

Debt-for-Nature Swaps: Moving From Peril to Promise

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## Abstract

The intent of this paper is to examine the economic viability of the debt-for-nature mechanism, specifically as it applies to the objectives of the Latin American and Caribbean Bureau of the U.S. Agency for International Development (A.I.D.). As the analysis is regionally specific, its conclusions may not be applicable to other countries whose commercial debt makes up only a small percentage of their overall obligation.<sup>a</sup> Furthermore, the paper is intentionally focussed to address specific questions, yet it should not preclude further analysis of broader related issues.

Debt-for-nature is only one of many innovative uses of swaps. Debt-for-development (including child survival, education, private cooperative investment, etc.) should also be explored. The debt swap mechanism does not question overall legitimacy of the Third World debt. Yet for practical as well as moral reasons, its application should not obscure discussion of the broader topic of debt relief: as long as the current debt-induced instability exists all development programs pursued are vulnerable to failure.

These issues should not be minimized, but are beyond the scope of the present work.

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<sup>a</sup> Until recently, only commercial debt (that owed to private banks) was eligible for swap activity. There is no parallel secondary market for "official debt" (that owed to bilateral and multilateral institutions).

## EXECUTIVE SUMMARY

### Background: The Economic / Environmental Link

The events of the past decade have done serious damage to the nations of Latin America, both economically and ecologically. Increasing debt servicing requirements compounded by deteriorating terms of trade have led less developed countries (LDCs) to exploit their natural resources in order to generate desperately needed foreign exchange. The paucity of new loans and increasing fiscal austerity have left scant funds to combat this environmental degradation. Yet LDCs are becoming increasingly aware that these exhaustive practices must be modified if they want to achieve sustainable economic growth.

### An Innovative Idea: Debt-for-Nature Swaps

Though far from a solution to the overall crisis, debt swapping is an innovative process by which an indebted country can transform its burden into a benefit. Specifically, debt-for-nature utilizes the link between economics and ecology to unify previously isolated sectors by tapping their mutual interests. Though the specific implementation will vary with each transaction, a debt-for-nature swap is a process by which discounted Third World debt is purchased by environmental groups and exchanged for financial and political conservation commitments by the host government. The numerous actors involved in the transaction (including the private commercial

banks, the local authorities, the conservation groups, and, most importantly, the indigenous people) all derive some benefit from the exchange, but also complicate the process considerably.

#### Practical Issues: The Costs

The debt-for-nature process, a technically complex and politically delicate transaction, involves a substantial commitment of both time and resources. Financial and legal expertise is necessary in order to locate "appropriate" debt (i.e., suitable price, denomination, maturation) and formally structure the terms of the agreement (redemption price, exchange rates, program specifics). The technical intermediaries used have provided their services free of charge, but the NGOs still incur great costs in the complicated negotiating process.

The transaction costs involved in a debt-for-nature swap will vary considerably depending on country circumstances (e.g. institutionalized swap programs, prior relationships, administrative receptiveness, legal regulations, and economic conditions) but are high enough to preclude most non-governmental organizations (NGOs) from playing a prominent role in debt-for-nature activity. Yet increased activity will significantly reduce these initial transaction costs, as the swap process becomes more standardized and the local NGOs, more sophisticated.

## Experience to Date

### - Amounts -

Nine debt-for-nature swaps have been successfully negotiated by the only three NGOs prominent on the scene (The Nature Conservancy, World Wildlife Fund, and Conservation International). Over \$90 million of Latin America commercial debt has been retired, and an additional \$140 million has been earmarked for debt-for-nature swaps. Donor contributions of \$13.8 million have leveraged over \$50 million worth of conservation programs in four Latin American countries (Bolivia, Ecuador, Costa Rica, and the Dominican Republic).

### - Activities -

Most of the swap funds have supported the conservation and management of richly diverse and threatened ecosystems. The proceeds have also been used to fund a variety of other community-integrated activities, including park enhancement, community education, resource preservation and management, environmental training and research, and conservation-compatible development. Increased participation by the additional countries and NGOs that have expressed interest should further broaden the scope of programs funded via debt-for-nature swaps.

### - "Problem." -

The majority of agreements have been implemented with no major problems, in spite of the perceived disadvantages that accompany any debt swap. In fact, most of the obstacles

hindering expanded debt-for-nature activity have been ones of politics, rather than economics.

In addition to general critiques of the legitimacy of Third World debt, the swap process has been criticized as a violation of national sovereignty. Although a debt-for-nature swap does not involve any foreign ownership, many people in the LDCs perceive a threat to their national autonomy, as policy decisions are "imposed" upon them by the terms of the agreement. Yet all debt-for-nature programs have been initiated and implemented locally, and are only permissible with prior government approval. Nonetheless, the international NGOs are sensitive to the antagonism that has always plagued the relationships between the North and South; thus, they have made concerted efforts to structure programs around the needs of the local communities, thereby integrating development and conservation.

The other perceived threat moderating the enthusiasm of local participants is inflation. Theoretically, fiscally constrained local governments might, in times of desperation, finance the debt buyback by printing money. At a large enough scale, such a sudden infusion of local currency into the money supply could engender inflation.

Though at the current scale debt-for-nature swaps have insignificant monetary impacts, the financial authorities do not want take any chances. Thus, most of the agreements have been structured to stagger the disbursement of local currency used to

buy back the debt and fund the conservation projects.

Specifically, financing the swap by issuing bonds (versus one lumpsum remuneration) spreads out the payment over a number of years, cushioning the monetary effects. Moreover, all countries with institutionalized swap programs have established quotas limiting the amount of debt that can be converted annually.

As the scale of the swaps increase, so does the threat of inflation, but the safety mechanisms available can prevent detrimental macroeconomic effects. In general, structuring the agreements to conform to the absorptive capacity of the local economy should sterilize any monetary pressure.

#### Insurance

Because the "problems" to date have been primarily ones of perception, formal insurance mechanisms have not been incorporated into any of the agreements. All of the NGOs have enjoyed prior cooperative relationships with their local partners. Thus, at the current level of activity, they did not feel the level of risk warranted the expenditure. Yet as the financial commitments increase, so does the level of risk. Hence, NGOs might more seriously consider investing in institutionalized protection.

Currently, the NGOs rely on monitoring and auditing clauses within the agreements as "insurance." In terms of financial risk, using bonds that are dollar denominated, negotiable, and/or front-loaded in their disbursement will help protect the

value of the investment. Political risk insurance is more difficult to come by due to the nature of this exchange. A debt-for-nature swap involves no transfer of ownership equity, and most political risk insurers are reluctant to guarantee a government's commitment, commercial or otherwise. Thus, regardless of the scale of activity, the best form of protection for the NGO is local support.

### Benefits

Because many of the benefits are intangible, the value of debt-for-nature swaps is difficult to quantify. From the point of view of the NGO, dramatic multiples of conservation funds have been made available as a direct result of the swap mechanism. In addition to the leverage inherent in the exchange, debt-for-nature swaps attract additional contributions as a high-publicity, "trendy" investment.

The resources conserved in and of themselves have financial value. The educational and aesthetic value of preserving biological diversity is as immeasurable as the global meteorological benefits gained by maintaining ecological balance. In addition to preventing disasters (e.g. flooding and erosion) and future ecological expenditures (pollution abatement, refertilization), debt-for-nature programs can translate into money savings represented by the conserved resource rents (profits that can be derived from a natural resource stock). Furthermore, as commercial activities have

been integrated into conservation programs, income from managed resource extraction and ecotourism can be generated with minimal ecological damage. Generally, the redirection of resources from degrading activities to more sustainable uses has real financial benefits, as it extends the life of the income-generating resource base.

Yet the most significant result of the debt-for-nature activity, according to the NGOs, is the strengthening of the indigenous conservation movement. In addition to the increased public awareness and empowerment of the local NGOs, the coalitions created between previously independent sectors have become long-term, solidified commitments to the environment. By tapping mutual objectives, the debt-for-nature process harnesses these complementary forces and channels them into productive uses.

#### Role of A.I.D.

As natural resource management supports long-term sustainable growth, A.I.D. has a vested interest in providing technical and financial support to facilitate the debt-for-nature process. To the extent it becomes actively involved, A.I.D. must be sure not to limit its activities to the current scope of work. For any particular country, other needs might be more pressing and/or other financing mechanisms, more appropriate. Specifically, establishing a general environmental trust fund provides the greatest flexibility, as it can

incorporate a swapping mechanism yet still accept other means of funding when the former is not a viable option. Furthermore, such a financing mechanism establishes the infrastructure necessary to foster the growth of infant, grass-roots NGOs, which have thus far been out-classed by better endowed (both in terms of finances and political connections) local organizations. As each country will bring with it specific complications, the general prescription is to examine each case individually, making sure interests of the local people are integrated into any conservation program undertaken.

The debt-for-nature mechanism has grown out of a very specific set of circumstances. Therefore, there is a certain urgency to stepping up participation and taking advantage of this unique opportunity. However, efforts to facilitate the swap process should by no means detract focus from the broader topic of debt relief. These objectives are not mutually exclusive, as debt-for-nature represents an innovative and cooperative way of dealing with the overall crisis. A.I.D. should look to foster the coalitions already established through this process to insure their continued growth and development.

## INTRODUCTION

### A. The Current Situation

In a time of increasing awareness of health and the environment, conservation has gained substantial public attention. With threats of global warming and natural resource depletion impending, governments have finally begun to incorporate environmental issues into their policy agendas. It is now more widely accepted that "a healthy environment is as fundamental to our survival and prosperity as a healthy economy."<sup>1</sup> Yet as with any significant shift in attitude, the connection between economics and the environment has only been recognized in the midst of a crisis.

Though the crisis situation of the previous decade has been somewhat abated, the burden of debt continues to plague the nations of the Western Hemisphere. Of the over one trillion dollar total Third World debt, Latin America owes about \$400 billion.<sup>2</sup> Its debt service payments exceed its income from new loans by approximately \$25 billion each year.<sup>3</sup> This outflow of hard currency has been compounded by Latin America's continued economic stagnation, as trade with the United States has decreased by almost 100 per cent in the last decade.<sup>4</sup>

Until recently, the financial crisis facing these less developed countries (LDCs) has obscured the equally devastating environmental one, but the two are not mutually exclusive.

## B. The Debt-Environment Link

On the most basic level, the debt burden contributes to the current environmental crisis by diverting attention, and more importantly, funding from conservation efforts. In a time of fiscal austerity (usually mandated by structural adjustment policies implemented to deal with the debt crisis) minimal funds have been dedicated to environmental matters.<sup>5</sup> Moreover, debt payments absorb finances that could otherwise be used for environmental purposes, particularly since much pollution abatement equipment must be imported.

Overall, debt-service requirements coupled with deteriorating terms of trade have left many Latin American nations hungry for foreign exchange. These countries thus regard their raw materials as valuable export commodities. "Developing countries, where the debt burden means a net flow of capital to the creditor countries, are not able to take a long-term view of their natural resources."<sup>6</sup>

As planning horizons are shortened, exploitation of the natural resource base, a quick means to acquire desperately needed hard currency, has intensified. Especially with the adoption of export-oriented growth strategies, timber extraction has well exceeded its replacement through replanting and natural regeneration combined. Short-term foreign exchange gains have increased, as well as the rate of deforestation and soil erosion. By the end of the century these trends of land degradation could decrease the productivity of rainfed croplands by as much as 30 percent.<sup>7</sup> Migration to watersheds and

production on marginal lands due to rapid population growth and increased poverty further aggravate this degradation.

