"DEBT-FOR-NATURE" SWAP : CASE STUDIES OF BOLIVIA, BRAZIL AND COSTA RICA

"DEBT-FOR-NATURE" SWAP : CASE STUDIES OF BOLIVIA, BRAZIL AND COSTA RICA

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CERTIFICATE

Certified that the dissertation entitled **"Debt-For-Nature" Swap: Case Studies of Bolivia, Brazil and Costa Rica** submitted by Aprajita Kashyap in partial fulfilment of the award of the degree of MASTER OF PHILOSOPHY in JAWAHARLAL NEHRU UNIVERSITY, is a product of the student's own work carried out by her under my supervision and guidance.

It is hereby certified that this work has not been presented for the award of any other degree or diploma by this University or any other University and may be placed before the examiners for evaluation.

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PREFACE

The burden of external debt and its servicing have been the major issues of concern for the policy-makers both in the debtor and creditor countries since Mexico nearly declared moratorium and sought rescheduling of its loans in late 1982. The creditor countries since then mostly adopted a common strategy, although the strategy went through three phases often associated with the last three US Secretaries of the Treasury -- Donald Regan, James Baker and Nicholas Brady. The Brady plan suggested a variety of "menu" of possible options to creditors and debtors aimed essentially at reducing the burden or volume of debt on the basis of mutually acceptable voluntary agreements. It was in these circumstances efforts were made to refine mechanisms which, at least on paper, could show reduction in the volume of the external debt of the Latin American countries. Two specific measures viz., debt-equity conversion and "debt-for-nature" swaps gained considerable attention of the policy-makers in Latin America.

The "debt-for-nature" swap was developed to transform commercial debt of developing countries into finance for environmental protection. The "debt-for-nature" swap transactions have an appeal in principle because they can meet two prime objectives of critical importance to select Latin American countries -- i) financing worthwhile environmental activities with substantial leverage for donor funds; and ii) helping to manage developing country's external debt. It may

however be added, that "debt-for-nature" swap transactions are somewhat complex, and instances in which both objectives were adequately met and served with a single instrument are undoubtedly few.

A modest attempt is made in the present monographic study to survey the major "debt-for-nature" swaps in select Latin American countries such as Bolivia, Brazil and Costa Rica. The rationale for the choice of these three countries are obvious: i) in GDP per capita terms these three countries are the most severely indebted countries in the region, and therefore, these countries were the ones which adopted a variety of measures, including importantly the innovative "debt-for-nature" transactions. For instance, it was Bolivia in 1987 that completed its first such transaction; and ii) these three countries were also the countries in the Latin American region which had experienced the worst environmental degradation, either because of indiscriminate mining activities (importantly in Bolivia) or, widespread deforestation.

On the basis of a descriptive survey of the efforts towards "debt-for-nature" swaps, attempt is made to analyse policy measures of such transactions, and examine the efficacy, or otherwise of these swaps in meeting the twin objectives identified earlier. An analysis along these lines is useful because notwithstanding its appeal and innovativeness in meeting the environmental concerns as well as redeeming the external indebtedness, according to available data, as of 1992, no more

than US. $ 128 million of the total external debt have been retired under the "debt-for-nature" scheme.

What accounts for the lack of attractiveness of such swaps? Is it a reflection of a lack of genuine concern towards environmental protection? Or, is it because of the complexity of the transaction itself involving greater domestic spending in the debtor country? For, a recurring issue in such transactions is the amount of local currency or equivalent bonds the debtor government issues in exchange for the external debt. In other words, "debt-for-nature" swaps in that sense, do not contribute substantially to the reduction of the external debt liability. Moreover, these transactions call for building up a nexus of relationship between international and local environmental agencies both governmental and non-governmental. Although governmental environmental agencies in a number of countries, notably Netherlands, Sweden and the United States have made grants available to some outstanding debts through "debt-for-nature" swaps, their effects have been more to reallocate aid rather than to generate additional resources to achieve cognizable success in environmental conservation. These are some shortcomings of the "debt-for-nature" swaps that have diluted the efficacy of these transactions. To what extent have these factors dictated the success or otherwise of these transactions is what this monograph purports to highlight.

The monograph is divided into six chapters. The introductory chapter briefly describes the different dimensions of the Latin

American external debt problems. Included in this general survey are aspects such as the antecedents of the region's debt as well as its anatomy in respect of the volume of public and private debt of Latin America with special reference to the three countries selected as case studies in the monograph. Also, an attempt has been made to broadly delineate the implications of external debt crisis and describe different measures considered and implemented by these countries to meet their external debt crisis. In the second chapter an analysis of the mechanism of the "debt-for-nature" transactions is made at some length to describe the complex modalities highlighting the "politics" and the "economics" of these transactions. This background analysis enables to assess the efficacy/inefficacy of "debt-for-nature" swaps in the country studies selected for in the monograph. Also a separate section deals with the major environmental issues in Latin American and the inexorable link that exists between external debt and environmental degradation. The three subsequent chapters are devoted to a descriptive analysis of the "debt-for-nature" swaps in Bolivia, Brazil and Costa Rica. Chapter 3 describes the environmental crisis and the "debt-for-nature" swaps transacted by Bolivia. The Chapter gives an overview of Bolivia's economic crisis and the implementation of New Economic Policy (NEP) since 1985. It also briefly describes the difficulties Bolivia faced in servicing its external debt. Both "economics" and "politics" are involved in the successful transactions made so far. Factors like implementation of major

structural reforms made Bolivia, in the eyes of creditor banks and governments, a candidate worthy of some debt-relief.

Chapter 4 describes Brazil's experiences with "debt-for-nature" swaps. The fact that Brazil is the largest debtor country in the developing world and also one that possesses the largest part of the Amazonia has made it a prime focus of "debt-for-nature" swaps. The Chapter describes in details the evolution of Brazil's perception and policy towards Amazonia. Geo-political and developmental considerations apart, Brazil has remained lukewarm towards "debt-for-nature" swaps arrangement on economic grounds too. "Debt-for-nature" swaps hardly make any substantial difference to its overall external indebtedness. Moreover, Amazonia is so closely linked with domestic, political and economic issues that any attempt to link it with debt would have aroused nationalistic feelings.

It is not Brazil but Costa Rica in Central America, which has become the success story of "debt-for-nature" swaps. Chapter 5 would describe the factors which enable Costa Rica successfully retire a part of its external debt.

The varied experiences of the three countries are summed up in the concluding Chapter. In addition to offering a summary of the monograph, it also makes some concluding observations underlying the merits and shortcomings of the "debt-for-nature" swap transactions for its feasibility and adoption in other developing countries.

Aprajita Kashyap.

Dated: July 20, 1995 (Aprajita Kashyap)

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Finally, I have pleasure in dedicating this work to my parents who have been the biggest source of inspiration for me.

Aprajita Kashyap.
(APRAJITA KASHYAP)

C O N T E N T S

CHAPTER 1

DIMENSIONS OF EXTERNAL DEBT CRISIS OF LATIN AMERICA

There is a close relationship between economic activity and environmental degradation. As environmental problems escalate, economists and environmentalists are beginning to realise that they are looking at the same problem from different points of view. Environmentalists are concerned about the changes in climate and loss of bio-diversity brought about by destruction of rainforests, whereas economists study the patterns of debt and poverty that lead to this destruction. The disciplines of economics and ecology are coming closer together.

Initially, many developing countries financed their development programmes by borrowing but that borrowed money has been misspent. Latin American countries became severely indebted and were expressing their inability to continue servicing their debts. Obligated to manage their economies according to the dictates of the World Bank, the International Monetary Fund (IMF) or creditor nations, there was frenzied and thoughtless harvesting of natural resources to raise cash by the debtor nations.[1]

Keeping this relationship in focus, the monograph in this introductory chapter will be devoted to describing the different

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[1] Jake Goldberg, Economics and the Environment (New York, 1993), p.62.

dimensions of the Latin American external debt problem. The highlights of the issue would be the antecedents of Latin American debt; the impact of the debt on the social, political and economic aspects; and finally a descriptian of the measures to meet the crisis situation. Each of these will be treated in separate sections. The discussion would be incomplete without looking into the volume of the debt in these countries.

Nature of the Debt Crisis

For Latin American countries, the 1980s have been described as a "lost decade" -- a decade in which economic and social developments stagnated. The debt crisis was the central factor responsible for the "lost decade". It was all pervasive and not a problem in Latin America could be discussed without reference to the debt crisis. In August 1982, Mexico declared itself insolvent, sending shockwaves throughout the world of international finance.[2] This precipitated the debt problem.

The skyrocketing of world oil prices in 1973-1974 and in 1979 raised the demand for credits on the part of petroleum - importing countries. Oil-importing Latin American countries gambled that higher import bills would be short-lived, and therefore they borrowed to avoid adjustment. The surge in developing countries lending after 1973 was motivated by the need to recycle enormous foreign currency assets of the Oil Producing

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[2] Walter Eberlei, Ways out of the Debt Crisis: Perspectives and Options for Latin America's Major Debtor Nations (Bonn, 1982), p.7.

and Exporting Countries (OPEC). They could not use all their oil revenues within their economies. Between 1973-1982 about 80 percent of these borrowings by oil-importing countries were used to compensate for oil price rises and sharp fluctuations in their export earnings and to servicing debt. Only 20 percent of the borrowings went into productive uses.[3]

Even the banks were the transmitters of the debt crisis. The majority of loans to Latin American countries were denominated in dollars to avoid losses from local currency exchange depreciation. Also, the maturities of loans were set at short intervals, so that the banks could have frequent opportunity to review them before refinancing.[4] Last but not the least, since the late 1970s, demands for credits were stimulated by relatively low interest rates. Low real interest rates made the spending spree all the more attractive. The situation changed in 1981 when the United States (US) and other Organisation for Economic Cooperation and Development (OECD) countries shifted to tight monetary policy. This resulted in an upswing of interest rates on the international market of loan capital. This directly affected Latin American debt, much of which carried floating interest rates. While in 1970 the share of credit received at floating interest rate comprised 2.9 percent of the total debt, in 1975 it

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[3] Nikolai Shmelev, "Face to Face in a Debt Pit", in S. Pshennikov and others, eds., Financial Imperialism: The World Under the Burden of Debts (Moscow, 1989), pp.19-20.

[4] G. Pope Atkins, South America into the 1990s: Evolving International Relationships in a New Era (Boulder, Colorado, 1990), p.165.

grew to 38.0 percent, in 1980 to 57.6 percent and in 1984 to 68.1 percent.[5]

Table 1. International Interest Rates 1974-1984

Year	US prime rates real terms	London Interbank offered rate (LIBOR) real terms
1974	-2.2	-1.9
1976	-1.3	-2.0
1978	1.7	1.1
1980	3.0	2.0
1982	6.8	5.3
1984	6.9	6.1

Source: Robert Devlin, Debt and Crisis in Latin America: The Supply Side of the Story (Princeton, 1989).

The policy of some Latin American countries aimed at encouraging import by overstating the exchange rate of their currencies. After the oil price hike, a major portion of the foreign loans were used to finance oil import bills. The nature of imported goods was dominated by consumer goods and not capital goods which could generate economic growth in the long run. External debt-service commitments forced the governments to curtail the imports. In 1982-1983 there was an unprecedented drop

[5] Natalya Nosova, "Latin America: Can Polliative Help?", in S. Pshennikov and others, eds., Financial Imperialism: The World Under the Burden of Debts (Moscow, 1989), p.145.

in Latin American imports: by 48 percent in terms of cost and by 45 percent in terms of physical volume.[6] Forced curtailment of imports, including the import of industrial goods led to decline in industrial production.

