by Costa Rica would devolve back to SINAC.¹⁰

Bilateral donors and NGOs are also sources of funding to INBio and to Costa Rica.¹¹ For example, the Government of the Netherlands, Norway and the World Bank are financing a project focused on capacity building at INBio, SINAC, and other organizations.¹² The Government of Canada approved a debt swap for CDN\$11.3 million¹³ The Government of Spain agreed to a debt service swap (reallocation of debt service) to biodiversity conservation for US\$6 million.¹⁴

⁷ This explains why certain areas of the country have boomed with tourism – like the private Monteverde Reserve – but the adjacent state conservation areas continue operating with basic budgets.

⁸ These products include pharmaceuticals, bio-pesticides, and agricultural and personal care products, such as perfumes and cosmetics, among the most common ones. A fuller description of bioprospecting and INBio can be found in Biodiversity Prospecting, by Reid, et. al., World Resources Institute, 1993.

⁹ The 1992 Biodiversity Country Study indicated that 83% of Costa Rica's living organisms were yet to be classified.

¹⁰ The INBio-Merck contract has contributed over US\$500 thousand to SINAC over 11 years. In addition, INBio has shared the benefits of multilateral grants with SINAC for over US\$4 million in the period 1998-2001, which SINAC has used to support the only marine conservation area in the country.

¹¹ Personal communication with Dr. Alfio Piva, Deputy Director, INBio

¹² Areas of interest of this project are awareness of biodiversity and its sustainable use, biodiversity inventory work and ecological mapping of five conservation areas, and a biological information management system.

¹³ Half of this goes to the consolidation of the Arenal Conservation Area and 50 percent to support INBio's efforts in bioprospecting, work with communities, and other projects, with a vision of financial independence of the Institute.

¹⁴ Half of this is directed to civil society participation in watershed protection projects in the Central Pacific Conservation Area and the other half is dedicated to support INBio's biodiversity resources development program.

Table 2: Contract terms between INBio and its collaborators in Costa Rica

INBio Partner	Potential benefits to biodiversity conservation in Costa Rica
Merck	Signed in 1991, the agreement has been renewed twice. Merck provides a research budget, technology and "know-how" transfer in exchange for biological samples. Income from royalties would be devoted to biodiversity research and conservation in Costa Rica. The agreement gives Merck limited exclusive access to samples provided to it.
Recombinant BioCatalysis	Terms similar to those described above. Partners are working with the Center for Molecular and Cellular Biology at the University of Costa Rica to prepare DNA from extreme habitats such as hot volcanic springs. Research is targeting thermostable biological catalysts for chemical processes and medical diagnosis.
Givaudane Roure	Terms similar to those described above. Research is targeting new fragrances and aromas.
US Govt. sponsored Intl. Cooperative Biodiversity Group (ICBG)	INBio, the Guanacaste Conservation Area and the University of Costa Rica are cooperating with Cornell University and Bristol Myers Squibb to target development of natural compounds from arthropods and mollusks. Terms similar to those described above, but samples are also subjected to screening assays for new anti-malarial, anti-inflammatory and anti-microbial compounds in Costa Rica, giving them locally added value.
INDENA	INBio screens samples for possible applications to phytochemistry and phytomedicine. A large portion of the developmental work is done in INBio labs.
AnalytiCon	AnalytiCon transfers "know-how" and equipment to INBio to support the institute in characterizing natural compounds, and will integrate INBio's research capacity into its contract research with pharmaceutical companies. Intellectual property rights are to be shared.
BTG-La Pacifica	Using a patent held by the British Technology Group Ltd., this collaboration involves a Costa Rican agricultural company in the process of developing a biological and non-toxic nematicide that could be domestically produced and marketed.

Adapted from (Nader and Mateo, 1998)

A more recent venture toward the financial self-sufficiency of INBio is the establishment and development of a US\$4 million 'edutourism' project known as the INBioPark. Funding was provided by seed capital from INBio and matching funds from Norway, Sweden and Canada, plus loans from the Central American Bank for Economic Integration (CABEI) and TNC. INBioPark is a gateway to national parks, taking advantage of its convenient location to provide to students, general audiences and international visitors with a brief and simplified introduction to biodiversity and national parks with live samples of ecosystems planted on the land surrounding INBio's headquarters.