This activity cannot be maintained indefinitely. Continual exploitation exhausts the "assimilative and regenerative capacity" of the country's valuable natural resource base.<sup>8</sup> Consequently, in addition to severely disrupting the ecological balance, such misuse undermines future economic growth.

Yet just as the source of both problems, financial and environmental are intertwined, so is the solution.

#### C. Taking Advantage of the Link: Debt-For-Nature Swaps

An innovative mechanism has been generated that is both a result of and a response to the current crisis. The deterioration both of the economy (represented by the discounted value of the debt) and the natural resource base has made possible the development of debt-for-nature swaps. Basically, a debt-for-nature swap involves an exchange of LDC debt for environmental commitments and projects. Though hardly a panacea, debt-for-nature swaps are a vehicle by which developing nations can refocus both energy and finances to sustainable use of their resource base. By conserving their natural endowments, LDCs enhance their potential for future development, thereby using the link between economics and the environment to their advantage.

## II. DEBT-FOR-NATURE: THE PROCEDURE

### A. Mechanics (see Illustration 1):

In a debt-for-nature swap, a non-governmental organization (NGO) purchases a LDC's commercial debt on the secondary market at a discount.<sup>9</sup> The NGO then transfers (donates) the debt note to a partner conservation organization (local NGO) in the debtor country, who then "redeems" it at the central bank for local currency.<sup>10</sup> The money generated is some multiple of the original investment (the redemption price is always greater than the purchasing price, sometimes as much as the full face value of the original debt note) - hence, the attraction for donors. The leveraged local currency funds finance conservation projects run by the local NGO. (The debt can also be swapped for non-financial commitments by the host government, such as legislative measures to protect certain sensitive areas.)

### B. Actors

Before any purchase of debt comes the negotiations among all the interested parties.

Locally, the actors include:

1) the host government -- who must approve the entire procedure, as well as the terms of the swap: the exchange rate at which the debt will be converted into local currency, the form (cash or bonds) and conditions of payment (disbursement schedule, interest rate, maturity date, etc.), and the specific conservation activities (park management, site protection,

policy reform, etc.). Support of the local administration is an absolute prerequisite.

2) the financial authorities (central bank/finance ministries) -- which issue bonds and disburse the local currency generated by the swap.

3) the local NGO -- which is the recipient of the funds generated. As the initiator of the entire process and implementor of the agreed-upon projects, it plays the greatest role in assuring the success of the swap.

4) the local people -- who are not directly involved in the negotiations but whose interests must not be overlooked in the complex process. The projects should be tailored to the needs of the surrounding communities, particularly in light of sensitivity of sovereignty issues.

Among the international interests involved are

1) the developed country's government -- which is not directly involved as a signatory to the agreement, but rather facilitates or hinders the swap process through its policies. Influential in determining financial aid and tax regulations, it can establish incentives and create an environment conducive to swapping.

2) the commercial banks -- which hold and trade LDC debt and thus determine its secondary market price. At times, they serve as financial intermediaries in locating the debt.

3) the international NGO -- which facilitates the swap procedure through its support, both technical and financial, of its local counterpart. Though they are heavily involved in getting the

projects off the ground, their ultimate goal is to increase the credibility and independence of the local actors.

### C. Objectives and Perceived Benefits

To varying degrees, all the interested parties derive some benefit from the exchange.

#### The original parties

The commercial banks eliminate from their loan portfolio unattractive LDC debt, while simultaneously generating some good publicity. On the debtor side, the transfer of external debt to domestic obligations somewhat eases the host government's financial burden, due both to the extended repayment period (government bonds issued in a swap have longer maturity terms than the original note) and increased accessibility of funds (typical scarcity of foreign exchange versus the more easily raised local currency, in which the domestic securities are payable).<sup>11</sup> Moreover, to the extent the government upholds its financial commitment, faith in the economy can be restored, potentially generating new investment interest. The most indisputable benefit to the local economy, however, is the redirection of funds from exhaustive to sustainable resource use. In this respect, debt-for-nature programs can be incorporated into development aid programs, and thus support the interests of the developed country's government as well.

#### The new actors

Yet the greatest benefactors of debt-for-nature swaps are the NGOs. Local conservation efforts are usually frustrated by

the redirection of potential money to the apparently more pressing short-term needs of the economy. Both through the substantial new source of funds and the technical support provided by their international partners, local NGOs are empowered by debt-for-nature swaps. For the international NGOs increasing the credibility of the local organizations is a continual objective, as it strengthens the indigenous conservation movement in general.<sup>12</sup> In addition, to the extent that the high publicity and trendiness currently associated with debt-for-nature swaps attracts new donors, the international NGO can step up its conservation efforts abroad.

Related to this issue of increased funding is the leverage available to the NGO through the debt-swap mechanism. For example, if the NGO acquires a LDC's debt (on the secondary market) at one-fifth its original worth and the government redeems it for three-fifths its face value (capturing two-fifths of the discount for itself), the environmental organization has multiplied its donation by three. (That is, three times as much local currency has been made available for conservation efforts as was originally invested.) Yet lest the extent of financial leverage offered by swap-funding be exaggerated, no investment is cost-free. Utilizing the swap mechanism, rather than making a direct contribution, introduces substantial additional transaction costs.

#### D. Transaction Costs

A debt-for-nature swap is a complex transaction, the costs

of which can eat away at some of the additional leverage gained by the debt discount. Many of the technical services, both financial and legal, have been offered free of charge to the NGOs, allowing the debt-for-nature mechanism to be economically viable for some of the larger organizations.<sup>13</sup> Yet the sophistication of the mechanism and the wide variety of actors involved contribute to the high costs that preclude some smaller NGOs from participating in the activity.

#### Preliminary negotiations

The wide array of actors involved in a debt-for-nature swap invariably bring with it a variety of interests. Thus, even before any debt is sourced, the swap requires extensive negotiations. Each actor involved has its own agenda and although many of the interests coincide, conflicts inevitably arise. The LDC government is looking to obtain the lowest repurchasing terms -- and the NGOs, the greatest leverage -- possible. The parties determine not only the redemption price, but the rate of exchange at which the debt will be converted into local currency. Structuring the repayment conditions becomes difficult when the financial authorities' fears of inflation conflict with the income needs of the local NGO.<sup>14</sup>

Once the financial terms are settled upon, project focus and resource commitment must be determined. Ministries of finance, agriculture, and natural resources all have a vested interest in the proceeds, and consequently, disputes over the design and implementation of programs are common. Legal services are

needed from beginning to end to assist in the negotiations, as well as draft any requisite documentation. Once the terms of swap have been agreed upon, the debt must be located.

Financial expertise: locating the debt

Sourcing and packaging debt is a technical and complicated endeavor. The appropriate debt must be found with terms (denomination, price, schedule of maturation, etc.) that conform to the specific needs of the actors and projects.

Locating notes with terms acceptable to all the parties involved is difficult. The majority of LDC debt is held in syndicate by a consortium of banks, and thus, "it is often necessary to get the approval of several banks to execute a single exchange."<sup>15</sup> Moreover, the size of these portfolios is usually far in excess of what NGOs can afford to spend, but the smaller parcels of debt needed for a swap are held by lesser-known regional banks and are thinly traded. The manner in which banks determine the risk level of a country (and its corresponding discount) is somewhat ad hoc, and consequently debt prices are not always consistent.<sup>16</sup> Because of the scarcity, inconsistency, and volatility of some LDC markets, NGOs usually rely on financial intermediaries to "shop around" and prepare a suitable debt package.<sup>17</sup>

In debt-for-equity swaps, there are costs associated with these services. Money center banks (the leaders of the consortia) often charge brokerage fees for putting loan package together, usually some percentage of the face value of the

transaction. Furthermore, some banks will make a turn on the trade, buying the debt at one price and selling it for a profit. Yet increased swapping has made sourcing LDC debt significantly less time-consuming, as the secondary market has become more institutionalized.<sup>18</sup> Quotations for discount rates are now published, and in some case locating the debt involves no more than a few phone calls.<sup>19</sup> Thus, it is increasingly likely that financial intermediaries will continue to provide their services for debt-for-nature transactions pro bono.

#### The NGOs' out-of-pocket

Though all financial and legal services are free of charge, the NGO incurs substantial costs associated with the time and resources devoted in the negotiating process. These "shadow" costs include staff time, travel expenses, and communication costs (telephone calls, facsimiles, xeroxes, etc). Depending on the number of parties involved, prior experience, and the relationships between the NGOs and the administration, these costs will typically average from \$15,000 to \$75,000 per swap.<sup>20</sup> These costs will decrease with repeated swaps for a given country. In particular, follow up transactions dramatically reduce the more technical aspects of the swap.<sup>21</sup> Often the governments will simply extend the terms of previous agreements when establishing new swap quotas, as was the case in Ecuador. Yet changes in economic as well as political circumstance within a particular country will require repeated

extensive negotiations and the corresponding overhead. First time transactions, without exception, will be on the higher end of this scale.<sup>22</sup> Some negotiations have extended many months, only to fall through in the end.<sup>23</sup>

General observations and suggestions

1) Each deal has its own economics. Legal regulations, economic conditions, and administrative receptiveness vary dramatically between countries. Consequently, transaction costs are really case specific, the only relevant variable being prior experience. Because of this uniqueness, in addition to the complexity of the process, each agreement must be independently structured to conform to the specific environment.

2) There is little relationship between the costs of negotiating a swap and the size of the transaction. Similar amounts of time and effort must be devoted to negotiate a \$1 million deal and a \$10 million one. Therefore, larger swaps are usually more cost effective. However, the larger the swap, the more pressure on the local economy's budget. Hence, extra care should be taken to counter increasing inflationary and non-payment risks that can accompany these economies of scale.<sup>24</sup>

3) Government enthusiasm simplifies the process considerably. Although always initiated locally, the warmth with which these projects are received by the ministries will vary. Want of

administrative support can slow the process considerably. Of course, protracted negotiations translate into higher costs.

4) Repeated swaps with a particular country substantially reduce the marginal cost of transacting swaps, as well as the risk involved. In addition to building familiarity and indigenous support, multiple transactions will institutionalize (either formally through a debt swap program or informally through precedent) the debt-for-nature process. By thus reducing the time and cost necessary to complete the transaction, smaller NGOs can become involved.<sup>25</sup>

5) Institutionalized swap programs dramatically cut the transaction costs. Formalizing the swap process regularizes the procedure, substantially decreasing the bureaucratic costs, negotiating time, and the potential for disputes. More importantly, outlining the criteria allows the country to regulate the activity in accordance with the economy's capabilities.<sup>26</sup> Interested countries should be encouraged to formalize the swap procedure.<sup>27</sup>

6) Especially in countries where no program exists, devoting staff to handle swap transactions facilitates the process. Because they anticipate increased future participation in debt-for-nature swaps (and can afford to do so), The Nature Conservancy, World Wildlife Fund, and Conservation International have invested their resources in bringing technical assistance

in-house. Increased familiarity with the mechanism will make the negotiating process simpler and the potential pitfalls easier to detect. For smaller NGOs who are more financially constrained, such staff expansions are not appropriate.