Latin American countries' exports comprised mainly of primary commodities. The slide in their prices following world recession led to decline in their earnings. The switch over from the export of traditional to the non-traditional commodities, viz., manufactured goods rendered these countries vulnerable to discrimination through countervailing duties, non-tariff barriers and voluntary' export restraints.[7]

This trade imbalance resulted in a serious balance of payments crisis. Borrowing was necessary to finance the deficit of balance of payments and of the state budget, to cover military expenditure and to refund the damages resulting from the operation of unprofitable state-owned enterprises. Rather than the productive units already in existence being modernized and provided with the latest technology, new units were super-imposed on the existing ones, making them relatively weaker.

The second oil shock of the 1980s fired the last salvo in aggravating the crisis. The recession in the developed countries resulted in a greater demand for financial resources within the developed economies themselves, thus diminishing the availability

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[6] Nasova, n.5, p.151.

[7] R. Narayanan, "Latin America Sentenced to Debt" World Focus (Delhi), vol.14, no.1, January 1993, p.22.

of funds for allocation abroad. Powerful technological changes further weakened Latin America's "comparative advantage" in the international scene.

The insufficient domestic integration of the Latin American national economic systems prolonged and reinforced external dependence and the inability to generate dynamic autonomous growth. The industrializing scheme was weakly geared towards the production of capital goods and was oriented more towards exportation and towards production of consumer goods.

Swelling of Latin American countries' external debt had objective limits and naturally gave rise to the financial crisis.

Implications of the Debt Crisis

To curtail the borrowing in order to extricate themselves of indebtness, the governments in the debtor countries resorted to decrease in real wages and reduction in employment opportunities. These trends in both income and employment, whose consequences were felt with relatively greater intensity among the working classes, eventually affected the basic standard of living of the general population quite severely, particularly if the effects of reductions in public spending in the social services were to be taken into account. Various indices relating to nutrition, health, education, reflected dangerous retrogressive tendencies. Impoverishment and the lack of productive job opportunities led to alarming levels of delinquency and corruption.[8]

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[8] ibid., p.3.

The drop in investment due to forced curtailment of imports of capital goods resulted in slower economic growth rates. In 1986 the Gross National Product (GNP) per capita turnover in the Latin American countries was 8 percent lower than that of 1980.[8]

The response of the creditors, their governments and the IMF to the debt crisis was based on the assumption that the short-run crisis could be tackled with financing to service their debt. To pull the defaulters out of the balance of payments crisis, appropriate domestic policy reforms were required. The reduction in current account deficit was achieved by sharp reduction in imports. National savings were used for debt-servicing rather than new investments. This resulted in a severe recession and decline in Gross Domestic Production (GDP). The governments took measures to control the public sector deficit. The orthodox policies of the IMF sought to give greater play to market forces and to private motivation. Financial markets were liberalised and interest rates in general were determined by the market. Given the political and economic uncertainties, closer integration with world financial markets would have meant larger capital outflows.

Reduction in the deficit were achieved more by expenditure cutting rather than by raising tax revenues. The axe fell on subsidies and investment in social sector. Since the taxes could not be raised, the government took recourse to printing money. This pushed up inflation which in turn led to devaluation of currency to prevent an erosion in the countries' export

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[8] Nosova, n.5, p.152.

competitiveness.

Servicing of the debt continues to be an albatross round the neck of these countries. The desire to prevent a rupture in the international credit chain was the main driving force of these "rescue operations".[10] This included granting new loans for repayment of old ones, lowering of interest rates, extending the period of maturation or transforming the debts into shares by various exchange deals.[11]

Countries can service their foreign debt by generating surplus in the commercial (trade) account of balance of payments or in the capital account (additional foreign borrowing), or some combination of the two. Because borrowing had been large, so this alternative was exhausted. Under the new circumstances, large trade account surpluses were required. These surpluses have been the main issue of the IMF's solution to the debt crisis. To achieve this, substantial increase in outputs are required.

The public sectors were eating up most of the funds borrowed from abroad. So to prune the deficit, the burden of adjustment had to be shifted onto the private sectors. This, however, resulted in de-industrialisation because imports were becoming expensive and new equipments to maintain the industrial base were difficult to procure. Whatever little was produced, had no market because the mass purchasing power had been destroyed due to wage-

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[10] Shmelev, n.3, p.21.

[11] Nosova, n.5, p.159.

reduction.[12]

The export-promotion policies failed to provide the lost economic momentum to these Latin American nations. For the promotion of exports, they lacked machine-building technologies and a developed scientific and technological base. They faced a host of new competitors; besides global over-production and economic stagnation in the advanced capitalist nations meant a wave of protectionism where Latin American countries started losing ground.[13] The accumulated effect was an enormous debt whose servicing seemed impossible.

Volume of External Debt and Its Distribution

Latin America in 1986 had the largest share of external debt among the regions of the developing world amounting to about 38 percent of the total debt.[14] According to the World Bank projections for the year 1992, the external debt liability of the Latin American and Caribbean region stood at a staggering $ 446 billion of which more than three-fourths was public or publicly guaranteed. This represented 58 percent of the GDP.

Since 1984, Latin American countries had paid out $ 160 billion in debt payments, mostly in interests. That averaged to 30 per cent of all export earnings and for Brazil the figure came

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[12] James M. Cypher, "The Debt Crisis as 'Opportunity': Strategies to Revive US Hagemony", Latin American Perspective (California), vol.16, no.1, winter 1989, p.53.

[13] ibid., p.62.

[14] External Debt Statistics, (Paris: OECD, 1987), p.8.

close to 50 percent. The debt which grew at the annual rate of 16.8 percent during 1970-1973, grew at 21.2 percent during 1973-1980.[15] In 1981, annual inflation rate was less than 10 percent for most countries.[16] But towards the end of the 1980s hyperinflation -- touching four digits in most cases -- forced cut in public expenditure and rising proportion of revenues absorbed by interest payments -- for example, it absorbed one-third of the GDP in Brazil -- made the situation worse.

Table 2 gives the composition of the debt incurred between 1970-1992.

The long term debt are advantageous since they offer a longer maturity period. The short term debt have shorter maturity period and a higher rate of interest. Between 1970 and 1980 there was a deluge of such short-term lendings in Latin America. Their servicing charge brought in trouble. This was, however, needed to finance developmental activities as the long-term loans were drying up. There has been another increase in short term debt in the post-1987 period.

Higher interest rates and shorter maturities which are characteristics of the borrowing from private sources, caused a marked fall in the size of net transfer during 1976. The private lenders have preferences for productive investment. The share of debt from private sources rose from 17.9 percent of the total debt in 1967 to 43.0 percent in 1976, leading to hardening the

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15 Narayanan, n.7, p.22.

16 ibid., p.23.

Table 2. Summary of Debt Data for Latin America and the Caribbean

	1970	1980	1987	1990	1992
Long term debt (LDOD) (US $ million)	27,696	187,197	410,636	377,691	408,078
Short term debt (US $ million)	-	68,753	45,447	77,740	92,828
Total debt (EDT) (US $ million)	-	257,363	474,295	473,279	496,330
Public and Publicly guaranteed (US $ million)	15,823	144,739	369,065	352,862	350,747
Private nonguaranteed (US $ million)	11,873	42,458	41,571	24,829	37,615
Interest payment (INT) (US $ million)	-	24,580	28,850	22,830	22,931
EDT/XGS (%)	-	206.6	384.4	276.0	272.2
EDT/GNP (%)	-	37.2	68.8	46.7	41.7
INT/GNP (%)	-	3.6	4.2	2.2	1.9
Variable rate long term Debt (LDOD) (US $ million)	12,501	117,188	271,697	194,206	205,903
Public Sector LDOD	15,397	124,171	339,501	321,851	319,327
Private Sector LDOD	12,299	48,157	45,244	28,212	40.781

Source: World Debt Tables, 1993-94 (Washington, DC; World Bank).

financial terms of debt.[17] Lower-income countries have relied heavily on public debt because they were either unable to gain access to private capital markets, or were barred by their own governments sometimes from attempting to enter them.

The external debt to export ratio shot up in 1987 to an all time high but declined slightly thereafter due to efforts by the debtor government to enhance exports. The GNP of these nations went down due to forced import restriction including those of capital goods. Interest payment amounted to about four times the GNP. This retarded domestic savings and there was an outflow of the much needed currency for investment in production.

The amount of loan contracted at variable interest rates became almost ten times between 1970 and 1980. The raising of interest rates by the international creditors enhanced the debt burden. The loans which had fixed interest rates were lower in proportion because those with variable rates even ran into negative terms after the boom in petro-dollars.

The public sector in the Latin American countries were becoming white elephants. Those state-owned enterprises acted as sponge soaking major portion of the long term debt. They never bothered to service these debts. The efficient private sectors took upon themselves the task of honouring their debt because their credibility would be at stake.

All these factors combined to produce the debt crisis.

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[17] Miguel S. Wionczek, LDC External Debt and the World Economy (Mexico, 1978), p.37.

Measures to extricate themselves from this situation led to arduous, and extensive negotiations between the banks and debtor countries. The banks rescheduled their debts, but they could not continue to be lenders of the last resort until the indebted countries dished out some viable financial option to meet the debt crisis.

Measures to Meet the Crisis

The burden of external debt and its servicing have been the major issues of concern for the policy-makers both in the debtor and the creditor countries since Mexico nearly declared moratorium in 1982. Debtors pleaded that they were suffering from insolvency and therefore required major reductions in their debt obligations, while creditors stuck with the illiquidity explanation.[18] Latin American debt management passed through three stages. The one from 1982 to 1984 involved the involuntary supply of new money by lenders in return for austerity measures taken by the debtors. The second stage from 1985 saw the negotiations of debt restructuring. The Bankers made efforts to resist demands for additional finance. Around the middle of 1986, coinciding with the third stage, new and innovative responses were being dished out.

Borrowers were aware that deviation from payment schedules would damage their credit standings, and lenders viewed

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[18] Gary W. Wynia, "New Strategies for an old Problem", in Robert Wesson, ed., Coping with the Latin American Debt (New York, 1988), p.21.

rescheduling as, atleast, a temporary impediment to their cash flows. Debt-service problems could have led to three events: a unilateral moratorium on payments by the debtor; an outright repudiation of the debt by the debtor; or a declaration of default by the creditor.[18]

The talks on rescheduling became an integral part of the international economic life from 1982 onwards. The character of negotiations was determined by mutual interests of the parties involved, atleast as a stop-gap measure. Latin American debtor countries had to work out their problems with their creditors, principally the private commercial banks, with the participation of the IMF and its traditional formula of austerity and domestic adjustment.[20]

There were two courses of action which the lender and borrower could take in concert:

i) Refinancing through the extension of new loans from the original lender, a portion of which could be used to service the existing debt; or

ii) rescheduling through a lengthening of maturity and grace periods contained in the initial agreement.

Each of the principal parties involved in the debt rescheduling process has evolved a distinct position on the

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[18] Chris C. Carvounis, The Debt Dilemma of Developing Nation: Issues and Cases (London, 1984), p.62.