2.C ENVIRONMENTAL SERVICES PAYMENTS

During the 1960s and 1970s Costa Rica had one of the highest deforestation rates in the world. As early as 1979, however, national forestry laws included incentives such as income tax credits to encourage reforestation. Forestry incentives, which have been redesigned and redirected several times, seem to have had an impact over time: between 1979 and 1987, approximately 2000 hectares per year were reforested.

In 1991, the National Forestry Financing Fund (FONAFIFO) was established to provide loans and incentives for reforestation. With FONAFIFO and the introduction of reforms that made the incentives available for small farmers, who constitute the majority of landowners in Costa Rica, the average amount reforested under the government incentive programs for 1991-1995 jumped to 17,500 hectares per year (LeBlanc 1997).

A new Forestry Law – *Ley Forestal #7575* signed on February 13, 1996 – provides the legal and regulatory basis to compensate landowners for "environmental services" (Environmental Services Payment, ESP) offered by their lands. The law addresses four key environmental services offered by plantations and forests: 1) carbon fixation, 2) watershed protection, 3) biodiversity resources and

4) protection of natural forest ecosystems located in life zones of particular interest. It empowers the Forestry Authority to contract with landowners, subject to provisions such as the availability of a forest management plan certified by a licensed forester, to compensate them for the environmental services offered by their lands (Asamblea Legislativa de la Republica and Gobierno de Costa Rica 1996). FONAFIFO pays all property owners.¹⁵

PAYMENT LEVELS OF FORESTRY ENVIRONMENTAL SERVICES, 2001

Regulations to the Forestry Law were published in early 1997 (MINAE 1997). These regulations establish the conditions for and levels of environmental services payments (established annually by executive decree) authorized by the Forestry Law. Current levels of ESP for 2001 follow.

- (a) for new plantations US\$ 575 per hectare, for a period of 15 years, paid in advance during the first five years, 50 percent during the first year, 20 percent during the second year, 15 percent during the third year, 10 percent during the fourth year and 5 percent during the fifth year,
- (b) for natural forest management (sustainable logging) \$ US 313 per hectare per five years with a commitment on the part of the landowner to keep the forest in natural forest management for an additional 15 years; and
- (c) for conservation of natural forest, \$US 220 per hectare under the same terms as above.

Funding for the payment of environmental services contracts comes from the income generated by one third of a selective consumption tax on fossil fuels established under *Ley 7575* on February 13, 1996, in a bi-partisan legislative move that dedicated these revenues to the reduction of greenhouse gases and the protection of biodiversity.

In addition, Costa Rica established a Carbon Fund to serve as a depository for monies from domestic and international sources and to distribute carbon "rights" or "credits" in exchange for such deposits.¹⁶ While FONAFIFO can only compensate private landowners for environmental services, the Carbon Fund serves as the financing agent for the national joint implementation projects by supplying funds for both parkland purchases, for the continuation and expansion of the government forestry incentives, and to support renewable energy projects. (See Annex 1)

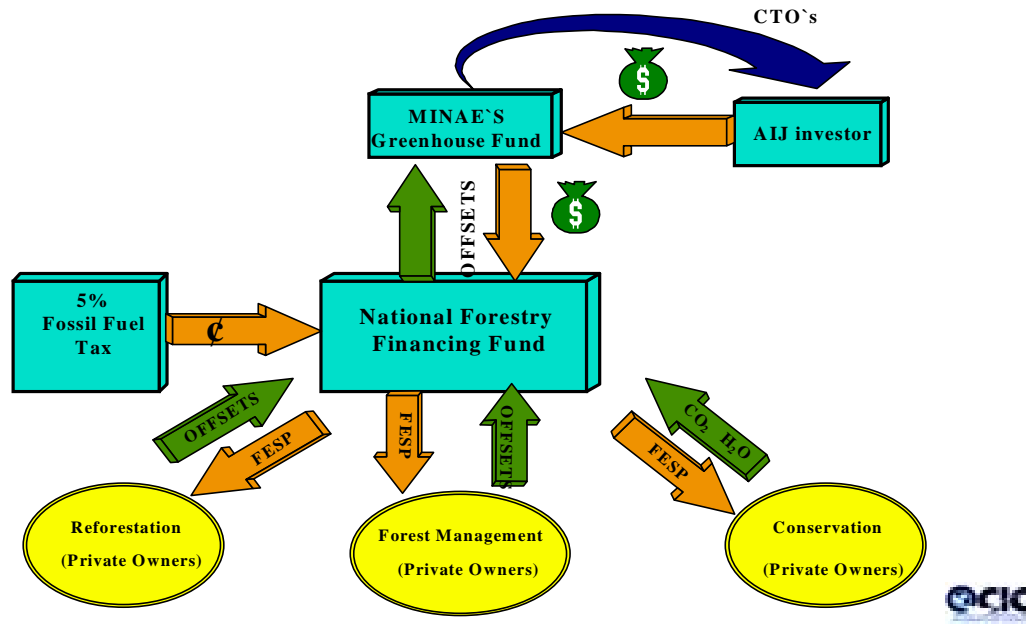
Landowners who wish to receive Carbon Fund monies must grant their environmental services rights to the Fund for its use and possible resale. The Carbon Fund markets and sells those rights internationally, producing the initial Certifiable Tradable [Greenhouse Gas] Offsets, or CTOs, a financial instrument depicted in Annex 1. These funds, in turn, are passed to FONAFIFO, to be distributed to landholders under contract. The scheme is depicted graphically in Figure 1.