### III. EXPERIENCE IN LATIN AMERICA

#### A. Actors

The majority of the NGO community are enthusiastic supporters of the debt-for-nature mechanism and speak optimistically about future expansion of its application. Though the support is widespread, the prominent players in debt-for-nature activity are World Wildlife Fund, The Nature Conservancy, and Conservation International. The lack of adequate exposure and resources have precluded smaller NGOs from participating on an equivalent scale, especially considering the high costs involved in transacting a debt-for-nature swap.

Yet many have been involved peripherally, providing funds and technical assistance for the existing projects.<sup>28</sup> Furthermore, some of these organizations (specifically the Smithsonian Institute and the National Wildlife Federation) have expressed interest in expanding their existing role. Scientific and research organizations, as well as academic institutions and universities, have also participated through their contributions and active promotion of debt-for-nature swaps.<sup>29</sup> Many such groups have consolidated under the umbrella organization the Debt-for-Development Coalition, which, along with its affiliate,

Debt-for-Development Foundation, provides technical assistance and information to help facilitate swaps.

Fundacion Natura (Ecuador), Fundacion de Parques Nacionales (Costa Rica) and the Puerto Rican Conservation Trust have been the most visible in local conservation efforts. They have enjoyed long-standing relationships with the international NGOs, a partnership which has undoubtedly contributed to the success of the swap activity to date. Nonetheless, it is important that the lesser-known developing NGOs not be overlooked. Some critics have suggested that the conservation efforts have been monopolized by a few local NGOs at the expense of equally effective but less well-connected grass-roots organizations.<sup>30</sup>

#### B. Amounts

Over \$90 million dollars worth of Latin American debt has been retired via debt-for-nature swaps (see Table 1). Once the remainder of the March quotas are filled (Dominican Republic and Argentina), this total will exceed \$230 million, approximately one-tenth of one percent of the outstanding commercial debt in Latin America (currently around \$260 billion). At a cost of \$13.8 million of donations, well over \$50 million worth of conservation funds have been generated. Costa Rica has done the greatest number of transactions (5), nominally worth over \$79 million. (With its newly established quota, the Dominican Republic has just surpassed Costa Rica for the largest amount of debt ear-marked for debt-for-nature swaps). Argentina has recently established a \$60 million swap quota but has yet to

negotiate an agreement. Bolivia was the site of the first and smallest swap (face value of \$650,000), followed by Ecuador, which has exchanged \$10 million of its debt.

### C. Activities

The focus of the existing projects has been on conservation and management of richly diverse and endangered areas. Land has been surveyed and zoned for the establishment of national parks and wildlife reserves. In addition, the funds have been used to create educational centers, both to increase public awareness and guide biodiversity research. Finally, through land management programs, sustainable uses of the existing natural resources have been supported.

### D. Agreements<sup>31</sup>

BOLIVIA -- 1 swap for \$0.65 million or 3.4% of total \$19.1 million commercial debt outstanding

1) DATE: August, 1987

FACE: \$650,000

COST: \$100,000 (debt purchased at 15 cents on the dollar)

REDEMPTION: \$250,000 (peso-operating fund)

- \$100,000: Bolivian government

- \$150,000: U.S. Agency for International  
Development

ACTIVITIES: The primary component of this agreement is non-financial. In exchange for the debt, the Bolivian

government gave the maximum legal protection to the Beni Biosphere Reserve, and set aside an additional 3.7 million acres surrounding the reserve for conservation. This buffer zone has been used to support logging methods that promote sustainable use of the forests. (The Beni Reserve contains some of the world's largest forest stocks of mahogany, jacaranda, and tropical cedar trees.)<sup>32</sup> Through tree marking and revised legislative incentives, swap-supported programs have focused on management as well as preservation of the natural resources. Further integrating conservation with development, the Inter-institutional Technical Commission that manages the Beni Reserve has engaged in a socio-economic study of the region. In addition to supporting endangered species, the Beni Reserve is home to the nomadic Chimane Indians. The intention of the study is to help resolve territorial disputes between the indigenous tribes and the timber companies, which were intensified by the swap agreement.<sup>33</sup>

POINTS OF INTEREST: The first debt-for-nature swap agreement, it is further distinguished by its incorporation of non-financial components (administrative decree and land use reform) and the simplicity of its financing methods (the account in local currency; no bond program is involved). The matching grant was contributed from local currency funds derived from the U.S. Government's PL 480 program, the first and only time this resource pool was used to support a debt-for-nature transaction.

ECUADOR -- 2 swaps for \$10 million or 0.2% of total \$5,722 million commercial debt outstanding

1) DATE: December, 1987

FACE: \$1,000,000

COST: \$354,000 (debt purchased at 35 cents on the dollar)

REDEMPTION: \$1,000,000 (bonds at 100% of face value - but converted at the official exchange rate <sup>34</sup>; nine-year maturity and floating rate with an average yield of 30-35%)<sup>35</sup>

ACTIVITIES: The interest on the bonds funds ongoing maintenance and conservation of Ecuador's national parks, while the principal is retained as a permanent endowment for Fundacion Natura.<sup>36</sup> The priority target areas are national parks in the Andean highlands, Amazon rainforests, Pacific coastal savannah and mangrove forests, and in particular, the Galapagos Islands.<sup>37</sup> Eight reserves covering over two million hectares of land have been the specific sites of focus, with the Pasochoa Nature Reserve being identified as an "area of special importance."<sup>38</sup>

2) DATE: April, 1989

FACE: \$9,000,000

COST: \$1,068,750 (debt purchased at 11 7/8 cents on the dollar)

REDEMPTION: \$9,000,000 (bonds at 100% of face value - but converted at the official exchange rate; eight-year maturity and floating rate with an average annual yield of 30-35%)

ACTIVITIES: The majority of funds have supported the efforts initiated by the prior Ecuadorian debt swap, with additional attention given to training and staffing of park professionals. The Machialilla National Park has been added to the list of threatened areas, in addition to the acquisition and management of the Maquipucuna Reserve in western Ecuador. The Missouri Botanical Garden, one of the purchasers of the debt, has begun a botanical inventory and other research work in conjunction with local Ecuadorian institutions. One of the more notable achievements funded by the swap proceeds is the establishment of a Conservation Data Center aimed at providing "a comprehensive source of biological and natural resource information at the national level in order to identify threatened species and habitats successfully, and to provide for their protection and sustainable management."<sup>39</sup> Particular efforts have been directed to the organization and implementation of in-country workshops and related field activities aimed at improving the local capacity to manage the country's natural resources.<sup>40</sup>

COSTA RICA -- 5 swaps for \$79.3 million or 5.1% of total \$1,550 million commercial debt outstanding.

1) DATE: February, 1988

FACE VALUE: \$5,400,000

COST: \$918,000 (debt purchased at 17 cents on the dollar)

REDEMPTION: \$4,050,000 (bonds at 75% of face value, with maturity of up to six years, carrying an average of 25% interest)

ACTIVITIES: The funds of this swap were targeted to expanding, protecting, and managing high priority parks and reserves. Of particular focus was the Corcovado National Park, where miners and other developers were putting pressure on the freshwater swamps, mangroves, lowland forests and tropical rain forests found there. The Guanacaste National Park, home of one of the last significant remaining patches of tropical dry forest in Central America, was expanded through a land purchase and enhanced by a new park management program (environmental training and education). Other parks -- Tortuguero, Braulio Carrillo, and La Amistad -- as well as the private reservations of Monteverde (cloud forests) and the Centro Ecologico del Pacifico have also received resources generated by this exchange. The Gandoca Land Management Project, funded by the swap, supports sustainable development practices (including land titling, organization of tree and crop nurseries, and agricultural extension work) and ecodevelopment projects such as aquaculture and nature tourism.<sup>41</sup>

POINTS OF INTEREST: This is the only instance in debt-for-nature activity to date in which a bank has offered its debt note as a donation (versus a sale on the secondary market).<sup>42</sup> Fleet/Norstar Financial Group Inc. of Rhode Island donated \$250,000 of its Costa Rican debt to The Nature Conservancy to be made available to the Parque Nacional Braulio Carrillo.<sup>43</sup>

2) DATE: January, 1989

FACE: \$5,600,000

COST: \$784,000 (debt purchased at 14 cents on the dollar)

REDEMPTION: \$1,680,000 (bonds at 30% of face value, with a five-year maturation period, paying an average of 25% interest)<sup>44</sup>

ACTIVITIES: Much of the activity supported by this swap was a continuation of projects funded by the previous one, including the restoration and preservation of dry tropical forest in the Guanacaste National Park, rainforest in Braulio Carillo National Park, and cloud forest in the Monteverde Reserve. New areas supported by the agreement include Lomas Barbudal Biological Reserve (dry tropical rainforest) and Barra Honda National Park (rare limestone caves with several unique species of bats). Operating endowments established with swap funds for the National Parks and Neotropica Foundations will cover costs for over a five-year period. Swap money has also supported a marine turtle protection project which provides guard services for nesting beaches. In terms of promoting research in the field, this debt-for-nature swap will finance the five-year operating budget of the Conservation Data Center (recently assumed under the National Biodiversity Institute -- INBio), a computer-driven data base which supplies biological and natural resource information to conservation workers.

POINTS OF INTEREST: The American Express Bank provided not only its services (free of charge) as a financial intermediary for this swap but the LDC debt as well. It sold its Costa Rican

debt to The Nature Conservancy, which has used this bank for all its debt-for-nature swaps. Most large banks are unwilling to sell or donate their debt in fear of potentially "contaminating" the rest of their LDC portfolio.<sup>45</sup>

3) DATE: January, 1989

FACE: \$33,000,000

COST: \$5,000,000 (debt purchased by the Government of the Netherlands at 15 cents on the dollar)

REDEMPTION: \$9,900,000 (bonds at 30% of face value, four-year maturation period, paying an average of 15% interest)

ACTIVITIES: Seventy-five percent of the revenue generated from the swap was dedicated to re-foresting 24,000 acres of land.<sup>46</sup> All of the funds are administered by a joint commission of Costa Rican ministries and the Dutch Ambassador to Costa Rica and are allocated to local NGOs' for their specific projects. In addition to re-forestation, sustainable development via social interest groups has been supported by this swap. Thousands of small farmers have benefited by monies granted to cooperative and peasant organizations. Nearly 4,000 hectares of land were planted in 1989 alone.<sup>47</sup>

POINTS OF INTEREST: In addition to the substantially increased scale, this swap was the first government-to-government exchange and did not directly involve any international NGOs.<sup>69</sup>

4) DATE: April, 1989

FACE: \$24,500,000

COST: \$3,500,000 (debt purchased by the Kingdom of Sweden at 14 cents on the dollar)

REDEMPTION: \$17,100,000 (bonds at 70% of face value, four-year maturity and 15% average rate of interest)

ACTIVITIES: This swap was dedicated to financing the completion and endowment of the Guanacaste National Park project.<sup>49</sup> The funds were raised by Swedish NGOs and student groups led by Daniel Janzen, a University of Pennsylvania biologist, who has been the force guiding this major conservation project in northern Costa Rica since 1985.<sup>50</sup> The re-generation of 200,000 acres of dry tropical forest has been the focus of the efforts. In addition, the endowment finances research and environmental education, staff training, and management of the park, including efforts to catalog the park's biodiversity and control forest fires during the dry season.