[20] Riordon Roett, "Brazil and the Debt. Social Caste", in Robert Wesson, ed., Coping with the Latin American Debt (New York, 1988), p.81.

issues surrounding the external debt relief. The IMF has endorsed the concept of structural deficit lending. Debt-service problems are primarily the responsibility of the debtor, who must initiate any request for IMF assistance and must comply with its conditionalities to receive emergency loans. The commercial banks view rescheduling as an extreme event and avoid renegotiations of contracted LDC debt until a liquidity crisis is under way. They called for a case-by-case approach to restructuring. Official creditors did not acknowledge the existence of a generalized LDC debt problem. The problems were viewed as balance of payments difficulties. For the debtors, the current rescheduling mechanism was woefully fragmentary and makeshift. They favoured a relaxation of fund conditionality and wanted greater say in the form and pace that adjustment programmes takes.

Accordingly, a series of rescheduling operations were designed to provide emergency finance, the so called "rescue packages".[21] A way out could be found in seeking short-term breathing space from foreign exchange constraints by reducing the debt-service ratio. The year 1984 saw the inability and unwillingness of the Latin American governments to continue to service their debt. A plan of action was agreed upon at the Quito Meeting of January 1984, calling for longer repayment periods and no increase in the cost of debt as a result of rescheduling.

In response to the strong precedents of creditor

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[21] Diana Tussia, "The Coordination of the Latin American Debtors: Is There a Logic Behind the Story?" in Stephany Griffith-Jones, ed., Managing World Debt (New York, 1988), p.283.

coordination found in the Paris Club in August 1982, the Cartagena meeting convened in June 1984 would provide the setting for a debtor's cartel. But the debtor governments feared that aggressive tactics might provoke government and public opinion in creditor countries into retaliating. The final communiqué of the meeting stressed the willingness of debtors to honour their debts and to continue within the case by case framework. A Bolivian proposal put forward during the preceding technical meeting to create a debt negotiating commissions was rejected to dispel any threat of a debtor's cartel. But the creditors had clearly decided to present a common front and to pursue a strategy of 'divide and rule', which would reward cooperative countries and isolate rebellious ones.[22]

In 1985, Fidel Castro convened a large gathering in Havana and made an appeal to the Latin American governments to repudiate their foreign debts. A few months after Castro's statement, a U-turn occurred on the side of creditors. The new approach was outlined by the US Secretary of the Treasury, James Baker, in Seoul in October 1985.[23] It envisaged additional crediting of developing countries worth US 29 billion dollars over three years, of which 9 billion dollars were to be delivered by international financial organizations, and 20 billion dollars by commercial banks. With the Baker Plan the emphasis was shifted

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[22] ibid., p.289.

[23] This was at the 40th session of the IMF and International Bank for Reconstruction and Development Board of Governors.

from the financial to the economic implication of debt servicing. It admitted that the debt problem could not be resolved satisfactorily if it impeded growth in the indebted countries. The Cartagena Consensus called the Baker initiative as a 'positive step' but 'inadequate'.[24] Additional money was needed to raise the low levels of investment. This support would be provided if the beneficiary country introduced free market policies. But since many banks were unwilling to provide substantial additional financing, the Baker Plan was stillborn.

US Treasury Secretary, Nicholas Brady, then offered a plan in 1989.[25] He realised that resumption of growth in the debtor country would require reduction in the real value of the debt. The Plan asked banks to forgive part of their loans to debtor countries in exchange for limited guarantees and repayment, financed by the World Bank and the IMF. The private banks were enthused to make new loans to help fund growth. For their part, debtors would be required to undertake domestic reforms to facilitate private investment. It also allowed international institutions to help the debtor government buy debt relief so that risk was shifted from the private sector to the public sector. By mid-1990 the Brady Plan was producing the first modest

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[24] ibid., p.295.

[25] Ann Halwege and Eliana Cardoso, Latin American Economy: Diversity, Trends and Conflicts, (Massachussets, 1992), p.140.

results.[28] Banks were far from eager to participate. Large banks complained that they were being forced to grant debt relief that would subsidize smaller banks that did not participate in the plan. Direct (private) investment was also stunted by existing debt, because these depressed economies yield low profit on new investment.

In addition to the debt management programme, Latin American countries introduced 'adjustment' policies, calling for opening up their economies to external competition, rolling back the state and privatising, all with a view to accelerating the economic development. The heavy burden of interest payments and related debt servicing, trade deficits and hyperinflation stymied the performance of the countries despite economic liberalization.

Even though repatriation of capital started but these were not direct foreign investments. Rather, they were attracted by the growing difference between the real interest rates offered in these countries and those prevailing in international financial market.

The process of internal adjustment included a drastic reduction in domestic demands and providing incentives to shift supply from the domestic to the world market. Other efforts included currency devaluation, financial liberalisation, reduction in fiscal deficit through increase in revenues and cuts in public expenditure. The countries also resorted to a policy of

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[28] Peter Hakim, "The United States and Latin America: Good Neighbours Again", Current History (Philadelphia), vol.91 (1992), p.50.

privatisation and the dismantling of public enterprises, either on efficiency ground or for fiscal consideration.

Apart from these, some innovative schemes of debt reduction were proposed which emerged after the 1982-crisis and centred around the fact that prices of developing country debt show large discounts in the secondary market. These schemes attempt to pass on to debtor countries, some of the reduction in loan value implicit in these discounts.

Debt crisis could have certain vital implications: risk of suspension of debt repayment; the risk of creditor bankruptcy; the consequences of reduced capital inflows on development; and the risk of new, imposed regulatory policies on foreign lending. The lenders realised that the crisis could not be terminated. Rather, the only option left was to cut losses. Adoption of market-based resolutions could help reduce the debt overhang.

Financial negotiations centering around debt-conversions have immense potential. The emergence of secondary market make the debt more manageable by conversion to some kind of securities. The banks can extract atleast some money from the languishing debtors. The following Chapter looks into some of these innovative strategies suggested for debt management. But since debt and the environment are inextricably linked in the Latin American context, the focus of the Chapter will be on the concept of "debt-for-nature" swaps.

CHAPTER 2

INNOVATIVE STRATEGIES

The need for the reduction of the debt burden of the developing debtor countries led to the evolution and consideration of several innovative strategies. The previous chapter dealt with the extent and the causes of the debt crisis in the Latin American countries. The present Chapter is devoted to describing the major strategies that evolved in the course of debt rescheduling involving the debtors and the creditors. The main strategies for providing, atleast, partial relief from the burden of the burgeoning debt were `debt-for-debt´ conversions, buybacks, `debt-for-equity´ and "debt-for-nature" swaps. Of these the need to point out that "debt-for-nature" swap has an edge over the other strategies is imperative since debt and environment are inextricably linked together. It is the enormous size of debt that has led to large scale deforestation in several countries in order to produce the requisite revenue for debt servicing. Deforestation is undertaken, also, in order to mitigate the hardships caused by the general economic decline.

The present Chapter is divided into three major sections with the first section being devoted to describing the different strategies of debt reduction; the second to the elaboration of the mechanism of "debt-for-nature" swap. The concluding section then highlights the complexities of the major transactions done so far by some of the Latin American countries.

Innovative Strategies

Proposal for a market-based approach to easing the debt crisis have been most common since the middle of 1980s. However, underlying most of them still is the assumption that the debt crisis is essentially a temporary problem of shortage of liquidity. Recognizing that adjustment fatigue had been mounting and posed the threat of a break-down of the economic process, a new wave of suggestions involving innovative financing schemes to ease the economic and financial strains emerged. These proposals are designed mainly to entice creditors to accept the conversion of debts into other assets. Described from the outset as the `menu approach´, a variety of these conversion techniques offer, both the creditors and debtors, the choice to convert their debt into bonds or shares, or into some other form of productive assets in the debtor countries.[1]

These market based transactions call for a third party involvement to bear some of the adjustment costs and/or some of the risk; and more significantly, to apply regulatory control.[2] These also involve negotiations between debtor and the creditor as to how the discount would be utilised.

The feasibility and popularity of `menu approach´ rest on the facts of emergence of a secondary market in debt. As the

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[1] Morris Miller, Debt and the Environment : Converging Crises (New York: United Nations Publications, 1991), p.114.

[2] ibid., p.115.

crisis deepened in Latin America and elsewhere, a secondary market for loan sales had emerged.[3] This was the outcome of a realization on the part of the creditor private banks, multilateral financial agencies and governments of creditor countries that full repayments of the loans were probably not possible. Therefore, rather than accepting the demands of completely writing off the debt, which would create adverse incentives for repayments of future loans, lenders were willing to consider alternative strategies.

Under this category of proposals, the creditors' claims to repayment of debt are converted to claims on assets in the debtor countries. The evolution of secondary market for the developing countries' loans enabled debtors to take advantage of the prevailing actual discount and get rid of difficult-to-realise loans. More importantly, it improved the economic scenario in the debtor countries by encouraging some private investment inflows, particularly in the form of return of flight-capital. The following Table 1 indicates the depth and spread of the secondary market and explains why the 'menu approach' began finding favour with the creditor banks and governments.

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[3] Secondary markets are for the sale and purchase of outstanding debts that are held by creditors as assets. The value of these assets at any point of time before their maturity depends on what a buyer is willing to pay. The debts of almost all third world countries are discounted in accordance with the assessment of their ability and willingness to service their debts; the discount being reflected in their valuation in the secondary market.

TABLE 1. Secondary Market Prices for Debt of Major Latin American Debtors, 1986-90 (Percentage of Face value)

	Argentina	Brazil	Chile	Mexico
1986				
April	65.8	77.0	67.5	58.0
August	66.0	75.0	68.5	58.0
December	64.0	74.0	68.5	56.0
1988				
April	29.0	50.0	59.0	51.0
August	22.5	46.5	60.0	46.5
December	21.5	39.5	59.0	41.5
1990				
April	13.3	28.0	64.3	41.2
August	14.3	18.0	70.0	43.8

SOURCE : LatinFinance, (Coral Gables, Florida), no. 23, (December 1990).

One can identify atleast four different kinds of debt swap arrangements : 'debt-for-debt' swap, 'debt-for-equity' swap, buyback and "debt-for-nature" swap.[4] 'Debt-for-debt' swap involves a transaction between creditors who inter-change external debt of a developing country. Concessional debt is exchanged for a new and restructured debt which has generally a reduced face value. The discount or amount forgiven is determined and a concessional interest rate is charged on the new debt, which cannot be rescheduled further.[5] This type of debt reduction programme was proposed and carried out under the "Enterprise for the Americas Initiative" (EAI).[6]

Buybacks which are also called the 'debt-rescue' swaps consist of a repurchase of a country's debt in the secondary market. The case of Bolivia is an example. Under the scheme, government of a debtor country buys back its own external debt at a small fraction of face value. For major debtors, debt conversion would take the form of a new bond offer that involves conversion of existing debt, of course at a discount, into new

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[4] Stein Hansen, "Debt-for-nature" Swaps : Overview and Discussions of Key Issues, Environment Department Working Paper No. 1 (Washington, D.C. : The World Bank, February 1988), p.35.

[5] World Debt Tables : External Finance for Developing Countries, 1993-94, vol.I (Washington, D.C.: The World Bank, 1993), p.35.