¹⁵ Property owners eligible to receive these payments must apply to the Forestry Authority, indicating the area of land to be managed under the contract on the property plan, and presenting a forest management plan certified by a licensed forester. Additionally, the commitments associated with the contract (e.g. a prohibition from cutting trees for the duration of the contract) must be registered with the deed to the property, so that they would transfer as a legal easement to any subsequent owner. Fulfillment of these requirements and contracts with a landowner gives the State the right to claim compensation for the environmental services of greenhouse gas mitigation in international diplomatic and financial fora.

¹⁶ The Carbon Fund is a way of capturing revenues without going through the central government budget. It was an uphill fight, as the economic and financial authorities were conscious that this would violate the unified window principle for national revenues.

Figure 1: The Forestry Environmental Services Payment Scheme

Forestry Environmental Services Payment



D1/FESP

The ESP scheme is not free of practical problems:

- It overemphasizes forestry and re-forestation, neglecting strategic ecosystems of importance for biodiversity protection, water catchment areas, wetlands and other topics that must qualify for economic compensation provided their direct relation to communities welfare. In order to improve mechanical deficiencies around the ESP and to finance the institutional strengthening of FONAFIFO, Costa Rica and the World Bank agreed to the Eco-Markets loan for \$US43 million in 2000.
- In institutional terms, two major problems have affected the ESP program. The above flow chart has proven to be bureaucratic and very complex. A major factor contributing to this 'bottleneck' lies in that the flow of revenues generated by the fuel tax, are captured by the Ministry of Finance 'unified window' mechanism. The ESP gets, in practice, only one third of the annual amount collected, causing breach of contract with some landowners. Moreover, recently the government eliminated taxes on fossil fuels, including the tax that constituted the major source of funding of the ESP. This implies that FONAFIFO will have foregone two thirds of its original share of funding and continue to work with a fixed budget.
- Finally, the ESP contracts with landowners negotiated by FONAFIFO were limited to 5 years. This restricted the amount of carbon credits which could be claimed and meant that the government was not accumulating any permanent restrictions on private lands which they had in fact partially amortized.

One successful decentralized example of ESP is a substantial effort made by the Public Utilities Company of Heredia (ESPH), a province in Costa Rica. Based on the Forestry Law and other related legislation, ESPH designed and implemented an environmentally adjusted water tariff. This adjustment is generating a new stream of revenues that must be exclusively to the payment of the water environmental service.¹⁷

¹⁷ Other related legislation, such as, the Law for Public Utilities, the Biodiversity Law and the Environmental Law, consider water resources as an environmental service of economic value. All these support the notion that end users of water resources can contribute to finance the cost of protection and conservation of the watershed to guarantee the physical conditions for future water

Based on this premise, the environmental adjustment denominated *tarifa hídrica* has been defined as: a) the value of water as an ecological service provided by the forest and b) the cost needed to recover over used land areas close to the water sources. The ESPH collects this income through the monthly utility bill (the amount is indicated separately in the bill) and places it in a specific fund that is used to finance PROCUENCAS (ESPH's program for the conservation and rehabilitation of the Ciruelas, Segundo, Bermúdez and Tibás watersheds in the Heredia province). PROCUENCAS is responsible of promoting conservation, natural forest regeneration and reforestation activities with the goal to recover and protect the water sources managed by ESPH.