POINTS OF INTEREST: \$3.5 million used to purchase the debt was part of Sweden's first bilateral aid contribution to Costa Rica.

5) DATE: March, 1990

FACE: \$10,754,000

- \$5,000,000 (La Amistad)

- \$5,754,000 (INBio)

COST: \$1,953,000 (18 cents on the dollar)

- \$908,000 (La Amistad)

- \$1,045,000 (INBio)

REDEMPTION: \$9,600,000

- \$5,000,000 (bonds at 100% of face value,  
20-year maturity, 8% interest)

- \$4,600,000 (bonds at 80% of face value,  
20-year maturity, 3% interest)<sup>51</sup>

ACTIVITIES: The proceeds of the first component of the swap will go to La Amistad Regional Conservation Unit (URC Amistad). A little less than half (44%) of the bonds generated will be assigned as a management endowment for URC Amistad. (The detailed use of the funds generated will be determined by some combination of URC Amistad administration and Fundacion de Parques Nacionales.) The remaining funds will go to protection and research of properties within URC Amistad. The Amistad Reserve offers protection to two indian groups ("who hunt and farm in sustainable ways") as well as a number of the region's watersheds.<sup>52</sup> URC has used swap funds previously for R&D projects related to environmental education, ecotourism, and the sustainable use of natural resources.

The beneficiary of the proceeds of the other swap component is the Instituto Nacional de Biodiversidad (INBio). Part of the income earned from the interest paid on the bonds will fund a parataxonomists course. The students, once trained, will staff the Biodiversity Sections of Costa Rica's eight Regional Conservation Units and establish additional biodiversity survey

offices. Included in the topics of training are zoning, species and habitat management, and specimen extraction for economic as well as scientific purposes.

POINTS OF INTEREST: The dual-component nature of the swap, merged into one transaction due to the distinct sizes of the debt packages obtained. Individually, the two parcels of debt (\$9.396 million and \$1.358 million) did not match the funding needs of either of the single projects, and thus, they were combined. Looking at the terms of the agreement, it is clear that this transaction is not simply a multi-purpose fund. Two distinct programs were united to conform to the existing conditions of the secondary market (namely, the availability of appropriate debt), exemplifying the flexibility of the swap mechanism.

DOMINICAN REPUBLIC -- 1 swap for \$0.58 million or 0.1% of total \$843 million commercial debt outstanding

1) DATE: March, 1990

FACE: \$582,000

COST: \$116,400 (debt purchased at 20 cents on the dollar)

REDEMPTION: \$582,000 (local currency account - trust fund)

ACTIVITIES: Isla Cabritos National Park, containing the world's largest population of American crocodiles, will receive 16 percent of the swap funds (\$94,000) for the salaries of 8 new park guards, a boat, training and community outreach. Another \$99,000 will go to support a reforestation effort and management of the Arroyo Parra watershed. An equal amount will go to La

Montana Diego de Ocampo to train the community in renewable resource practices, construct tree planting nurseries, and create and manage a protected zone. The remainder of the money (\$290,000) will establish the Ebano Verde Scientific Reserve, covering the costs of management and building the park infrastructure.

POINTS OF INTEREST: The swap funds that financed these projects were part of the largest debt-for-nature swap program ever undertaken in a single country. The Central Bank and the Fondo Pro Naturaleza (PRONATURA - a coalition of 11 of the Dominican Republic's leading conservation and development groups) have agreed to convert \$80 million or 9.4% of its foreign commercial debt (outstanding \$843 million) into local currency for conservation efforts for the next four years. (The pesos generated by the swap are held by PRONATURA in a special account at the Central Bank, which serves as a national conservation trust fund.)

#### ON THE HORIZON

##### 1) PARAGUAY

DATE: December, 1992 (goal)

FACE: \$9,170,000

COST: \$2,750,000 (estimated)

- \$2,225,000 (The Nature Conservancy)

- \$500,000 (US AID matching program grant requested)

REDEMPTION: \$5,000,000

- \$4,000,000 (10-year bond, interest at LIBOR)

- \$1,000,000 (25-year bond, interest at LIBOR)

ACTIVITIES: The Mbaracayu, currently owned by the International Finance Corporation (IFC), is a large tract of land (approximately 143,000 acres) covered with virgin sub-tropical forest. The \$4 million bond would be used to buy back this property (in addition to a smaller 25,000 hectare parcel of land) and establish it as a nature reserve. The remaining \$1 million dollar bond would be used to endow a trust fund on behalf of Fundacion Moises Bertoni (a local NGO) for the sustained protection and management of the reserve. The fund will also support a biological survey for zoning the reserve, as well as a land tenure study and appraisal of the surrounding area. Finally, a socio-economic survey of the Ache community currently under way will be completed, in order to better integrate wildlife management and protection of the reserve with the lifestyle of these native inhabitants.

POINTS OF INTEREST: The unusual circumstances of the nation's credit history allows for the first participation by a multilateral institution in a debt-for-nature swap. The IFC acquired title to the Mbaracayu and the smaller 25,000 hectare tract as a result of a default on a loan. It has thus far held out in selling the property to commercial buyers who could log the commercial timber to recover the investment (or engage in some other activity directly in conflict with the Bank's policy to assist in the preservation - not elimination - of wildlands).

2) PANAMA: Pending the signature of President Bush, up to \$15 million worth of A.I.D. funds will be used to purchase up to \$100 million in Panamanian commercial debt. The Nature Conservancy has agreed to match every three dollars of this public money (part of an overall \$420 million economic aid package to Panama) with a dollar of its own (in effect, TNC would augment a \$10 million A.I.D. grant with a contribution of \$5 million). The swapped funds will endow a Conservation Trust Fund to protect the Panama Canal watershed and several million acres of tropical forests.<sup>53</sup>

3) JAMAICA: The Central Bank is establishing an endowment fund to finance recurrent costs associated with the management of protected areas (National Parks Trust Fund). A swap proposal, whereby by The Nature Conservancy would match USAID/Jamaica funds to capitalize the trust and carry out the details of the arrangement, is currently being negotiated. No formal agreements have been reached, but an initial effort of U.S. \$200,000 has been suggested for the purchase of commercial debt.

4) ARGENTINA: The central bank has agreed to exchange \$60 million worth of foreign debt for local currency to support ecological conservation. Two \$30 million quotas have been established on behalf of Fundacion Neuquen and Fundacion Parodi, respectively. No debt-for-nature swaps have been transacted yet, as Argentina has been preoccupied with its privatization efforts. (Juliana Abella, USAID/Argentina mission officer)

5) URUGUAY: Hopes exist of establishing a \$50 million debt conversion to fund an Oceanographic Institute. Its focus would be research and tracking changes in the environment (both oceanographic and atmospheric). Because of the nation's diligence in its debt servicing (in addition to its current trade negotiations with the United States), its debt is priced at almost 50 cents on the dollar. Thus, Uruguay is not a very favorable candidate for debt swaps.

6) BRAZIL: To date, all the debt-for-nature swap proposals brought before the Central Bank have fallen through. Hyperinflation and the politically sensitive sovereignty issues have prevented the successful completion of a transaction. The new young president is supportive of a current debt-for-nature proposal, but it faces resistance by some of the older ministers. The Central Bank in particular is preoccupied with managing the domestic economy and internal reform.

7) PERU: Like Costa Rica, Peru has an institutionalized swap program which makes the possibility of debt-for-nature attractive. Furthermore, with its debt currently trading at under five cents on the dollar, there is incredible leverage potential. However, the significantly discounted debt price explains why previous swap plans with the Nature Conservancy have been all but halted: its current economic crisis (in addition to the political instability caused by the rebel movement) has precluded the otherwise enthusiastic actors from serious negotiations at the present time.

#### IV. RELEVANT ISSUES

##### A. Obstacles

###### Problems: Politics and Perception

Aside from a few minor disagreements, there have been few problems with the actual implementation of the conservation projects. The greatest difficulties encountered, in fact, have not been economic but political. First, debt swaps are theoretically problematic. Because the debt was contracted without consent of civil society and (in many countries) squandered over mismanagement and corruption, its legitimacy is still challenged. Furthermore, many look upon debt-for-nature unfavorably because they claim it diverts attention from the overall debt crisis. Finally, debt-for-nature swaps are criticized publicly for their perceived inflationary strain and investment subsidization.<sup>54</sup>

To the extent that these political difficulties are simply the result of lack of information, local advocates try to dispel many of the misperceptions:

- 1) As a condition of the swap, the foreign NGO can not accept title or interest in any local equity.
- 2) Furthermore, at this stage of activity, particularly in light of the precautions that have been structured into the agreements, inflation is mostly a theoretical problem.
- 3) Finally, a debt-for-nature swap, many will argue, cannot "legitimize" the debt crisis or "impose" a foreign agenda on the

LDC because "in the last analysis, it is the debtor's decision whether the transaction is appropriate."<sup>55</sup>

Yet the publicity and rhetoric will not completely overcome the distrust that underlies the national autonomy issues. Local countries perceive that their national sovereignty, whether in terms of land ownership and or political decisions, is being compromised. If indigenous interests are overlooked in the negotiating process and the conservation programs do not integrate the needs of the local community, the results could be disastrous .

The first swap done in Bolivia is a case in point.

Prior to the swap, disputes existed between Bolivian timber companies and indigenous tribes over territorial rights in the buffer zone surrounding the Beni Biosphere Reserve. This controversy was exacerbated by the swaps, as the debt-for-nature agreement seemed to legitimize the logging operations. The Indians were not involved in the negotiating of the swap or consulted as to its possible ramifications. They recently staged a march to protest the debt-for-nature swap, insisting it "has made it impossible for them to gain title to their lands, and is leading to the destruction of their home."<sup>56</sup>

Conservation International acknowledged that they had neglected to meet with the Indians living in the Chimanes forest before implementing the agreement.<sup>57</sup> This oversight can be attributed to both the lack of experience and haste to be "first", as before Bolivia debt-for-nature was no more than a brain child of Thomas Lovejoy. In a desire to integrate the

indigenous needs into their overall conservation efforts, CI has been involved in the subsequent internal negotiations.<sup>58</sup> Specifically, Conservation International has begun to actively examine traditional resource use and ways in which it can be integrated into environmental management.

The Bolivian example emphasizes the importance of generating the support of all sectors of the country. The conservation organizations have relied on strong partner organizations and have solicited the backing of the local administration to insure the successful implementation of the projects. Yet lack of indigenous support will assuredly nullify the benefits these swaps can bring.

Success: Publicity and Participation

No project can survive in a hostile environment. The additional publicity that has come with increased swap activity has improved public understanding and trust, adding more legitimacy to debt-for-nature swaps. As an additional precautionary measure (economically and politically), subsequent swap projects have focussed on augmenting existing conservation programs, rather than procuring new territory. Yet in order to assure continued success, local interests must be included in the planning process. Only by addressing their needs will the full support of the indigenous people be galvanized.