[6] A unilateral declaration of intent announced in June 1990 by the U.S. president George Bush (1988-92), EAI proposed reduction in debt that Latin American countries owed to US government; free trade and investment opportunities. Envisaging a Hemispheric-wide free trade zone, EAI targetted the opening of Latin American economies through greater liberalization and privatization.

bonds. Such a conversion reduces the face value of the outstanding debt and hence interest payments too.

The 'debt-for-equity' swap involves the conversion of external debt into some form of equity in the debtor country. How does this swap work? A firm buys a claim from a bank in the secondary market. The claim is then presented to the debtor country's central bank for payment in local currency at discounted rates. The proceeds are then used for investment in the debtor country. When the transaction is complete, a creditor bank has sold off a claim for dollar cash; a foreign firm has acquired a real asset in the debtor country; and the central bank of the debtor country has reduced its dollar liabilities. Debt-equity swap are being extensively used to finance purchases of existing firms, induce investments in new operations, and unload burdensome state corporations.

The concept of "debt-for-nature" swap is fairly straight-forward. With the administrative help of private financial institutions, a developing country's debt is purchased at a discount in the secondary market. The purchasers may be either a conservation group from a developed country, the debtor government itself, or local conservation groups of the debtor nation. The next step is to convert the purchased debt into the local currency equivalent. These funds are then used directly for certain environmentally-sound projects or else are used for the purchase of income-generating bonds whose proceeds are then utilised for the protection and promotion of an environmental

project.[7]

All the swap arrangements hold the promise of eventually reducing the outstanding debt; and doing so in a manner that would shift the debtor country's economy towards greater reliance on a market-oriented approach. For the debtors, the key attractive element is the possibility of capturing the discount on their loans. But the discount issue is the most contentious factor in the equation. There lies a difficulty in persuading creditors to accept the secondary-market valuation of their claim on a third world country's debt. Equally serious is the inflationary impact of such swaps on the economy of the debtor country. The conversion of the debt into local currency increases the money supply in circulation. This adds to the inflationary pressure already difficult to control in several debtor countries.[8]

Be that as it may, debt crisis and environmental degradation are two issues often locked in an adverserial relationship in Latin America. Large scale deforestation and rampant mining activities to generate export revenues and mitigate the problems of widespread unemployment heightened the concern of environmentalists and governments both in the region and outside. It was in this context that the innovative "debt-for-nature" swaps were recommended to several Latin American countries. In a sense, the "debt-for-nature" swaps have an edge

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[7] Miller, n.1, p.161.

[8] ibid., p.127.

over all the other innovative debt-reduction strategies in achieving the dual ends of easing the debt burden and protecting the environment.

In short, the so called innovative mechanisms were put forth in a climate when debtor countries as well as creditor banks and their governments had, nearly from the mid 1980s, begun agreeing on the need for structural reforms. The change is significant since the Regan Plan and Philadelphia Formula suggested by Ronald Reagan administration (1980-1988) had insisted on rescheduling only in the case of the creditworthy countries. On their part, the debtor countries of Latin America had not only given up their ideas about creating a debtors' cartel but all through the 1980s had been accepting the stabilization programmes suggested by the multilateral lending agencies. It was in a climate of economic restructuring that ideas related to debt swaps started gaining currency.

Debt and the Environment

The environmental consequences of the Third World's debt crisis have been admittedly catastrophic. Obligated to manage their economies according to the prescriptions of the World Bank and the IMF, Third World nations have responded to the debt crises by selling whatever they can to raise export surpluses. The result has often been the excessive exploitation and frenzied harvesting of natural resources and consequent grave damage to the environment -- the scenario responsible for the

large-scale destruction of rainforests in Latin America and elsewhere. Debt is not the sole reason because, in fact, developmental priorities had equally disastrous impact on environment. Be that as it may, the world's forests are disappearing at an estimated rate of 15 million hectares each year, with most of the losses occurring in humid parts of Latin America, Africa and Asia. With the present rate of deforestation, about 40 percent of the remaining forest cover in the developing countries, or 20 to 50 percent of all plants and animal species is likely to be lost by the year 2000.[8] Tropical forests are admittedly a valuable resource, not only on a national but a global scale, for maintaining ecological balance.

Environmentalist argue that one of the global goods that is being seriously threatened by deforestation is bio-diversity.[10] The rainforests are the habitat of innumerable plant and animal species -- all mutually dependent and necessary for ecological balance -- which are becoming extinct in the wake of deforestation.

Latin American region, it is claimed, possesses about 70 percent of the world's plant and animal species. Even if a

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[8] Global outlook 2000 : An Economic, Social and Environments Perspective (New York : United Nations Publications, 1990), p.85.

[10] Bio-diversity includes the diverse forms of flora and fauna present in an eco-system. The rich and unique gene pool can be used to breed plants and other living species that are more suited to a particular environment, can produce new foods or are of immense value in pharmaceutical industries, besides maintaining all vital parts of the nature's system.

small patch of forest is destroyed, many species are feared lost entirely. Because of the inter-dependence and co-evolution of species, extinction of one could cause the extinction of many others. Apart from the destruction of irreplacable species without regard for their potential economic, aesthetic or biological significance, another major global concern is the greenhouse effect. The tropical forests can and do play a role in changing the global environment. Rainforests absorb a substantial amount of the greenhouse gases such as carbon-dioxide (CO_2) and help maintain a relative balance in atmospheric gases.

Deforestation and oombustion of fossil fuels lead to excess of atmospheric CO_2 which allows more heat from the sun to reach the earth while inhibiting the escape of heat radiated from the earth's surface to the atmosphere. In the past few decades, deforestation has been adding roughly two gigatonnes of CO_2 to the atmosphere every year. According to computer-based projections, the accumulation of atmospheric CO_2 resulting from the current deforestation practices would raise the earth's temperature on an average between three and nine degrees Fahrenheit by 2050 A.D.[11]

This would cause ocean levels to rise by several feet, flooding coastal areas and altering vegetation types. Among the

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[11] David Barrans, " Promoting International Environmental Protection Through Foreign Debt Exchange Transactions," Cornell International Law Journal (Ithaca, New York), vol. 24, no.1, winter 1991, p.69.

possible strategies for reducing the greenhouse gas emissions, halting deforestation, arguably, is the most important alternative alongwith increasing the efficiency of energy use.

Deforestation also leads to an increase in barren land and desertification in tropical regions; soil erosion caused due to removal of the vegetative cover from the soil surface whose roots bind the soil together; and increased downstream flooding. Another major consequence of deforestation is the threat to the livelihood of the indigenous people inhabiting these forests who depend for their survival on these forests and their products. Their culture and ways of life are also influenced by these forests e.g. the Yanomami tribe in Brazil.

The cause of deforestation is not simply population pressure but, as has been noted earlier, also the desire to earn more foreign exchange. Many of the countries are induced to cut and export timber faster than their forests are being regenerated. As has been discussed subsequently in Chapter 4, developmental strategies such as those in Brazil during military rule (1964-1985) also contributed to environmental problems through the policies of opening up of the Amazon. Increasing population pressure and the need to solve the problem of landlessness led the Brazilian military government to open the Amazon, where the small landholders, due to soil conditions indulged in shifting cultivation. This led to clearing of large tracts of forests. Extensive cattle ranching in Brazil and several other countries also proved detrimental to the forests.

Converting forests into pastures was attractive due to various tax credits and governmental subsidies. In many other countries overuse of forest resources also took place on account of increasing demand for fuelwood.

Along with these factors, the severity of the debt in its own way forced the developing countries to search for quick fix solutions which could generate maximum export revenues quickly; for example, cutting down trees and using land for the purpose of shifting cultivation and cattle ranching. It is not beside the point that such quick fix solutions hardly contribute to development process. So neither development nor environment is sustained through these temporary policy measures. This is where the linkage between environmental problems and the international debt crisis emerges. No gainsaying, there is a direct link between external debt and the destruction of rainforests. In their desperate attempt to service their debt, many debtor developing countries have been forced to excessively exploit there natural resources so as to raise their export earnings.

"Debt-for-Nature" Swap : Mechanism and Modalities

The idea of "debt-for-nature" swap, first proposed by Thomas Lovejoy, the then Vice-President of World Wildlife Fund for Nature (WWF) in 1984 represented an innovative concept which recognized that the debt crisis and the problems of the environment were linked. Lovejoy proposed that the Third World

could be relieved of some of its debt if, as a quid pro quo, it pledged to implement various environmental protection measures.[12]

How does the "debt-for-nature" swap work? Creditor banks holding a country's debt sell it at deep discount in the secondary market to conservationists and write off face value from taxes. The country's central bank redeems the debt and issues local currency bonds equivalent to the debt. Debtor nation's conservation organizations use bond interests or directly the proceeds of debt sale to finance local environmental protection projects.

A perusal of such swaps indicate atleast four distinct stages leading to the final arrangement:[13]

First, negotiations are conducted between an environmental organization -- called the donor organization -- which acts as the purchaser of the debt papers, and the debtor government -- also usually including the central bank of the debtor country -- to establish the framework for a swap.[14] In most cases another environmental organization -- called the recipient organization -- from the debtor country concerned is also involved.[15] The so called recipient organization is generally

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[12] International Hearld Tribune (Paris), 14 October 1984.

[13] Jens Rosebrock and Harald Sondhof, "Debt-For-Nature Swap: A Review of the First Experiences", Intereconomics (Hamburg), vol. 26, no. 2, March-April 1991, p.83.

[14] ibid.

[15] ibid.

familiar with local conditions, maintains the necessary contact with the government officials and subsequently is expected to oversee the protection of the agreed upon environmental asset.

In the second stage, the donor organization purchases debt paper for the agreed amount and assigns them to the local environmental organization that is, the recipient organization.

The third stage involves the implementation of the agreement in accordance with the conditions negotiated with the government and/or the central bank. The debt is then converted into local currency and, at times, into some other kind of benefits such as ceding a part of forest or a land area, which should be equivalent in value to the sum in local currency of the debt thus redeemed. It depends on the specific circumstances of a transaction whether preference is given to the acquisition of interest-bearing government bonds; or to simply the assurance of legal protection measures (perhaps for a national park); or the complete conversion into national currency for an environmental project.

In the final stage, the funds available are used for the implementation of project intented to help protect the environment. The leading role is now assumed by the local recipient organization though the donor organization frequently also preserves the right to act in a consultative capacity. However, instances of conflicting opinion and intereste are there where the international donor organization have tended to work in a high-handed supervisory fashion.

"Debt-for-nature" swaps have also been termed 'debt-for-expenditure' swaps because non-governmental organizations (NGOs) are interested in obtaining domestic currency at a discount which they subsequently want to use for the same purpose.[16]

"Debt-for-nature" swap transactions bring together institutions which have their own differing interests. Environmentalists, banks and economic planners have generally their own limited and very divergent perspectives. The strength of the swap arrangement lies in its capacity to achieve a balance between those divergent interests. Environmental organizations which put themselves forward as donor organizations are often the driving force behind the "debt-for-nature" agreements. They are an appealing means of making most effective use of available resources, and also in generating additional funds. In addition, the organizations may even try to find' sponsors for a "debt-for-nature" project. The prime candidates for such co-operation are generally those banks which are keen to reduce their commitment in the international debt market.

Commercial banks of the creditor countries have their own interest in the proper functioning of the secondary market and therefore welcome the demand for Third World loans in the secondary market. They continue to maintain and increase the marketability of the debt paper.[17] They also usually act as

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[16] Hansen, n.4, p.3.