A direct financial compensation is provided through this mechanism to the Braulio Carrillo National Park and private forest and land owners who undertake protection activities and measures around the main water sources that supply the Heredia area served by ESPH. Considering that currently the highly productive infiltration and catchment area has been reduced due to increasing urban developments and non-traditional agriculture, this water ESP contributes to protect the consistent reliance of ESPH in the natural system.

3. Final Remarks and Lessons Learned

Several elements mentioned in Sections 1 and 2 have changed substantially since 1998. The Ministry of Environment and Energy became an office of the Second Vice-Presidency, denoting the lack of political support for this policy area. Many projects and programs were altered with the change. For example, although there is still potential to carry out debt-for-nature swaps and/or request grants to a handful of friendly countries, the Government's interest is lacking. Following is a brief description with the current status of the policy areas examined in this document.

SINAC: Although the possibilities for conservation areas to benefit from increasing flows of revenues from tourism and visitation and toward self-sufficiency seem viable, these will remain obstructed as long as major reforms (already established in the Biodiversity Law but impeached by the current administration) do not break the funding structures tied to the “unified window” system. The Biodiversity Law proposes the decentralization of SINAC: each protected area as a administrative unit with its own budget. To achieve this goal, the creation of independent trust funds and specific foundations is seen as necessary. These measures have been postponed and require approval at the highest political level.

Biodiversity prospecting: As this program is carried out by INBio, which is an independent organization, it has continued its course.

Environmental Services: The outcome of the recent Climate Change COP VI in The Hague and Bonn that excludes carbon sinks from the Clean Development Mechanism (CDM), reduces Costa Rica's possibilities of placing its large carbon potential in the market.¹⁸ The country has, however, been able to help other developing countries in institutional capacity building, training human resources and know-how in climate change and energy as potential economic opportunities. Costa Rica has also been able to raise over US\$134 million in investments in clean energy projects, and \$US8 million in private forestry projects (PFP). Bilateral agreements with Norway and The Netherlands allowed the sale of CTO's worth approximately US\$3 million, deriving from energy projects and PFP. Since 1997 the ESP has been strategic in diverting the trend of deforestation by transferring US\$46 million in 3 years to forest owners, stimulating private forest conservation as a major alternative source of direct and tangible economic benefits to the rural sector. NGOs such as CEDARENA and TNC are working to perfect new private lands legal mechanisms such as permanent conservation easements which will pay private land owners a fair price for permanently restricting certain types of land use on their properties, thus opening the door even more for innovative market mechanisms.

supply and its quality.

¹⁸ Close to 1,000 MT of carbon from state protected areas have been carefully certified and offered in the international markets.

Final Remarks

Substantial conservation goals have been achieved in Costa Rica notwithstanding the lack of a structured policy and financing planning process. The three elements that have been present at times of important policy leaps are a) political support at the highest level, b) an adequate institutional setting, and c) financial resources.

Political support has been uneven. The administration of President Rodríguez (1998-2002) has not shown interest in capitalizing on the progress made by its predecessor. Environmental policies in general have not only stagnated, but have reversed in some cases. Institutionally, an incomplete process has been carried out over the years with overemphasis on legal aspects and less attention on institutions and capacity building. On the financing side, the absence of this strategic component has been fertile ground for creative and innovative economic instruments designed to capture fresh, external funding to accomplish specific conservation objectives. These alternative mechanisms have temporarily solved public conservation needs. However, for the territorial and operational dimensions of a national and centralized SINAC, these mechanisms could be much more efficient if each conservation area could achieve a administrative and financial autonomy.

This exercise shows that conservation financing is not an isolated endeavor. Political and institutional structures, as well as operational details should be factored in as well. Countries must attempt to tie these often loose elements and it may well be that building a conservation strategy and doing financial planning is not as overwhelming a task as perceived. Broadening the conceptual and action framework may help other countries take solid steps towards their own conservation goals.

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The Costa Rican Joint Implementation Regime¹⁹

The Costa Rican government began to develop official JI policy and programs beginning in mid-1994. A high level Consultative Committee on Climate Change was formed to shape JI policy, in the context of the national greenhouse gas emissions inventory.