## B. Inflation

At the current scale, swap activity has negligible inflationary implications. Yet it is possible that a number of simultaneous debt swaps (or a substantial increase in the scale of transaction) could lead a deficit-ridden government to inject new money into the economy to fund repurchases. Such a major infusion of local currency into an already inflation-sensitive economy could have devastating results. The case of Brazil is the example most often cited by critics who insist swaps engender inflation. Over \$1.8 billion worth of swaps were converted into local currency in 1988 alone, increasing the country's entire monetary base by approximately fifty percent.<sup>59</sup> Inflation soared to a record 934% in 1988 and as a result, Brazil suspended its swap program that December.

Clearly if a country does not use discretion in its conversion procedure, the swaps can have very real inflationary effects. Yet there are measures that can be taken to minimize these pressures. One possible solution is to follow the Bolivian example of demonetizing the debt by incorporating non-financial components (policy reform, legislative decrees, etc.) into the exchange. Such commitments negate the inflationary effects but are, by their nature, more difficult to enforce. Moreover, for the commercial aspects of the exchange, carefully structured financial mechanisms can sterilize any potential monetary pressure.

Financing the debt buyback by issuing bonds (versus one lump sum remuneration) cushions the monetary impact. Bonds stagger

the disbursement of the local currency, thereby easing the immediate pressure on the money supply. While the periodic interest payments provide a source of revenue for the local NGO, the principal, upon the bonds' maturity, can be used to establish an endowment for future conservation efforts. All of the bonds issued to date have had longer maturity periods than the retired debt notes, to further diminish the liquidity impact. Though of yet they have not been employed, perpetual bonds might be considered as the size of the transactions grows.<sup>60</sup> As a final precaution all the bonds issued thus far have been non-negotiable.<sup>61</sup>

When structuring the terms of these financing instruments, the debtor country must consider the tradeoff between minimizing inflationary threats and reducing the overall fiscal deficit problem. In order to "soak up" the money supply increase, the domestic bonds used to finance the buyback will have longer terms of maturity than the external commercial debt for which they are swapped. However, the domestic interest rates which these bonds must carry are "far higher than the interest rates that are locked into the existing bank debt."<sup>62</sup> (That real internal interest rates are usually higher than international rates is a reflection of the government's current insolvency.)

Increased interest payments on the newly issued bonds might offset the extended repayment period offered by these domestic instruments and could, therefore, increase the overall debt-servicing burden of the local government. Yet it must be noted that the interest payments on these bonds are usually made

in local currency, which is far easier for the government to raise than the scarce hard currency needed to service the old foreign commercial debt. In fact, some claim that debt-for-nature swaps can have a "deflationary impact, since the exchange of external for internal indebtedness reduces the inflationary pressures of a shadow hard currency economy."<sup>63</sup>

Focussed on rebuilding their shattered economies, the central banks have understandably insisted on playing it safe. Consequently, most of the debt-for-nature agreements have included ample protection against any potential inflationary impact. At this stage of activity, however, the fear of inflationary effects of debt-for-nature swaps is far greater than the reality. A study commissioned by The Nature Conservancy (at the request of the Costa Rican Government) concluded that the country could swap up to \$50 million in local currency in one year and still affect inflation by less than one half of one percent!<sup>64</sup>

Yet as the scale of debt-for-nature activity increases, inflation can potentially become less of a theoretical problem and more of a practical one. Nonetheless, the issue of inflation cannot be approached as a general question but rather as a specific concern to be addressed on a case-by-case basis. The amount of activity any one economy can tolerate varies markedly between countries, and so the agreements must be molded to each independently. Each nation should establish quotas limiting annual debt monetization and structure the financial mechanisms accordingly.<sup>65</sup> As long as the swap conforms to

the absorptive capacity of the local economy, the inflationary pressures can be managed.

### C. Insurance

Any activity abroad brings additional commercial and political risk to the NGO. The latter is less of a threat for those NGOs who, as a result of previous activity, enjoy well-established rapport with their local counterparts. Nevertheless, the LDC environment is characterized by both financial and political instability, and therefore, the insurance mechanisms available should be explored to minimize the risk.

#### Financial risk

In terms of financial risk, the funding mechanism should be carefully structured to protect the value of the investment. Some experts recommend using bonds that are denominated in dollars (or any other stable currency) so that they maintain their purchasing power.<sup>66</sup> If instead local currency instruments are issued, generous interest rates should be negotiated in order to counteract inflation and insure that the principal account (if it intended to endow a environmental trust) remains undisturbed. For particularly volatile economies, indexing the bond's interest rate to the rate of inflation is another method of value protection.

Many of the monetary stabilization bonds used, like those in the \$9 million Ecuador swap, have disbursement schedules that

are front-loaded to protect the investing NGO against currency devaluation and inflation. In these cases the funds available from the preliminary disbursements usually exceed the financial needs of the local NGOs. This surplus income should be reinvested in local commercial instruments (such as certificates of deposit and other bank accounts) so that its value can be maintained.

For those instruments that do not carry a government guarantee, insisting that the bonds be marketable further minimizes commercial risk. If the bonds issued in the swap can be sold and traded on local markets, insurance is less imperative because they can be converted at any time. All of the agreements to date, however, have involved non-negotiable bonds in order to minimize the monetary impact of the swap conversions.

#### Political risk

In terms of political risk, insurance is available for investments financed through debt-for-nature swaps, up to the full face value of the transaction. The annual premium, country-specific, is determined by the perceived risk and the market.<sup>67</sup> Due to the nature of conservation agreements, however, many of the terms of the exchange are not eligible. Most organizations are reluctant to directly insure government commitments, commercial or otherwise. None of the institutions contacted would insure a government's "word" (e.g. commitments to preserve endangered areas, enact legislation), though a few

private insurers offered to cover its obligation to make payments on bonds issued in the swap transaction.<sup>68</sup>

Bilateral and multilateral agencies such as U.S. Overseas Private Investment Corporation (OPIC) and the World Bank's Multilateral Insurance Guarantee Agency (MIGA) insure investments made via debt conversions but will only compensate the international NGO if it has established ownership interests in the country. Yet the titles to all "subrogatable assets" (park buildings, education centers and clinics, conservation equipment, etc.) are transferred to the local NGO in the process of the exchange. A debt-for-nature swap involves no foreign ownership, and consequently government expropriation or confiscation is not really an issue. That a government would seize property of a local non-profit organization is unlikely, particularly since most are involved in rural development.

Nonetheless, legal clauses (termination, governing law, default, remedy, dispute settlement, waivers of sovereign immunity, etc.) are a prudent means of protection against possible transgression. Setting forth in the agreement what rights are conferred to each party and how conflict about the exercise of those rights will be resolved in and of itself discourages breaches. Furthermore, OPIC has offered to insure against the government's failure to abide by agreed procedures for resolving disputes. To date such provisions have not been included in the agreements. In addition to the formality they introduce to the otherwise genial professional relationship, the non-profit organizations do not have the financial resources to

enforce them. Unfortunately, since these provisions have thus far been omitted from the contracts, a precedent has been established "which makes it more difficult to request them in the future."<sup>69</sup>

Except in cases where longer financial obligations of the host government are involved, debt-for-nature agreements are no more vulnerable to breach than any other foreign conservation commitment.<sup>70</sup> Moreover, as a requisite participant in the negotiations and a signatory to the final swap agreement, the government has a vested interest in these programs and thus, is less likely to renege on its obligations.<sup>71</sup> In fact, the experience to date has affirmed this expectation.

With the exception of the first swap done in Bolivia, all disbursements of funds have been paid in full and on time.<sup>72</sup> Due to this financial diligence, none of the existing debt-for-nature agreements include any formal insurance mechanisms. Most of the NGOs consulted feel that at the current level of activity, the amount of risk involved does not warrant the expenditure.<sup>73</sup> Detailed contractual provisions, significantly less expensive than institutionalized protection against risk, have been the main form of "insurance" mechanism upon which the NGOs have relied.<sup>74</sup> Yet financial constraints were not the only determining factor in this decision.

#### The Best Protection: Indigenous Support

In all the debt-for-nature swaps to date, the actors involved have had prior "cooperative relationships."<sup>75</sup> In

general when considering protection against the risk, an overwhelming consensus exists among those active in the field: there is no substitute for dedicated indigenous support. Many were skeptical of the usefulness of insurance, arguing that what is true of the original debt obligation is true of this swapping mechanism: "if the intention is not there you can't build institutional protection."<sup>76</sup> It is thus crucial to identify and seek out strong local partner institutions, as they will have the most influence in assuring that commitments are honored. The general prescription was to look to the soundness of the relationship, rather than paper promises, for insurance.

## V. BENEFITS

### A. New Money

Among the most noteworthy benefits from the standpoint of the NGO are the "dramatic multiples of new financing for conservation that did not exist before."<sup>77</sup> Debt-for-nature swaps serve as a useful promotional device for the PVOs.<sup>78</sup> Swapping is "in" right now and with the recent increase in environmental awareness, banks and donors generate a lot of good publicity by participating in the debt-for-nature process. Of course, the other attraction to donors is the leverage they obtain on their investment via these swaps.

At the current secondary-market prices and rate of redemption offered by the governments, donor dollars invested via the debt-for-nature mechanism can be multiplied for many of

the LDCs in Latin America. Yet this leverage is contingent upon the continued discount of LDC debt, as well as the free supply of financial and legal services.<sup>79</sup> Furthermore, due to budgetary limitations and an increasing preoccupation with inflation, central banks are becoming less generous in their debt redemption offers. If they insist on taking more of a discount up front, the NGOs might consider investing in securities. But even if the discounted present value of the swap mechanism is slightly less than that of alternative financial mechanisms, it is easier for the PVOs to find donations via swaps because, due to the immediate multiplier, "it looks better on paper."<sup>80</sup> From the local country's viewpoint, the additionality of the conservation funds is more obvious.

Though the size of the multiplier will depend on the specific terms offered in each agreement, the internal investment in conservation has been dramatically increased by debt-for-nature activity. Though unimpressive relative to the foreign commercial debt outstanding, the \$50 million worth of projects supported by swap money represents a significant impact in terms of existing conservation efforts in Latin American. "The interest alone from Costa Rica's debt-for-nature swaps is several times more than the annual budget of our National Park Service."<sup>81</sup> Most of these funds cover the direct costs (training, education, and research) of preserving the natural resources of these countries and promoting their sound management. In and of themselves, the environmental assets

preserved have value in terms of biological diversity and ecological balance.

## B. Environmental Enhancement

### Valuing natural resources - the limitations

The true worth of natural resources has only recently been recognized. Most appraisals of the financial worth of development activities do not include the environmental tradeoffs. The lack of expertise and funds are only part of the difficulty, as the instruments available are ill suited to conservation finance. Furthermore, until adequate coordination of programs and priorities occurs, the problem of environmental valuation will not be tackled. Some countries have recognized this shortcoming in their national income accounts and are consequently in the process of revising their accounting systems to more accurately value their resources.<sup>82</sup> Despite these limitations an attempt will be made to evaluate the benefits that have resulted from debt-for-nature swaps.

### Conservation of Resources

By maintaining the ecosystem and genetic variety, the preservation of endangered species and botanical specimens offer educational and aesthetic value. Further to be considered is the potential medicinal value of the biological specimens yet undiscovered. In terms of meteorological benefits, to the extent that these projects help temper climatic change, air and

water pollution, ozone depletion, and overall disruption of the ecological balance, they are integral in the long-term sustainable development of all nations. It is not within the scope of this study, however, to attempt a valuation of the global environmental ramifications of the conservation programs. Nonetheless, they should not be marginalized when considering the overall economic benefit of the debt-for-nature projects.