[17] Rosebrock and Sondhof, n.13, p.84.

advisers to the donor organizations and even act on their behalf to purchase the papers on the secondary market.

The government of the debtor country has the advantage that the swaps can be used to finance environmental tasks for which it frequently has no funds of its own. Moreover, the swaps mean that a part of hard currency debt has been converted into national debt, which is at times preferable to most governments. Finally, the local environmental organizations in their role as potential recipients are interested in "debt-for-nature" swaps since more funds are thus made available to them than they would otherwise have been able to obtain from conventional financial transfers.

The benefit of such swaps for the debtor country is determined by the difference between the present value of the costs of the outstanding debt and the present value of the cost of the equity. The larger the debtor's share in the discount, the lower the present value of the cost of equity and the larger the benefit of the swaps.

The "debt-far-nature" swap has largely had a positive reception from the general public in debtor countries. One important factor is that these transactions do not involve any transfer of property away from the country itself in favour of the donor country. These also provide the governments an opportunity to gain the publicity and goodwill that come from funding popular causes such as conservation of natural resources. The other advantage of these arrangements to the

debtor nation is that it can easily pay off a significant foreign exchange obligation with domestic currency. Government reputation is one variable that needs to be assessed at the time of a proposal. How much compensation is needed to induce the country to adopt a sustainable environmental management activity depends on how the government values a drop in its reputation or the loss of its creditworthiness. If the government already has a conservation programme in place, risk of contract breach is no larger than for any other grant aid for conservation projects. It is important to check to what extent the "debt-for-nature" swap really provides additional funds or simply ends up substituting for other conservation activities.

There are atleast as many as four variations in which "debt-for-nature" swaps do materialise.[18]

(i) Conversion of debt by the central bank into local currency to be held by a local environmental organization for investment in environmental project. In this case the equivalent amount is handed over to the local environmental organization.

(ii) Issuance of local bonds, proceeds of which are used by a local organization for investment in environmental projects.

(iii) Purchase of debt by an environmental organization -- national or international -- and its discounted sale to a multinational corporation (MNC), which in turn agrees to make environmentally sound investment and adopt efficient technology; and

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[18] Hansen, n.4, p.3.

(iv) official debt relief tied to supporting environmental management.

The swaps carried out so far mainly in Latin America, have had the following characteristics:

(i) Efforts were made to involve private, locally-based environmental organizations, either as managers of programme or as trustees working in collaboration with governmental agencies.

(ii) In each case the funds have been channelled into precisely defined projects, the majority of which involved extending or taking care of natural resources.

(iii) Although the donors in a majority of cases have been private organizations most of the transactions have been with the national governments of the debtor countries .

(iv) Property right, whether to land or to other resources, have not been transferred to the donor organization in any of the arrangement so far concluded.

Since 1987, when the first "debt-for-nature" swap was concluded in Bolivia, thirty one such transactions, most of them in Latin America, have taken place until 1992. Through this mechanism a total of about US $ 128 million have been raised for various environmental projects at an initial cost of only US $ 47 million -- on an average discount of 62 per cent.[18] This indicates, first, the meagre amount of the debt thus swapped; and second, the virtually irredeemable position of a particular debt

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[18] World debt Tables : External Finances for Developing Countries (Washington, D.C., 1993), p.115.

instrument which made it sell at such a heavy discount.

Significantly, the three Latin American countries namely, Bolivia, Brazil and Costa Rica account for most of the "debt-for nature" swaps in the region. Table 2 shows the extent of debt conversion through the mechanism of "debt-for- nature" swaps in these three countries.

Notwithstanding, the potential benefit of "debt-for-nature" swaps, there are several problems -- envisaged and actual -- which limit their effectiveness or prevent their realization.

Firstly, just an expressed governmental concern for environment and a high preference for better environmental management generally do not lead to voluntary decisions and resource allocation for the purpose. There has to be sufficient fund available for this. Environmental issues are taken care of mostly when economic activities, such as, for example, income from the tropical forests are low or negligible.

Secondly, the debtor governments already preoccupied with structural reform programmes which require massive managerial and administrative monitoring resources, find themselves often running behind schedules of implementing reform process. Adding various environmental projects to these already overburdened administration pose severe administrative bottlenecks and shortage of managerial skills and personnel.

Thirdly, the most serious criticism of "debt-for-nature" swaps is on economic count. Such arrangements no doubt, tend to be either inflationary or require the debtor nation to take an

Table 2. "Debt-for-Nature" Swaps, 1987-1993

Country	Year	Cost (US $ thousand)	Face value	Conservation funds	Purchase price (%)	Redemption price (%)	Leverage	Source of funds
Bolivia	1987	100	650	250	15.4	38.5	2.5	Conservation International (CI)
	1992	0	11500	2760	0.0	24.0	n.a.	WWF & CI
Brazil	1992	748	2200	2200	34.0	100.0	2.9	CI
Costa Rica	1988	5000	33000	9900	15.2	30.0	2.0	Netherland
	1988	918	5400	4050	17.0	75.0	4.4	National Park Foundation of Costa Rica
	1989	3500	24500	17100	14.3	69.8	4.9	Sweden
	1989	784	5600	1680	14.0	30.0	2.1	The Nature Conservancy (TNC)
	1990	1953	10754	9630	18.2	89.3	4.9	Sweden, WWF, TNC
	1991	360	600	540	60.0	90.0	1.5	TNC, Monteverde Conservation League Rainforest Alliance

NOTE:
Cost = Expenditure by environment agency to acquire the sovereign debt.
Face value = Face value of the sovereign debt acquired by the environment agency.
Conservation funds = Value in dollars equivalent to the local currency part of the swap.
Purchase price = Price at which the debt was acquired (cost/face value).
Redemption price = Conversion rate from foreign debt to local debt (conservation funds/face value).
Leverage = Redemption price/purchase price.

Sources: World Wildlife Fund, Nature Conservancy and World Bank Data, 1993.

expensive domestic debt.[20] Unless contracted by savings in other areas, the conversion of hard currency into local one has the effect of raising the money supply in the debtor country. It has been suggested that these alternative problems can be avoided if the debtor government instead of purchasing the debt paper with local currency, cedes land to the local organization for conservation. Thus, inflationary effect can be alleviated if funds are not released but invested in interest bearing government bonds.[21] Be that as it may, many inflation ridden countries have found such swaps extremely unattractive.

Fourthly, the political and scholarly circles mainly in debtor countries have expressed reservation about the "debt-for-nature" swap, since it is agreed that such an arrangement interferes with the sovereignty of the debtor nations.[22] One, the swaps vest control over debtor nations' land and resources in the hands of foreign creditors. Such transactions tantamount to a sale of land. Apprehensions that such swaps would facilitate the imposition of foreign control, alien ideas and values become more common since politics is inseparable from environmental issues.

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[20] A minority of economists maintain that the inflation threat is overstated. They claim that the effect is precisely the same as with any new foreign investments. However, the experience of some Latin American countries, such as Brazil and Mexico, belie such an assertion.

[21] Rosebrock and Sondhof, n.13, p.85.

[22] Barrans, n.11, p.79.

However, it is erroneous to overstate such apprehensions since environmental groups do not seek to secure title to the land. The concerns over the imposition of foreign projects and values are eliminated since "debt for nature" swaps are negotiated and approved by the debtor nation themselves and are, generally, defined and managed by the local groups; and above all, have so far been concluded on a limited scale.

Fifthly, the issue of legal enforceability is another obstacle in the use of "debt-for-nature" swaps. Various control problems like absence of an overseeing authority make it difficult to enforce the legal arrangements of a "debt-for-nature" swap. The private organizations are provided with hardly any instrument such as legal remedy, to enforce the arrangement. No legal means of enforcement are available to ensure that the funds are really deployed as agreed.[23]

Lastly, the effectiveness of the secondary market also affects the "debt-for-nature" swaps.[24] Though these markets are described as rapidly maturing one, donor organizations have problems in purchasing the debt paper. There are only twenty odd countries whose debts are thus regularly traded.[25] The secondary market is characterized by price fluctuations and low volume of trading.

The amount of debt converted thus far in "debt-for-nature"

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23 Rosebrock and Sondhof, n. 13, p.86.

24 ibid.

25 ibid.

swap represents only one small portion out of a larger size of indebtedness. The amount of debt converted so far has been limited because environmental protections are still viewed as unprofitable and remain low on the priority of both government and banks.[26] The transaction cost of reaching a multiparty agreement is at times, higher in proportion to the actual amount swapped. Many environmentalists have argued that if "debt-for-nature" swap are included in a 'package' of debt-relief, costs of negotiating individual "debt-for-nature" swap would, to some extent, be absorbed by the overall transactions.[27]

Conservation reserves created through "debt-for-nature" swaps may exist along with the traditional revenue-producing activities such as ranching and farming in the unprotected areas. This defeats the very purpose of the transaction because protecting only specific parts while leaving other parts for indiscriminate exploitation, offers little protection to rainforests as a whole.

In sum, the relation between external debt and environment is a complex one. As has been seen in the present Chapter, "debt-for-nature" swap and all other innovative mechanisms have been suggested less for environmental and more for economic considerations. Involving international environmental groups, governments and central banks of the debtor countries, the

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[26] Barrans, n.11, p.81.

[27] ibid.

complex transactions generally depend for their success on the size and maturity of the secondary market. As the Chapter highlights the entire process involves several stages before a transaction is concluded and the successful implementation of a transaction depends so much on good faith and perceived mutual benefits. The arrangement has been, so far, limited both in terms of the countries and the volume of debt that has been offered for swap. Political concerns such as the perceived threat to national sovereignity, economic considerations such as the inflationary impact and even environmental destruction outside the thus protected areas severely limit the appeal, efficacy and applicability of the "debt-for-nature" swap arrangements.

The next Chapter highlights in some details how the arrangement has worked in the case of Bolivia with a certain amount of success for reasons that are less to do with environment and more with the nature of Bolivian regime and its economic policies during the 1980s.

CHAPTER 3

CASE STUDY OF BOLIVIA

In the preceding two chapters an attempt was made to describe the anatomy of Latin America's external debt and the various debt-reduction mechanisms importantly the "debt-for-nature" swap arrangement that came into vogue in the eighties.

The present Chapter makes an attempt to assess and analyze the "debt-for-nature" swap arrangements entered into by Bolivia. Divided into three major sections, the Chapter makes a broad survey of the economic and political conditions and crisis followed by a description of Bolivia's external debt. The final section then describes the "debt-for-nature" swaps and their impact.

The Economic Crisis and the New Economic Policy of 1985

The landlocked country of Bolivia with nearly a population of seven million has generally been considered a good example of a dependent monoculture economy. Dependence on tin exports links Bolivia to international market and produce other secondary effects such as vulnerability to the vagaries of external market; structural dualism in the economy resulting in the neglect of non-tin activities; and at the political level a weak state. Such a state has found itself, repeatedly in the twentieth century, unable to finance its own developmental activities and resorted to external borrowings. From 1970s export receipts were never enough and both the amount and

quality of tin production and exports began a steady downward spiral which has continued to this day; a situation further exacerbated by the fact that Bolivia is a high cost producer which has always found it difficult to compete in the international tin market. Thus, not only the country's resource base remains narrow, but it has in a real sense been stagnant and/or contracting for decades.[1] Other disposable resources have been extremely limited and above all the country is ridden with social, cultural, racial and economic division.