In September 1994, Costa Rica and the United States signed a bilateral statement of intent on cooperation for sustainable development and joint implementation. This agreement led to the "Cooperative Assessment of Baselines and Certifiable and Transferable Greenhouse Gas Emissions Offsets."

The Costa Rican Office for Joint Implementation (OCIC) was established in April 1996, with the authority to formulate JI policy and evaluate and approve projects, reporting to the Ministry of Environment and Energy (MINAE). It includes representatives from the MINAE, local NGO's and private sector. The office established project approval criteria and assisted in the development of more than fifteen project proposals, many internationally noted as among the best-designed of the first generation of similar attempts. More recently, the OCIC strategy has been to exclusively promote three national-scale projects focusing on 1) parks' consolidation, 2) natural forest management on the part of private landowners, and 3) renewable energy. The first two of these "umbrella" projects, which focus on land-use, will eventually encompass most of the forested areas of the country.

The development of JI projects of national scope addresses one of the most important obstacles to developing-country participation in joint implementation: it reduces the per-ton transaction costs associated with the development, evaluation and marketing of projects. Moreover, the national proposals complement the Costa Rican land tenure structure of traditional small and medium-sized farm ownership, engaging and supporting such landholders. Although, all property owners are eligible, the majority of payments for environmental services have been made to NGO's representing small land holders

The Protected Areas Project and the Private Forestry Project include long term monitoring of carbon benefits, using satellite imagery, ground verification and independent third party verification. The Project has already been assessed by SGS Forestry and monitored annually.

The Certifiable Tradeable Offset (CTO)

Costa Rica has designed a financial instrument that can be used to transfer (sell) greenhouse gas offsets in the international marketplace, called the Certifiable Tradeable Offset, or CTO. A CTO represents a specific number of units of greenhouse gas emissions expressed in carbon equivalent units reduced or sequestered. The home-country verification process certifies that the offsets are of a high enough quality to allow them to count against national and company-level greenhouse gas reduction commitments, if such crediting is eventually permitted under the FCCC.

When an investor purchases a CTO he or she is truly providing financial additionality to Costa Rica, as required under the FCCC. CTOs should appeal to investors interested in avoiding the costs of developing and submitting individual joint implementation projects to home and host-country authorities for evaluation. CTOs are pre-approved and the investor simply purchases the offsets. CTOs are fully transferable to others and are guaranteed by MINAE for 20 years.²⁰

In July 1996, Costa Rica sold its first CTOs. At that time, the governments of Norway and Costa Rica, along with companies from both countries, agreed to cooperate on a JI project, that involves, among other things, reforestation and forest conservation as part of the Private Forestry Project. The project was proposed by the Costa Rican government during negotiations with Consorcio Noruego, a consortium of

¹⁹ A more detailed discussion of the Costa Rican JI regime can be found in LeBlanc, 1997 (see Bibliography).

²⁰ Investor confidence in the CTOs may be further strengthened if a third-party monitoring, verification and certification process is established.

three private sector Norwegian companies, for the expansion and reconstruction of a hydroelectric facility. The Norwegian government agreed to join in support of the project as a JI investment. The Norwegian parties are contributing \$2,000,000 to the Private Forestry Project – \$1.7 million from the Norwegian government, financed by a Norwegian carbon tax, and \$300,000 from Consorcio Noruego – in exchange for 200,000 CTOs.

The Norwegians will be the final users of the bonds and do not intend to resell them. However, Costa Rica's goal for CTOs is to see them traded in a manner similar to the United States market for sulphur oxides (SOx) pollution that has surprised many observers by reducing emissions of these compounds at far less cost than originally believed possible. Natsource Energy Brokers and The Centre for Financial Products, Ltd, an active participant in the development of SOx trading launched in 1993 at the Chicago Board of Trade, seek an intent to promote the development of the CTO market and broker those tons of Costa Rican carbon over the next years.

Two cooperation projects with the Dutch government have enabled Costa Rica to take this initiative further and to issue CTOs in new market niches other than carbon sequestration. The first project consists in the anaerobic treatment of organic waste from coffee processing, which results in cuttings in methane emissions and the implementation of clean technologies and energy savings through the use of biogas. The second project is directed to the reforestation of 78 ha. of former banana plantations that will contribute carbon sequestration and environmental sustainability conditions for banana production. The Netherlands received the corresponding CTO's for the annual reduction of 500 tons of methane gases in addition to the ones resulting from carbon sequestration.