More Sustainable Activities - money savers

In addition to these less tangible qualities, debt-for-nature swaps have financial benefits if they result in a shift of resources from environmentally degrading activities to more sustainable uses. Watershed protection helps prevent flooding and erosion and thus, in addition to providing potable water sources, can save the government substantial funds in terms of damage prevention. As they represent both a reduction in future ecological maintenance expenditures (pollution abatement, toxic cleanup, refertilization) and conservation of resource rents, the current projects can translate into increases in real net income.<sup>83</sup>

Unmanaged timber extraction, unsustainable cash crop monocultures, exploitation of marginal lands and wetlands, all yield high returns in the short run but significantly diminish future productivity by their long term resource degradation (deforestation, soil erosion, depletion of groundwater supply). By promoting their management and sustainable use, the swap projects extend the annual rents (income streams from forestry,

agriculture, fishery) these resources generate. Thus, sustainable resource use can have commercial as well as ecological value.

### C. Conservation with Commerce

For the millions of acres of forest procured, commercial activities as well as alternative uses have been integrated into the conservation efforts. Previously, in addition to production of timber, fuelwood, and non-wood products, these forests have supported cattle ranching and grazing, traditional uses by indigenous inhabitants (e.g. shelter, hunting, and poaching), tourist attractions, and scientific research. These activities are not all mutually exclusive, but there are many value judgments made in determining their worth. For the purposes of this valuation, high priority will be placed on their compatibility with natural rejuvenation techniques.<sup>84</sup>

#### Forest Management

There have been strong market incentives for destructive logging and widespread clearing for grazing purposes. The economic value - and environmental loss - differs based on species diversity and productivity of each forest (as well as the difficulty of extraction and accessibility to trade ports). Conservation projects pose constraints on logging activity, but some of the debt-for-nature forest management methods have attempted to integrate sustainable practices through zoning and tree marking.

In Bolivia, the multi-million dollar logging industry has been monitored and controlled to allow the natural rejuvenation of the forest. In addition to all the environmental benefits accrued, the once exhaustive industry can now be continued for an indefinite time frame, providing a more sustainable income for the country. The worth of this recovered income, however, is usually significantly discounted, both in economic and commercial terms: the present value of the income generated by the trees 80 to 100 years from now (the amount of time it takes a most trees to mature) is further diminished, loggers argue, because by that time wood may be replaced by other building materials. Yet there are additional gains to restricting timber extraction which compensate for the lost lumbering income.

### Alternatives

#### 1) Traditional Lifestyles

Direct benefits, social and economic, result from sustainable forest use. Many of these forests are home to indigenous dwellers who depend on its supplies for survival. Forest preservation allows indian tribes to maintain their traditional use of the forest, generating financial as well as social benefits. Both in terms of territorial rights negotiations and relocation efforts for displaced migrants, governments are spared a significant financial welfare burden.

#### 2) Non-timber Industries

Regarding more commercial uses of forests, other more

lucrative conservation-compatible industries can be explored. Non-wood products -- such as edible fruits, oils, latex, fiber, and medicines -- can be harvested with less damage to the forest. The value of preserving genetic resources for purposes of pharmaceutical and chemical improvements "are tremendous," though they are difficult for a government to capture.<sup>85</sup> Furthermore, an appraisal done of these "minor" commercial products in a species-rich Amazonian forest in Peru concluded that that the sustainable exploitation of these resources yields higher net revenues per hectare than timber extraction.<sup>86</sup> More importantly, they are compatible with other income-yielding uses of the forests.

### 3) Ecotourism

In addition to recreational and aesthetic value, the landscape enhancement resulting from debt-for-nature swaps stimulates ecotourism (and its related industries).<sup>87</sup> A report commissioned by World Wildlife Fund has concluded that the potential benefits of tourism to natural areas "are yet to be realized."<sup>88</sup> Swap funds have supported additional staff, management training, and buildings for national parks -- the very infrastructure Elizabeth Boo claims is needed if developing countries are to capture "opportunities for expanding an economy at very little cost."<sup>89</sup> Debt-for-nature swaps allow the countries of Latin America to augment the income presently generated from ecotourism. In Costa Rica, the nation that has supported the most debt-for-nature programs, tourism was the

third largest source of income in 1987, generating over \$130 million in foreign exchange.<sup>90</sup> Moreover, of the visitors in Costa Rica in 1986, thirty-six percent identified "ecotourism" as a main motivation for their travel and fifty percent visited a protected area during their stay.<sup>91</sup>

No market exists for the less tangible benefits anticipated from the implemented programs, and consequently, they are difficult to quantify. However, these qualitative benefits are the very ones the NGOs identify as the most important.

#### D. Coalitions and Commitments

Just as important as the actual acreage preserved in the eyes of the conservation groups is the strengthening of the indigenous movement. Debt-for-nature swaps have "institutionalized conservation progressively."<sup>92</sup> Community education and training programs have reinforced the general environmental awareness debt-for-nature swaps engender by their high publicity. Local NGOs have become technically and financially more sophisticated and have upgraded their staff accordingly. In addition to the direct training, the scientific research (biological inventories, land appraisals, etc.) supported by the newly created Conservation Data Centers have enhanced their credibility. Most importantly, the trust funds that have been endowed by debt-for-nature swaps will generate future income for NGOs to expand their conservation programs and their capabilities.

Equally as crucial in terms of solidifying conservation

efforts, environmental issues have assumed new priority in the public agenda. The dramatic increase in cross-sectoral communication engendered by the swaps has subsequently manifested itself in legislation and policy commitments. In Bolivia, for example, a new forest preservation classification and management program ("permanent production forests") has been inspired by swap activity.<sup>93</sup> These unprecedented resource management programs are backed financially by the endowed trust funds and politically by the empowered PVOs. But the greatest security, and consequently the most noteworthy benefit, are embodied in the coalitions created by the debt-for-nature process.

Financial and environmental, as well as local and international interests are consolidated in the extensive negotiating process. This union of previously isolated sectors establishes long-term relationships that facilitate future cooperative activity. Overall, by tapping mutual objectives, the debt-for-nature mechanism channels these complementary forces into productive capacities for sustainable growth.

## VI. A LOOK AHEAD

Though not very significant in terms of overall debt reduction, debt-for-nature swaps provide a powerful means of funding conservation projects. Donors can leverage their investment dollars and potentially get more "bang for their buck." Furthermore, debt-for-nature is a process of extension -- both of planning horizons and spheres of influence. It thus

can play a substantive part in sustained, integrated development.

The ingenuity of the debt-for-nature process lies in its application to a very specific set of circumstances. Changes in policy by any of the actors (specifically, a decrease in the redemption value offered for the debt buyback, a change in financial and legal intermediaries' pro bono policies, bank reluctance to participate/sell LDC debt, LDC shift away from open exchange rates or general economic reform) could create an environment where debt-for-nature was no longer economically viable. Thus, there is an urgency to step up participation and facilitation efforts in order not to forgo the unique opportunity provided by the current situation.

#### A. U.S. A.I.D. Strategy

To the extent A.I.D. actively promotes debt-for-nature swaps, a few suggestions are offered:

##### 1) Focus on Strengthening In-country Capacity.

Empowering local facilities will secure existing investments and create a welcome environment for future project interests . A.I.D. should assume a supportive role, providing financial and technical assistance especially to the lesser known, inexperienced local NGOs. The nurturing process should be gradual, as "it is just as possible to destroy an organization by over-funding as it is by under-funding."<sup>94</sup> Ideally, A.I.D. could help establish and endow a trust fund which would create a policy and incentive framework that would foster

indigenous institutional growth.

2) Encourage Diversity.

Some equally capable grass-roots organizations have been obscured by the larger, more experienced conservation organizations. As these infant organizations often are more in touch with the needs of the local community, they should be nurtured. Political and financial favoritism has created a great disproportion in the money and resources available to the various organizations. Funds, technical assistance, and training should be made more widely available to better equalize local capacity. Moreover, since environmental concern is sometimes one of the few permissible means of political expression, fostering pluralism in the local PVO community has democratic as well as environmental advantages.<sup>95</sup>

3) Expand the Scope of Activity.

Though not to de-emphasize the importance of what has been accomplished, many feel that the scope of work should be broadened. The activities supported to date have generally focused on procurement, preservation, and management of natural resources, the priorities of the three conservation organizations involved (i.e. The Nature Conservancy, World Wildlife Fund, and Conservation International). Additional research into the relative costs and benefits of diversifying the existing programs should be undertaken. Some of the equally pressing needs that require additional attention include:

pollution abatement and control, toxic cleanup, environmental surveys and inventories, and political advocacy (including legislation).<sup>96</sup>

4) Keep Local Interests Actively Involved.

Indigenous participation should occur from start to finish. Particularly in light of the delicacy of the sovereignty issue, local groups at every level should be considered when designing the programs. Of course, indigenous support is absolutely necessary if the benefits of these projects are to be realized. Thus, the specific needs of the surrounding communities must be integrated into any conservation project pursued.

5) Explore All Options.

Not all countries provide an environment conducive to debt-for-nature swaps. For those countries that lack the domestic income, infrastructure, stability, or significant debt discount, this financing mechanism might not be economically viable. Yet these LDCs should not be excluded from the benefits of conservation investments. A general environmental trust fund should be strongly considered as it offers the most flexibility. Such a trust can incorporate a swapping mechanism, but also accept other means of funding (donations, blocked funds, bilateral aid) in situations where the former is not a viable option.<sup>97</sup>

B. A Final Word

In his address on June 27, 1990, President Bush announced his Enterprise for the Americas Initiative, stressing the need to "build a broad-based partnership for the 90's." The initiative is based on the realization that the well-being of the north is interdependent with that of the south. That this initiative specifically incorporates the debt-for-nature mechanism is appropriate, as it too is fueled by the forging of mutual interests.

The debt-for-nature process should be actively explored in order to uncover its potential not only for environmental relief but also as a commitment to innovative and cooperative methods of dealing with the overall debt crisis. In recognition of the link between sustainable development and conservation, debt-for-nature has brought together previously isolated interest groups. A.I.D. should focus its future strategy on nurturing the coalitions fostered so they can blossom on their own.

Table I:

## DEBT-FOR-NATURE SWAPS IN LATIN AMERICA TO DATE

(As of June 30, 1990)

(U.S. \$000)

DATE	COUNTRY	PURCHASER	COST	FACE VALUE OF DEBT	*CONSERVATION FUNDS GENERATED
1/89	Costa Rica	Sweden/WWF/TNC	1,950	10,750	9,800
3/89	Dominican Rep.	PRCT	116	582	582
3/89	Argentina <sup>1</sup>	(no transactions to date)		120,000	---
4/89	Ecuador	WWF/TNC/IBG	1,069	9,000	9,000
4/89	Costa Rica	Sweden	3,500	24,500	17,100
1/89	Costa Rica	Holland	5,000	33,000	9,900
1/89	Costa Rica	TNC	784	5,800	1,880
2/88	Costa Rica	NPF	891	5,400	4,050
12/87	Ecuador	WWF	354	1,000	1,000
3/87	Bolivia	CI	100	650	250
TOTALS:			13,767	90,482	53,162

<sup>1</sup> \$60.0 MM quota established (3/90)

<sup>2</sup> \$30.0 MM quota established - Fundacion Neuquen

\$30.0 MM quota established - Fundacion Perodi

\*Does not include  
interest earned  
over life of the  
bonds.