Coupled with economic dependence, Bolivia since the 1952 revolution, which brought middle class, organized labour, and peasant demands to the centre of political process, has also been faced with conflicting demands by mobilised social classes and groups on its meagre resources. Periods of boom in tin exports have enabled successive regimes to ensure a modicum of economic development and political stability. Periods of economic downturn have generally been characterised by rapid regime changes, economic policy reversals and military interventions. Not surprisingly, the 1952 revolution led by Movimiento Nacionalista Revolucionario (MNR) focussing on a state stimulated capitalist development and a populist redistributive programme had by 1964 soured badly as none of the important economic groups and classes were willing to bear the costs of development or relinquish their redistributive claims

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[1] James M. Malloy, " Authoritarianism and Corporatism : The Case of Bolivia" in James M. Malloy, ed., Authoritarianism and Corporatism in Latin America (Pittsburgh, 1979), p. 469.

over the limited resource base.

Nationalization of mines and an extensive land reform only expanded the economic responsibility of the state without actually expanding the economic base. Consequently, the 1952 revolution only deepened dependence mainly on US both for exports of tin and economic aid. Economic aid from US and from the IMF, contingent as it was on implementing stabilization programmes, brought the MNR government of Hernan Siles (1956-1960) into increasing confrontation with popular classes. His successor Paz Estenssoro (1960-1964) bedevilled by economic crisis and political chaos capitulated on the development strategy suggested in the Alliance for Progress -- a US prescribed strategy for stimulating development on capitalist lines initiated by US president John F. Kennedy.

The period between 1964 and 1980 therefore is characterised by military authoritarian governments which using coercive measures tried to curb popular demands and miners-peasants mobilization and establish conditions of state-led capitalism. Fortuitous external circumstances in the form of rising prices of tin enabled the military authoritarian regime of Hugo Banzer (1971-1978) attract modest foreign investments in mining and other sectors and create a semblance of economic stability.

In 1973 and 1974 the price of tin in the world market had almost doubled. Besides, rising prices turned Bolivia's meagre oil reserves into a bonanza, providing nearly a quarter of total export earnings in 1974. The total volume of national exports

almost doubled in that year. However, oil reserves proved small and production expensive; so when oil prices plummeted at the end of the decade of the 1970s, Bolivia had ceased to be an oil exporter. This declining trend was offset briefly by the dramatic rise of another product viz. natural gas. But export market opportunities for natural gas were again meagre. The price of natural gas, which had become the country's principal legal export in early 1980s, tended to decline. Coupled with this trend during the early 1980s, the price of tin also declined, registering a fall of 57 percent between 1980 and 1988.[2]

From its 1980 peak of US $ 7.61 per fine pound, the price of tin had dropped to US $ 5.78 in 1982 and still further to US $ 2.43 by June 1986 while the production cost remained at a high of US $ 8 per pound.[3] Of the traditional exports, tin had also been declining over the years in terms of volume -- from nearly three quarters of all exports in 1965 to about one quarter in 1985.[4] In short, narrow resource base, high cost of production and excessive dependence on tin made Bolivia a good example of a dependent economy, forcing it to remain an open economy. For instance, sugar a major product in Santa Cruz could not be produced at less than US $ 18 per 100 kilogram while Brazilian

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[2] Jennifer L.Bailey and Torbjorn, L. Knutsen, "Surgery Without Anaesthesia : Bolivia's Response to Economic Chaos", World Today (London), vol. 43, no. 3, March 1987, p.47.

[3] ibid., p.47.

[4] ibid., p.47-48.

sugar sold in La Paz at US $ 15 per 100 kilogram. Excessive dependence on tin and in the 1980s on oil and natural gas meant that the agricultural and manufacturing base of the economy remained extremely limited and hardly contributed to export earnings. However, as mining sector exports declined all along, Bolivia tried to market non-traditional exports, chiefly manufactured and agricultural goods during 1980-1985.

The decline in exports had shaken the whole Bolivian economy. Bolivia's national income was reduced by about a quarter between 1980 and 1985; imports were reduced by 58 percent during the same period.[5] Reduced national income and cutbacks in imports produced a fall in real investment of some 75 percent during the first half of the 1980s. The drop in exports led to a decline in government revenues ironically at a time when Bolivia's prospects to secure loans were faced with uncertainty in the wake of the military coup that brought General Luis Garcia Meza (1980-1981) to the presidency. Gross violations of human rights, presence of neo-nazi para-military groups and its suspected connections with international drug traffickers had led to an economic and diplomatic isolation of the Garcia Meza regime. Despite declining export receipts, investments and income, government spendings almost remained constant producing large budgetary deficits. To compensate for this deficit, the Garcia Meza government increasingly turned to printing money to pay the state's bills as a stop-gap measure.

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[5] ibid., p.48.

After Meza was forced to step down, Hernán Siles Suazo became the first civilian elected president in October 1982. He had, therefore, to make several attempts to resolve the economic crisis at hand and implement various stabilization packages. But the government was immobilized and unable to govern in economic matters. The upshot was a steady decline in economic growth and a demand driven inflation that by 1984 was totally out of control. Put into office through constitutional manoeuvres and political manipulation in the national legislature, Siles administration remained largely immobilized and unable to craft a meaningful policy to deal with the deep crisis besetting the economy. So when in August 1985, Victor Paz Estenssoro became the president as a result of consensus among nation's private sector, foreign investors and subsequently even the armed forces, he imposed a series of tough reforms. These were designed to remedy the economic ills and to win the IMF'S approval. He floated the peso causing a devaluation of 1500 percent, froze public salaries, allowed demand and supply mechanism to determine the market prices of consumer goods and introduced a sweeping tax reform. The New Economic Policy (NEP), as it came to be called, was contained in decree 21060 and had two main objectives: to stabilize the economy and to establish the authority of the government over the state-enterprises by restructuring and decentralising them.[6] The

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[6] James M. Malloy, "Bolivia's Economic Crisis," Current History (Philadelphia), vol. 86, no. 516, January 1987, p.12.

IMF-prescribed austerity programme also opened up the economy to international market forces and domestic private sector. Other measures included decentralization of large state enterprises including Bolivian Mining Corporation (COMIBOL), the oil and gas company (YPFB) and the development corporations (CBF).[7] In order to balance the buget, education and other basic services were removed from state agenda.

Popular opposition to these measures invited repression including imposition of a state of siege. The major achievements of NEP have been the slashing of inflation and a stable foreign exchange rate. As a result the country became eligible for both fresh loans from IMF and private commercial banks. In 1986, it obtained $ 10 million in loans from international institutions, three-fourths of which incidentally were for servicing the old debt.[8] One positive effect of this was that Bolivia was able to sign letters of intent with the IMF. This IMF stamp of approval was necessary for it encouraged other lending agencies to be more favourably disposed to grant new credits.

No doubt, the NEP was pursued at a high social cost. First, the measures widened the gap between the rich and the poor. The wages of workers and government employees were frozen. Second, NEP also brought in its wake closure of loss-making mines and retrenchment of thousands of workers in a

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[7] Bailey and Knutsen, n.2, p.49.

[8] ibid.

bid to streamline the government's revenue and expenditure. The reforms led to increased unemployment. Nearly 20,000 workers had been made redundant by 1986.

Third, the opening up of market to international competition had a devastating effect on domestic industry. The competitiveness of the Bolivian goods were eroded as they were simply inferior in quality and higher in cost compared to the imported products. Fourth, as the prices of the two major legal exports viz., tin and natural gas collapsed in the 1980s, Bolivia's dependence on coca exports increased and the land under coca cultivation more than doubled from thirty-five thousand in 1982 to eighty thousand hectares in 1989. The gross annual income of Bolivia's coca paste exporters was calculated at roughly US $ 1.3 billion which was a significant amount when compared to the US $ 500 million Bolivia earned from its legal exports in 1986. Following year, the volume of legal exports fell further to US $ 470 million whereas the 'hot money' that returned exceeded US $ 600 million. Official government sources valued Bolivia's income from coca trade at US $ 680 million for 1992-1993. Besides generating foreign exchange earnings -- deeply valued by the cash-strapped indebted economy -- coca earnings also provided a critical cushion for many of those left unemployed and impoverished by the NEP. It is estimated that nearly half a million people are directly engaged in the cocaine economy. The former Bolivian finance minister, Flavio Machicado, has estimated that coca dollars have allowed the creation of

some three hundred thousand jobs that have no direct connection to drug trade.

Impact of External Debt

For Bolivia its external debt rose dramatically during the seven year presidency of General Hugo Banzer (1971-78). Generally if a country's debt is more than twice its exports, there is cause for alarm; in Bolivia's case the debt was more than five times its officially registered debt (1985 figures).[9] Its debt to export ratio ranking rose from tenth to third, and its debt service to export ratio ranking rose from tenth to fifth between 1974 and 1980.[10]

Bolivia had earlier benefitted from high prices for its exports of petroleum. Once the known reserves were depleted in the 1980s, it had to import petroleum. Meanwhile, international commercial lending rates increased and world inflation drove up the cost of imports. Also the domestic economic and political dynamics added to the severity of the debt burden. The Banzer era had given way to a four year period between 1978-1982 of intense political instability producing nine different heads of state, with each one of them unable to take the economic crisis seriously. In 1979, the debt had nearly equaled the value of

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[9] Howard J. Wiarda, " Can the Mice Roar ? Small Countries and the Debt Crisis." in Robert Wesson, ed., Coping with Latin American Debt (New York, 1988), p.124.

[10] Susan Eckstein, " Revolutions and Restructuring of National Economies : The Latin American Experience," Comparative Politics (New York), vol. 17, no. 4, June 1985, p. 486.

the national product (97.4 percent).[11]

The installation of Garcia Meza after a coup in 1980 exacerbated the economic crisis. The implementation of austerity programme was not possible because there was no governmental capacity to mobilize support for such an extensive exercise in the statecraft. When Siles Suazo came to power in 1982, the inflation rate had reached 300 percent and external borrowing was negative. Seignorage financing i.e. printing money, substituted for the declining foreign resource inflows.

Bolivia's foreign debt had grown from $ 670 million in 1970 to $ 2.7 billion in 1982, and passed the $ 5 billion mark in 1986.[12] In 1989 debt/GDP ratio at 135.5 percent was the highest in the region. In the same year its ratio of total external debt to exports was 463.9 percent.[13] Since the debt was more than five times its official registered exports, there was cause for alarm.

Between 1981 and 1986, Bolivia devoted an average of 42 percent of its export revenues to interest payments. In 1985, interest payments had risen to 60 percent of export receipt. The same year saw the inflation attain a mind- boggling

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[11] Susan Eckstein and Francis Hagopian, " The Limits of Industrialization in the Less Developed World : Bolivia ", Economic Development and Cultural Change (Chicago), October 1983, p.73-74.

[12] Bailey and Knutsen,n.2, p.48.

[13] World Debt Tables, 1989-90 (Washington, D.C.: World Bank, 1990), p.46.

figure of 25,000 percent.[14] Between 1980 and 1984 real salaries for all Bolivians shrank by as much as 75 percent. Prices of staple food doubled or tripled. Despite a desperate internal situation, Bolivia continued to borrow a part of the debt service.

Taking a cue from President Alan Garcia of Peru, President Siles Suazo limited payments on Bolivia's foreign debt unilaterally. He apportioned no more than 25 percent of the country's export earnings to the servicing of debt. This measure heightened the crisis when international banks responded by declaring Bolivia's $ 1.5 billion outstanding loans non-performing cutting of all credits and refusing to negotiate.[15] Labour unrest and the calls by the trade unions for repudiation of the debt further frightened off foreign investments and new loans.

The reasons which accounted for Bolivia's growing debt woes were many. It had to repay its debt on onerous terms. Private banks in 1981 and 1982 demanded repayment over five and a half years (whereas the regional average was eight years) and at interest rates which were 2.19 percent above the LIBOR.

Moreover, economic problems were compounded by its relative marginality in the global economic context. The problems of a small country like Bolivia received less attention

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[14] Susan George, A Fate Worse Than Debt (New Delhi, 1990), p.149.

[15] Bailey and Knutsen, n.2, p.47.

because its creditors were constantly engaged in designing rescheduling packages for the larger debtors. Because of the small size of its debt, Bolivia did not pose a major threat to the banks. The private commercial banks had virtually given up on collecting interests from Bolivia.[16] The reasons for their unwillingness to advance new loans or offer favourable rescheduling packages had been the low growth rates, small domestic market, heavy dependence on a few export commodities whose prices globally were low, and the poor institutional infrastructure.

The favoured class created as a result of economic upheaval also accounted for the severity of debt burden. The high level government functionaries purportedly stole millions of dollars from the treasury and invested these funds unwisely or simply stashed them abroad.

Besides, in a largely poor country, the government had few fiscal resources to tap. The annual per capita average income of Bolivia remained less than US $ 600.[17] The official rate of urban unemployment was 7.5 percent in 1980 which rose to 12.1 percent by 1983.[18] In reality, however unemployment rate was much higher. Local production was limited, inefficient and poor in quality. Economic liberalization simply wiped out local

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[16] Robert Wesson, ed., Coping with the Latin American Debt (New York, 1988), p. 128.

[17] ibid., p.48.

[18] ibid.

industries and with it, thousands of jobs both in manufacturing and mining sector. It was under these economic conditions that Bolivia attracted new schemes for debt reduction. These included importantly the buybacks and the "debt-for-nature" swaps. The US government after lengthy negotiations with the government of Bolivia agreed to treat the Bolivian case on the merits of political and economic situation in Bolivia. A buyback was arranged. Bolivia repurchased about one-half of its debt to US government at 11 cents per dollar of face value in late 1986.[18] The money used for the purpose was donated by foreign governments. With the $34 million spent on the buyback, the official community did not impose sanctions on Bolivia for non payments on the remaining bank debt.

Environmental Crisis and the " Debt-for-Nature" Swap

Indebted Bolivia paid little attention to the damage it did to the environment. There are two types of debt-environment connections. The first is borrowing money to finance ecologically destructive projects. The second is repaying the debt by cashing in on natural resources.[20]

Between 1985 and 1990, the exploitation of natural resources and of raw materials intensified as Bolivia tried to fulfill its international financial commitments under the programme of structural adjustment. In 1980 the mining sector's

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[18] Jeffrey D. Sachs, " Comprehensive Debt Retirement : The Bolivian Example, " Brookings Paper on Economic Activity, (Washington, D.C.), vol.2, 1988, p.712.

[20] George, n.14, p.149.

share of GDP was only 8 percent while its exports represented 47 percent of total export value. Many environmental problems arose as a result of the large scale mining operations which amounted to 500 tonnes of tin per day.[21] Much of the activity was concentrated around the Altiplano region. Large areas of the forests were destroyed.

Besides mining, the activities of lumber companies, migration of population and exploitation of forest resources by private groups and cultivation and processing of coca, all contributed to the unsustainable exploitation of natural resources. Independent reports and government findings indicate that Bolivia has been losing some 1,400 square kilometers of forest annually while only minimal reforestation is being carried out. An estimated 38 percent of the total soil cover is heavily eroded as forest cover has been eliminated.

Some degree of environmental degradation has also been attributed to coca production in Bolivia. Since late 1970s, there has been a major expansion in coca production on the foothills of the Andes. The low prices for the primary export commodities had driven many Bolivian peasants to switch to this more lucrative export. A hectare devoted to coca plantation could earn for the planter US $ 1200 a year, which is nearly eight times the earnings of a non-coca- producing peasant (US $

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21 William P. Blacutt-Mercado, " Environmental Legislation, Economic Growth and Risks in Mineral Development: The Bolivian case", Natural Resources Forum (Oxford), vol.17, no.3, August 1993, p.207.

150 a year per hectare).[22] This is the reason why more and more agricultural land is devoted to coca cultivation with the consequence that large scale deforestation has been undertaken. Launching of 'Operation Blast Furnace' in 1986 by the US administration of president Ronald Reagan (1980-1988) with the aim of destroying processing laboratories in Bolivia and 'Operation Snowcap' in eleven South American countries further caused damage to the environment.[23]

It is estimated that since the early 1970s when the coca boom began, coca production has directly caused the deforestation of some 700 thousand hectares of jungles in the whole of Amazon region. As to the impact of coca processing on environment, a study made by Peru's National Agrarian University may have relevance for Bolivia too. The aforesaid study estimated that in 1986, the 160 thousand hectares of land under coca cultivation in Peru produced about 6,000 metric tonnes of basic paste whose manufacturing required about 57 million litres of kerosene, 32 million litres of sulphuric acid, 16 thousand metric tonnes of toilet paper, 6.4 million litres of acetone and 6.4 million litres of toluene.[24] The considerable waste involved in manufacturing of paste, an activity in which both

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22 Jake Goldberg, Economics and the Environment (New York, 1993), pp. 81-82.

23 Bailey and Knutsen, n.2, p.49.

24 Ivelaw L. Griffith, " From Cold War Geopolitics to Post-Cold War Geonarcotics," International Journal (Toronto), vol. 59, no. 1, winter 1993-94, pp.29-31.

Bolivia and Peru specialize, is dumped into the rivers and streams with adverse consequences for marine life besides forcing indigenous communities in many areas to survive on the polluted water. Hundreds of small and large streams and rivers in the coca-producing and processing regions have been reportedly polluted, exterminating several plant and living species. Two thirds of the area under coca cultivation in Bolivia were destroyed by the use of a powerful herbicide 2-4-D under the direction of a US expert even though its use was illegal under Bolivian law during eradication campaigns.[25] This resulted in soil and air pollution to a very large extent.

Since 1987, in response to external calls and demands, the environment became an important issue in policy making of the Bolivian government. Policy designs and planning have been undertaken to restructure comprehensively all environmental and natural resource activities. After 1990, the environment was placed high on the government's agenda. On 11 January 1990, the government adopted emergency measures, declaring an "ecological pause" of five years so that it could reorganise the processes that were jeopardizing Bolivia's natural resource base.[26] A moratorium was placed on new forest concessions; more than one million hectares were transferred from forest-sector business to

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[25] James Dunkerley, Rebellion in the Veins: Political Struggle in Bolivia, 1952-82 (London, 1984), p.309.

[26] Amanda Davila, " Investing in Bolivia's Environment " in New Partnership in the Americas: The Spirit of Rio (Washington, D.C.; US Agency for International Development and World Research Institute, 1994), p.22.

the Bolivian government; and measures aimed at conserving natural resources and the habitat of thousands of indigenous people were implemented.[27] The Bolivian government realised the legitimacy of the indigenous people's claims, but its coffers were empty. International cooperation for the protection of natural resources was limited to scattered projects and at that time a national environmental policy was lacking.

A $ 20 million project aiming at sustainable management of the country's forest was announced. The project called Bolivia Forestal (BOLFOR) has the objective for the next 10 years to improve the forest sector's capacity, to balance payments favourably and to offer an alternative to mining. In 1991 a General Environmental Law was framed by the Bolivian Commission of Natural Resources and the Environment.[28] This demonstrated Bolivia's swing from a non-existing environmental awareness to one which would have a framework of rules and regulations. The law aims at providing everybody the right to enjoy a healthy and pleasant environment. The codification of environmental law was essential because lack of access to basic services like piped water, waste-water disposal mechanism or electric supply leads to the destruction of environment.

To develop an adequate infrastructure of basic services,

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[27] In Bolivia, the majority of the population belongs to two main indigenous groups: Quechua and Ayamara. There are 53 additional ethnic groups, mostly scattered throughout the Amazon region.

[28] Mercado, n.21, p.287.

private domestic or foreign investment are needed. Bolivian mining sector, which enjoys a comparative global advantage, offers a favourable investment climate for the exploration of mineral deposits.

Bolivia's General Environmental Law has two primary objectives -- one, the protection and conservation of natural resources; and two, the promotion of sustainable development. The other objectives of this law are: conservation of biological diversity; optimum utilization of water, air, soil and resources; and compatibility with international policy trends, subject to the limits of national sovereignty and national interests.

Finally in April 1992, to pay due regards to the larger social and environmental issues raised, the government passed the General Environmental Law.[28]

From the government's perspective, the main obstacle to environmental protection is the absence of institutions and adequate mechanisms to obtain and manage the financial resources needed to carry out conservation and other natural resource activities with the participation of other countries, the NGOs, donors and affected parties. This effort coincided with the Bush administration's announcement in June 1990 that environment sector would figure prominently in official debt reduction and restructuring within the framework of the "Enterprise for the Americas Initiative" (EAI).

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[28] ibid.

The National Environmental Fund of Bolivia, the Fondo Nacional para el Medio Ambiento (FONAMA) was set up on 12 December 1990 to arrange all investment in Bolivia's environment. The first of its kind in the Americas, FONAMA has emerged as an autonomous body in charge of organizing, procuring and managing funds for sustainable development and the environment.[30]

The linkage between economy and environment was apparent. The environmental crisis was linked to the debt crisis. So a mutual solution had to be evolved. The "debt-for-nature" swap was seen as a cure for the economic ill. Bolivia was the first developing country to agree to execute the "debt-for-nature" swap in June 1987.[31] Under the plan a portion of its foreign debt was reduced in return for action to preserve a specific tract of ecologically valuable land. This pioneering agreement was reached between the US environmental protection organization, the Conservation International (CI) and the Bolivian government. CI acted through Citicorp Investment Bank -- a Citibank subsidiary. It purchased debt papers with a nominal value of $ 650,000 for about $100,000 that is about 15 cents on the dollar.[32] The $ 100,000 to finance the swap was in turn

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[30] Davila, n.26, p.24.

[31] Jens Rosebrock and Harald Sondhof "Debt-for-Nature" Swaps: A Review of the First Experiences", Intereconomics (Hamburg), vol.26, no.2, March-April 1991, p.84.

[32] John Walsh, " Bolivia Swaps Debt for Conservation," Science (Washington, D.C.), vol. 237, 7 August 1987, p.596.

provided by Frank Weeden Foundation of San Francisco.[33] In return, the Bolivian government agreed to protect nearly 4 million acres of forest and grassland in the Beni Biosphere Reserve in the Amazonian basin. It was created in 1982 as a model reserve to protect animal, plant and water resources and native people. Part of the area covered by the agreement is to be maintained undisturbed for research. Another portion would be used by the nomadic Chimane Indians and opened to carefully managed agricultural and forestry development. The protected area is not set aside purely for conservation uses but rather to create a buffer zone around the existing areas.[34] The agreement allows controlled commercial activities in the buffer zone subject to environmental regulations, including equivalent reforestation for each tree cut down under the project.[35] Thus, through a creative transaction the CI sought to reconcile commercial development with conservation.