TNC ...The Nature Conservancy

WWF... World Wildlife Fund

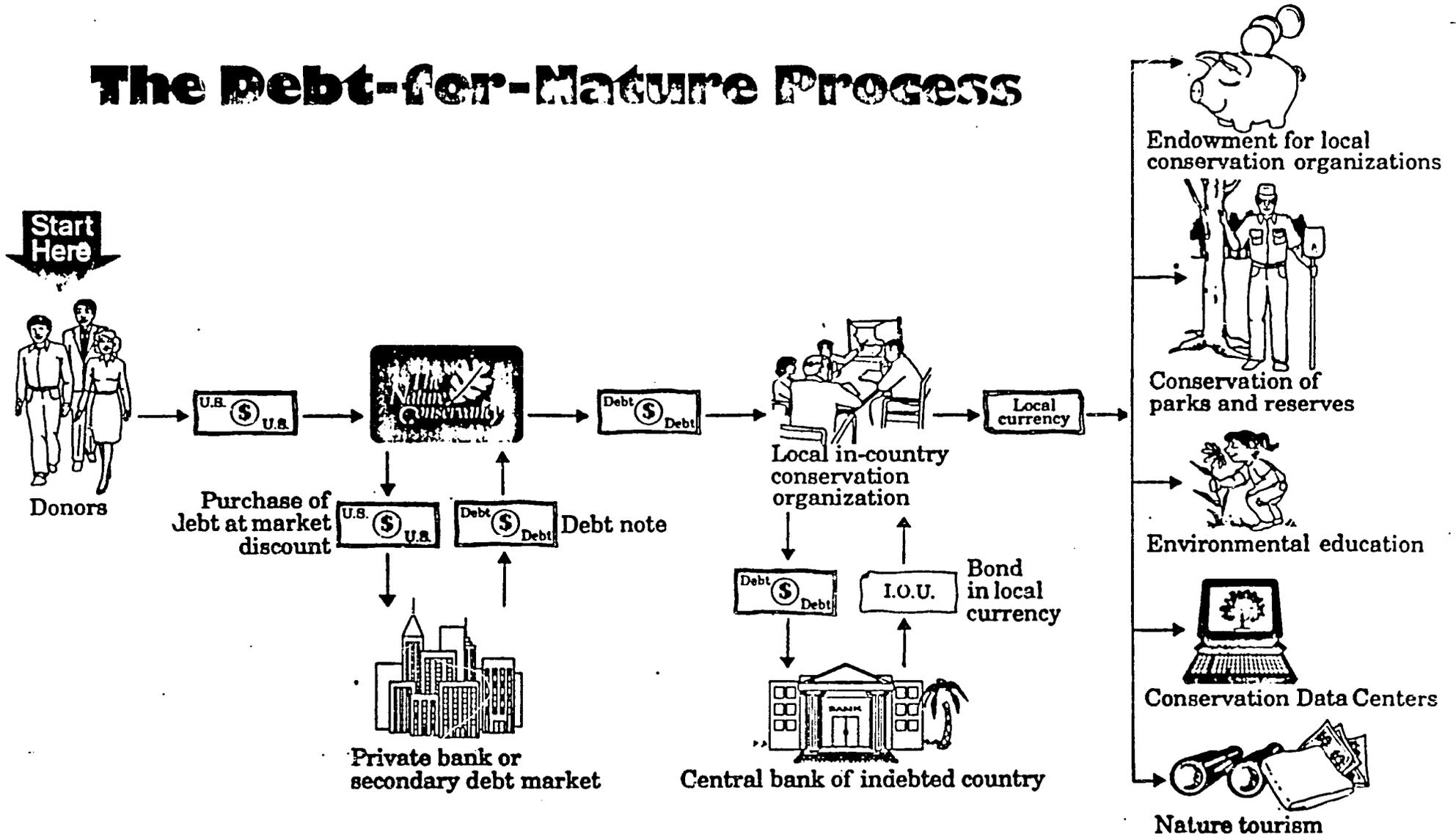
PRCT...Puerto Rico Conservation Trust

IBG...Missouri Botanical Garden

NPF...National Parks Foundation of Costa Rica

CI...Conservation International

# The Debt-for-Nature Process



## NOTES

- 1 Geoffrey Barnard. The Nature Conservancy. Statement before the Subcommittee on Western Hemisphere Affairs and the Subcommittee on Human Rights and International Organizations, Committee on Foreign Affairs. U.S. House of Representatives. July 11, 1990. p. 1.
- 2 Ron Scherer. "Latin Plan Launches New Partnership," The Christian Science Monitor. July 3, 1990. p. 4.
- 3 Richard A. Nuccio. Inter-American Dialogue. Statement before the Subcommittee on Western Hemisphere Affairs and the Subcommittee on Human Rights and International Organizations, Committee on Foreign Affairs. U.S. House of Representatives. July 11, 1990. p. 3.
- 4 Scherer, p. 4.
- 5 Environmental programs, typically of low priority on governments' policy agendas, are usually the first casualties of budgetary cutbacks.
- 6 Alvaro Umana. "Costa Rica's Debt-for-Nature Swaps Come of Age," The Wall Street Journal. May 26, 1989. p. A 11.
- 7 World Resources Institute. "Natural Endowments: Financing Resource Conservation for Development." International Conservation Financing Project Report Commissioned by the United Nations Development Programme. September, 1989. p. 2.
- 8 Timothy R. Muzondo, Kenneth M. Miranda, and A. Lans Bovenberg. "Public Policy and the Environment: A Survey of the Literature." Working Paper 90/56. Fiscal Affairs Department, International Monetary Fund. June, 1990. p. 3.
- 9 The market price for Third World debt ranges from a few cents on the dollar to parity. The discount reflects banks' diminishing confidence in an LDC's ability to meet its external debt obligations. Thus, although a lower debt price offers greater leveraging potential, it also indicates the greater instability and risk of investment in a given country.
- 10 Rather than using cash, the host government usually pays for this debt by issuing local currency bonds through the central bank. Any bonds issued (or account established) are in the name of the local NGO. Unlike some debt-for-equity swaps, debt-for-nature swaps involve no foreign ownership or claim to any asset involved in the exchange.
- 11 Especially as the scale of the swap activity increases, it is important that these agreements be carefully structured so as to adjust to the government's budgetary constraints and absorptive capacity. Yet incorporating more monetary stabilization measures into the agreement usually increases the country's overall debt-servicing burden. (see "Inflation" section below)
- 12 Randall Curtis. The Nature Conservancy. Personal communication. June 26, 1990.

13 Michael Chamberlain, of Sherman & Sterling (the legal firm for World Wildlife Fund), was very optimistic about the firm's continued pro bono policy with World Wildlife Fund and other interested PVOs. (Personal communication. August 8, 1990.)

14 The primary concern of the central bank is the health of the economy. Despite the fact that inflation is really no more than a theoretical problem at this stage of play, that the financial authorities perceive it to be a real threat makes it a very practical concern in the negotiating process.

15 Robert P. Ball. "Debt-for-Nature Swaps: An Innovative Way to Finance Conservation." Policy Task Force on Global Warming. Woodrow Wilson School 402a. May 1, 1989. p. 40. Furthermore, large banks are reluctant to sell their debt due to the accounting ramifications. (see below: "POINTS OF INTEREST, Costa Rica - case #2")

16 Laurie Lamby. U.S. Agency for International Development. Personal communication. August 8, 1990.

17 American Express Bank and Solomon Brothers have brokered the transactions for The Nature Conservancy and World Wildlife Fund, respectively.

18 Kristen Dawkins. "Case Study: Debt-for-Nature Swaps." Massachusetts Institute of Technology. 1990. pp. 6-7. Brokerage firms still assist in "identifying and arranging" the debt package, but this more-or-less routine service is provided pro bono.

19 Barbara Hoskinson. World Wildlife Fund. Personal communication. June 28, 1990.

20 These numbers are very rough projections. The range includes estimates given by Francisco Remeres at International Planned Parenthood Foundation, Randy Curtis at The Nature Conservancy, Thomas Gibson of CARESBAC, and Maria Theresa Ortiz at Conservation International (all of whom have been involved in transacting debt-for-nature/development deals).

21 Michael Chamberlain, supra note 13. Subsequent transactions could involve as little as ten to twenty percent of the legal costs. As they are provided pro bono, these savings do not factor into the financial costs facing the NGO. Nonetheless, when determining the economic costs of the transaction, they must be included.

22 Some first time efforts have involved as much as \$200,000 in protracted negotiations.

23 Open-ended negotiations can be considered, in effect, part of overhead and consequently "raise the average cost per successful transaction." (Clarence Zuvekas. U.S. Agency for International Development. Bureau of Latin America and the Caribbean. Editorial comments. August, 1990.)

24 Most banks have a minimum amount they will swap so there are additional factors keeping the scale high and precluding involvement of the smaller NGO community. Generally, increased

swap activity should bring these costs down somewhat, as the process becomes more routine. (Jerry Wein. The Debt-for-Development Coalition. Personal communication. July 31, 1990.)

25 Ibid.

26 Specifically, establishing swap quotas to conform to the economy's absorptive capacity should sterilize any inflationary implications of debt swaps. (See "Inflation" section below)

27 Though periodically suspended in times of fiscal austerity, debt conversion programs exist in the following countries: Costa Rica, Dominican Republic, Peru, Argentina, Chile, Brazil, Uruguay, Mexico, Jamaica, and Ecuador. The first four have established provisions specifically for debt-for-nature swaps.

28 Among the growing number of such NGOs are Pew Charitable Trust, Organization for Tropical Studies, Tropical Science Center, and the MacArthur Foundation.

29 The Midwest University Consortium of International Activities (MUCIA), a development group comprised of a number of universities, has shown great interest in participating in the debt-for-nature scene but has been constrained by the complexity and subsequent costs of negotiating a transaction. (Jerry Wein. Debt-for-Development Coalition. Personal communication. July 16, 1990.)

30 Among those who have voiced this criticism are: Brad Erickson, The Environmental Project on Central America (EPOCA); Randy Hayes, Rain Forest Action Network; Mary George Hardman, Survival International; Paul Weatherly, Independent Contractor.

31 The figures for the commercial debt outstanding for each country was obtained from the Draft Discussion Paper "The 'Enterprise for The Americas' Program: Implications for the Not-for-Profit Community." Debt-for-Development Coalition. July 26, 1990. Table Three.

32 J. Eugene Gibson and Randall Curtis. "A Debt-for-Nature Blueprint." 1989. p. 354.

33 See "Obstacles" section below for details.

34 The official exchange rate is calculated on the dates of redemption and is substantially less than the floating rate. (For example, in the second swap, the government converted the debt notes at the official exchange rate of 422.88 sucres to the dollar, versus the free market rate of 520 sucres. Using the fixed rate, the dollar value of the bonds generated is \$7,319,077 -- still multiplying the original donation by over six times!)

35 Unless otherwise stated, all redemption bonds are denominated in local currency.

The interest on these monetary stabilization bonds is linked to market rates, to help maintain the instrument's financial value.

36 Fundacion is not the exclusive beneficiary of the

endowment, as other local NGOs can apply for grants to fund conservation efforts.

37 The preservation of the last region (home to more than 1,400 species of birds, 20,000 species of plants and various endangered animal species) is vital, both in terms of conservation and ecotourism.

38 World Wildlife Fund. "Debt-for-Nature Agreement: Ecuador, December, 1987."

39 The Nature Conservancy. "Biodiversity Protection and Conservation in Ecuador." Factsheet. July, 1990.

40 World Wildlife Fund. "Amended and Restated Debt-for-Nature Agreement: Ecuador, Tranche II, April, 1989."

41 The Nature Conservancy. Costa Rican Debt-for-Nature Agreement, World Wildlife Fund Attachment. 1988.

42 Banks have been extremely reluctant to donate their debt for the swaps, even though the amounts involved represent only a tiny percentage of their overall exposure. It is not the amount that accounts for the banks' reluctance, but the precedent of any hint of forgiveness.

43 Fleet was trying to rid itself of its entire LDC portfolio of \$155 million, a rather insignificant write off relative to the \$200 million in net income, \$29 billion in assets, and \$1.8 billion in equity the institution enjoyed in 1987. To an institution that had had a longstanding relationship with The Nature Conservancy, the donation of the Costa Rican parcel was a convenient, high-publicity method of disposing of "nuisance" debt. (R. Ball, pp. 33-4.)

44 The Central Bank reduced the rate of redemption in order to capture some of the tremendous leverage the PVOs (unintentionally) obtained previously. In the first swap the price of Costa Rica's debt fell dramatically during the process of negotiations, and consequently the NGOs went from doubling their donation to increasing it by 4.5 times the purchase price. (Alvaro Umana, supra note 6.)

45 If banks sell a portion of their debt at its discounted secondary market value, it is possible that regulators could demand that they mark the rest of their portfolio of that country's debt down. Such a writedown would adversely affect both their balance sheet and capital level, and banks with particularly large exposure could face serious difficulty meeting their capital requirements. Thus, the regulatory environment is biased against debt sales. (R. Ball, p. 61, 70) The American Express Bank avoids many of these regulatory and accounting restrictions, as it does not engage in commercial banking in the United States. (Gibson and Curtis, p. 369)

46 Gibson and Curtis, p. 370.

47 Alvaro Umana, supra note 6.

48 Gibson and Curtis, p. 370.

49 Debt-for-nature swaps have made the Guanacaste the world's

first fully endowed national park. (Larry Tye. "Winning On for the Forest: An Alliance of Bankers, Environmentalists Creates Debt-for-Nature Swaps," Boston Globe, April 10, 1989, p. 13.)

50 Marjorie Sun. "Costa Rica's Campaign for Conservation," Science, Vol. 239. March 18, 1988. p. 1368.

51 The bonds of the first component of the swap (\$5 MM - La Amistad) offer more favorable terms because they are paid out in colones (the local currency of Costa Rica), whereas the others are dollar-denominated.

52 R. Ball, p. 21.

53 The actors involved have tried to minimize the publicity because the market for Panamanian debt is very volatile; formal announcements could raise its price rapidly.

54 A note is in order on the theoretical debate over the "implicit" subsidy involved in a debt swap transaction.

In addition to supposedly exacerbating inflation, swap-financed investments have been criticized for their lack of additionality. In other words, the government (by buying back its external debt at a price significantly higher than its secondary market rate) is merely subsidizing foreign investments that would have happened without the swap option. (Proponents of swaps argue that the leverage provided by the discounted debt attracts additional foreign investment -- that which would not otherwise have occurred.)

However, these two criticisms -- inflationary impact and lack of additionality -- cannot logically be levied simultaneously. "A swap program leads to inflationary impacts only to the extent that investments made through it would not have happened without a swap program [i.e., they were additional]." (Joel Bergsman and Wayne Edisis. "Are Swaps Inflationary? A Note on Macroeconomic Effects," Latin Finance, July-August, 1989, p. 58.)

Debt-for-nature investment funds are not additional to the extent that the country recognizes its indispensable conservation obligations and has committed itself to protecting and repairing its ecological integrity. In this case, the monetary pressure caused by conservation expenditures are not unique to those funded by debt swaps.

55 William K. Reilly. "Debt-for-Nature Swaps: The Time Has Come." Remarks by the Administrator, U.S. Environmental Protection Agency. Conference on Debt and Conservation - Zurich, Switzerland. November 2, 1989. p. 5.

56 Kenneth Warn. "Tribes March Against Debt Swap." Financial Times. August 2, 1990.

57 Merrill Collett. "Bolivia Blazes Trail . . . to Where?" The Christian Science Monitor. July 10, 1989.

58 A study commissioned by the negotiating participants has determined that the watershed projects can continue without disrupting the Chimane's semi-nomadic lifestyle. The government,

therefore, is currently considering granting territory in the watershed area of the Beni reserve to the tribes as a concession. (Maria Theresa Ortiz. Personal communication. August 8, 1990.)

59 Eliana Cardoso, "Swaps and Inflation: A Brazilian Perspective," Latin Finance, July-August, 1989, p. 63.

60 Alvaro Umana, *supra* note 6.

61 Some have suggested that as a means to develop local capital markets, this policy be reconsidered. (See "Debt for Development: Mobilizing the Non-for-Profit Community," SWAPS, Volume 3, Number 10. October, 1989, p. 5.) Marketable bonds also reduce the risk to the investor - see the "Insurance" section below.

62 Jeffrey D. Sachs. "A Strategy for Efficient Debt Reduction," Journal of Economic Perspectives, Volume 4, Number 1. Winter, 1990, pp. 19-29.

63 Konrad von Moltke. "Debt for Nature: An Overview," World Wildlife Fund. 1988. p. 4.

64 Juan Moreno Perez and Carlos Lopez Bravo. "Conversion de Deuda Por Conservacion de la Naturaleza: Los efectos en Costa Rica." May, 1988. p. 17 (Cuadro 2).

65 Important factors to consider when determining debt conversion quotas include the current money supply and rate of inflation, exchange rates, levels of government expenditure (and size of deficit, if applicable), the reserve position of the banking system, IMF and World Bank fiscal and monetary targets. (See U.S. Agency for International Development Guidance to Mission on the Possible Inflationary Effects of an A.I.D.-Financed Debt Conversion. February 1, 1989)

66 Roque Sevilla. Fundacion Natura (Ecuador) and Dr. Alvaro Umana Quesada. Ministro de Recursos Naturales, Energia y Minas. (Costa Rica). "Por Que Canjear Deuda Por Naturaleza?" 1990. p. 24. For the governments that do offer the option (e.g. Ecuador and Costa Rica), dollar-denominated securities, which provide less attractive rates than the domestic bonds, pay interest in local currency at the prevailing market exchange rate.

67 Patricia Skold. American International Group, Inc. Personal conversation. August 7, 1990.

68 American International Group, Inc (AIG) of New York has provided insurance for investments in both financial and non-commercial activities undertaken in debt-for-development agreements. Lloyds of London affiliates such as Professional Indemnity Association (PIA), Investment Insurance International (Managers) Ltd. (III), and Hogg Robinson (brokerage firm, London) have considered similar insurance policies.

69 Gibson and Curtis. p. 342.

70 Deborah K. Burand. "The Debt-for-Nature Exchange: A Tool for International Conservation." Conservation International. September, 1989. p. 29.

71 As a locally-initiated and domestically-focused endeavor, the projects financed by debt-for-nature exchanges usually enjoy community support, especially those which generate jobs for the indigenous population.

72 The delay of more than one year in payment was a result of fiscal austerity measures undertaken in the country to deal with the collapse of its economy in the mid 1980s.

73 Conservation International, the organization who engineered the Bolivian swap, expressed interest in guaranteeing the financing of future debt-for-nature exchanges, assuming the increased scale of activity justifies such an increase in expenditure.

74 All the existing agreements call for periodic financial and administrative updates, including project plans, budgets, and disbursement proceedings.

75 Gibson and Curtis, p. 341.

76 Chris Herman. Environmental Protection Agency. Personal communication. July 12, 1990.

77 Randy Curtis. Personal communication. August 9, 1990.

78 Ibid.

79 Kate Campana. Sherman & Sterling (legal council for World Wildlife Fund). Personal communication. August 6, 1990.

80 Randy Curtis, August 9, 1990.

81 Alvaro Umana, supra note 6.

82 Bolivia and Costa Rica, with the help of A.I.D. finances, are currently engaged in such national accounts revision projects.

83 Resource rents are the profits that can be "derived or earned from a factor of production" (i.e., a natural resource stock) beyond all the factor costs incurred in extraction. The major factors determining the value of this rent are the scarcity and location of the resource. (Robert Repetto, et al. "Wasting Assets: Natural Resources in the National Income Accounts." World Resources Institute. p. 19.)

84 Traditional discounting techniques minimize the economic value of recovered future incomes from sustainable resource use. Yet the environmental damage that results from the more exhaustive alternatives have rippling effects. For example, in addition to soil fertility maintenance and flood risk reduction, rainforest preservation serves meteorological functions. Though such ecological benefits are almost impossible to quantify, in terms of relative scale it is not unreasonable to attach a higher relative value to more conservation-compatible activities.

85 H. Jack Ruitenbeek. "Social Cost-Benefit Analysis of the Korup Project, Cameroon." World Wildlife Fund for Nature. September, 1989. p. 4.

86 Charles M. Peters, Alwyn H. Gentry and Robert O. Mendelsohn. "Valuation of an Amazonian Rainforest," Nature, Vol 339. June, 29, 1989. p. 656.

- 87 The term "ecotourism" is used here to refer to the travel to natural areas for the express purpose of studying, admiring and enjoying the scenery and wildlife. "Related industries" include travel agencies, park staff, souvenir and craft shops, transportation, hotels, restaurants, entertainment centers, and any other tourist related activities.
- 88 Elizabeth Boo. Ecotourism: The Potentials and Pitfalls, Volume I. World Wildlife Fund. 1990. p. xi.
- 89 Ibid., p. xiv.
- 90 Ibid, Volume II, p. 25.
- 91 Ibid, p. 29.
- 92 Maria Theresa Ortiz. Personal communication. July 11, 1990.
- 93 Maria Theresa Ortiz. Personal communication. August 8, 1990.
- 94 Konrad von Moltke, p. 5.
- 95 Fundacion Natura, by far the best endowed and most powerful environmental NGO in Ecuador, accepts donations from the petroleum company, Conoco. Recently, CONAIE, a confederation of indigenous communities has suggested that this conservation group has allowed Conoco to excessively exploit oil reserves within the Yasuni Park. (Brad Erickson. "Are Debt-for-Nature Swaps the Answer?" EPOCA [The Environmental Project on Central America] Update. Summer, 1990. p. 4.)
- 96 Barbara Bramble. National Wildlife Federation. Personal communication. August 10, 1990.
- 97 Barbara Bramble of the National Wildlife Federation has suggested following Brazil's example in creating a multi-institutional board represented by local authorities and NGOs to administer the trust and assure that the funds address local needs. (Ibid.)

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