CI however made it a condition that it should be entitled to supervise the observance of the law in the capacity as advisor to the government.[36] The swap agreement was not an impulse buy . The eight month negotiations that produced the

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[33] ibid.

[34] David Barrans, " Promoting International Environmental Protections Through Foreign Debt Exchange Transactions," Cornell International Law Journal (Ithaca, New York), vol. 24, no. 1, winter 1991, p.75.

[35] ibid., p.76.

[36] Rosebrock and Sondhof, n.31, p.84.

agreement were based on a history of co-operation among the people involved for a number of years. Sumner Pingree a number of CI had said that "the strength of the deal is based on the relations with the Bolivians".[37] He made and had maintained wide acquaintanceship with Bolivians concerned about environmental issues including the then president Victor Paz Estenssoro.[38]

Because the Bolivian swap attempted to reconcile commercial activities with conservation, it is sometimes referred to as 'debt-for-development' swap too. A 'debt-for-development' swap seeks to accommodate long-term social and economic development by any number of means, including reduction of local poverty levels, improvement of education and health standards, and protection of the environment.[39]

FONAMA also managed "debt-for-nature" swaps in the beginning. According to an estimate for each dollar that the agency invests in obtaining financial resources, $ 53 have been raised, $ 90 have been pledged and $ 1,333 dollar worth of bilateral debt and $ 40 of debt servicing eliminated.[40] Furthermore, the "debt-for-nature" swaps structured and managed by FONAMA have enabled Bolivia to reduce its bilateral debt with the United States by $ 372 million or 10 percent of Bolivia's

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[37] Walsh, n.32, p.597.

[38] ibid.

[39] Barrans, n.34, p.77.

[40] Davila, n.26, p.28.

total bilateral debt.[41]

The swaps contain no enforcement provisions. What are the guarantees that debt swap agreements will be kept over the long haul? Should the Bolivian government ever decide to renege on its promise to conserve the land, the environmental organizations would have no legal recourse. Fortunately, the Bolivian government has kept its promise.

'Debt-for-development' swaps such as the one implemented in Bolivia have also proven somewhat ineffective. Under the Bolivian swap agreement, Bolivia was to grant logging rights within the protected area, subject to the condition that loggers plant new trees sufficient to those they had cut down. While many trees had been cut, as of 1989 not a single tree had been planted.[42] To be successful, the plan requires coercive enforcement of the reforestation provisions. This also brings into question, the very idea of sustainable development. Sustainable development still calls for exploitation of natural resources for development purposes and the subsequent restoration of and replenishment of the exploited natural resources. On the face of it, sustainable development presents a middle line between environment and development but in reality it excludes the destruction of bio-diversity which perhaps cannot be restored. Moreover, these swaps contemplated a co-existance of environmental destructive activities and environmental

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41 ibid.

42 Barrans, n.34, p.83.

protections. They fail to address the antagonism between currently-held concepts of economic development and the environment. Rather than seeking concessions to the environment, conservationists should try to make environmental protection attractive to developing countries, or, at least, economically feasible. Protecting the environment requires not only setting aside reserve areas, but more importantly, reducing reliance on ecologically destructive activities and creating economic incentives for protecting the environment.

In short, Bolivia's economic problems are typical of those of a dependent economy. An extremely narrow resource base, viz, tin creates conditions of dependence on external market, neglect of other economic sectors and a necessity to borrow externally. Bolivia has been borrowing since the 1920s, more so whenever tin prices slumped. Low quality and high cost of production make its exports uncompetitive in the international market while neglect of non-mining sectors have severely limited the possibilities of diversification.

Significantly, even a populist revolutionary regime of MNR could not break these shackles of dependence; and after 1956, the government had to introduce economic stabilization programmes, and seek the economic assistance from US. Economic dependence brought an end to the populist revolutionary experiment and after 1964, the country remained subject to military rule. For a while, rising prices of tin, and discovery of modest oil and natural gas reserves provided a semblance of

economic balance and prosperity during the 1970s, only to push the economy again into an economic chaos as international market for Bolivian exports plummeted in the late 1970s. Unwillingness of short-lived military regimes to cut government expenditures, rather their resorting to demand led economic policies only fuelled hyperinflation. By early 1980s, the country was in shambles unable to service its debt and secure new finances, and with mining, industry and agriculture all in deep recession. Major activities were in the informal sector and coca cultivation and production.

Inaugurated in 1985, the NEP, though stabilised the economy and made Bolivia eligible for fresh loans, caused untold miseries and damage to the environment. Though many factors account for the damage to the environment, debt was undoubtedly among the foremost one. Thus, it was a liberalizing economy that began paying attention to external demands for protection of environment. And in June 1987, it became the first country to execute the "debt-for-nature" swap, involving a sum of US $ 650 thousand. The thrust of the transaction was to protect a specific forest and the habitat of indigenous population living there. The approach was to use forest resources alongwith a programme of reforestation. A few other swaps since then have reduced Bolivia's bilateral debt with the US by about US $ 372 million. Though a small amount compared to Bolivia's total external debt obligations, the swaps worked till so far, nevertheless, present a balance between protection of

environment and developmental needs.

But these new schemes such as buybacks and "debt-for-nature" swap make little sense to indebted Bolivia because they nibble away at its debt in tiny transactions having piecemeal character. Also, the Bolivian debt has a very low secondary market value -- roughly between 5 and 10 percent of face value. A country which is able to pay such a meagre portion of the face value, faces great difficulty in new borrowing. It will face high bargaining cost in handling a large volume of its total external debt.

The money used in the two transaction came from foreign governments either as aid or in other forms of investment. The US government's support for the swap transaction was guided by foreign policy interests. Bolivia had been feared as a centre of unrest and stabilizing the democracy was essential. Moreover the anti-cocaine policy of the US could be realised only if the Bolivian government was friendly and stable.

Can the Bolivian example be replicated elsewhere? Some of the problems highlighted in the Chapter assumed serious proportions as Brazil first accepted and then rejected the innovative approach. The next chapter makes a modest attempt to assess the debt crisis in Brazil, its approach towards the Amazon rainforest, and the working of "debt-for- nature" swap.

CHAPTER 4

BRAZIL'S "DEBT-FOR-NATURE" SWAP EXPERIENCES

An attempt has been made in the previous chapters to describe the nature of the debt crisis and its impact and the implications for the Latin American countries. The near impossibility of recovering the loans in full gave rise, after 1982, to a secondary market in debt. Secondary market arose essentially as a reaction to the risk of default as the economic deteriorations had nearly paralysed some of the debtor countries. Therefore, innovative schemes for debt reduction began to be put forth from the mid-1980s onwards. Included among these were importantly the idea of "debt-for-nature" swap.

As has been argued in the previous chapter, Bolivia became the first country to swap a tiny portion of its external debt in return for protecting conservation areas totalling 2.7 million acres. The much-heralded swap, however, retired only 0.01 percent of Bolivia's total debt; and, that too, which was selling in the secondary market at extremely low prices. Besides, the swap was arranged in 1987 when Bolivia had initiated a programme of massive economic restructuring -- deregulating the economy, slashing government expenditure, wages and employment and privatizing state enterprises. Significantly, under the swap, the government agreed to allow scientific research, protect the rights of the indigenous Chimane Indians, and permit sustainable

logging.

As is argued in the present Chapter, the large-sized Brazil with the massive Amazon rainforests huge external debt and a diversified economy present a different dimension of environmental problems, debt servicing and "debt-for-nature" swap arrangement.

Amazonia and the Environmental Issues

Brazil alone has about 3.5 million square kilometers of tropical rainforests, that is about 30 percent of the world's total, and most of that is in Amazon Basin, or Amazonia. Deforestation is extensive and increased after mid-1970s until 1990 when international pressure and Brazilian government's own policies brought about a reduction in the pace of deforestation. An estimated 16,000 square kilometers of rainforest was deforested each year between 1975-1978 under the developmental strategies of the period. As Brazilian economy began slowing down, the rate of deforestation increased to 24,000 square kilometers between 1978-1980, and as the economic crisis deepened, deforestation increased to an estimated 60,000 square kilometers a year between 1980 and 1988.

What is that Amazonia holds for Brazil and the rest of the world? The question is important as international environmental concerns have aroused nationalist indignation in Brazil. Successive Brazilian governments have looked at the Amazon as holding key to national development and grandeur, whose

exploration is besides, considered necessary for national integration, for agricultural lands and above all for national security. Admittedly, therefore, any international concern against deforestation of Amazonia is deemed as an interference in domestic affairs and linkage between external aid, loans and environmental issues is vehemently resisted and rejected as part of the process of internationalization.[1] It is considered to be an attempt to deprive or, atleast, circumscribe Brazilian sovereignty over the Amazonia.

The Amazonia has always attracted the attention of Brazilian policy-makers and intellectuals especially its geo-politicians at least for two reasons: the vast expanse of lands and rivers lying towards the north and west hold immense resources crucial to economic development of the country. Secondly, these largely unpopulated and undemarcated areas must also be colonized and possessed at the earliest for perceived security reasons. In short, Brazilian geo-politicians have for long believed and argued that Brazil is destined to become a great world power and for that it needs to move, above all, towards the interior and effectively possess its Amazonian territories.

As geo-political ideas began taking definite shape, nationalist governments especially of president Getúlio Vargas (1930-1945; 1950-1954) began a series of measures including

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[1] What is internationalization? It is a chimera conjured up by the suspicious leaders who are jarred by the turmoil of internal politics into seeing a foreign threat at every turn. They are scared of foreign invasion into or annexation of Amazonia.

moving the capital from the coastal Rio de Janeiro to the interior Brasilia in 1954 and developing a network of communication linking the interior.

It was, however, between 1964-1985 that Amazonia became the focus of development under the military - authoritarian rule. The primordial goal of rapid economic development and linkage between development and internal security made the military authoritarian regime regard Amazonia as of great strategic importance. Entertaining ideas such as that widespread poverty and income inequalities pose a direct threat to the national security and developmental processes, military regimes began looking at Amazonia as a way to alleviate social tension and poverty.

General Humberto Castello Branco (1964-1967), the first of several military presidents, made that clear early on: "Amazonian occupation will proceed as though we are waging a strategically conducted war". In 1966, Operation Amazonia was launched to promote settlement and fully integrate the region into the nation's economy. The government created the Superintendency for the Development of the Amazon (SUDAM) which launched a campaign to attract entrepreneurs for agricultural, cattle-ranching, mining and industrial enterprises.[2] The goals of economic modernization and national integration were to be achieved through a development model calling for a mixture of state initiatives and private enterprise.

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[2] David W. Pearce and Jeremy J. Warford, World Without End: Economics, Environment and Sustainable Development (New York, 1993), p.185.

After General Branco left the presidency in 1967, the reign of power came into the hands of more nationalistic factions. At home, the authoritarian rule became more repressive and exclusionary, while at the foreign policy level, the regimes of General Arthur da Costa e Silva (1967-1969) and Emilio Garrastazu Medici (1969-1974) began distancing the country from US, and start an independent course in external relations. The rise of authoritarian nationalist faction coincided with the impressive growth Brazilian economy experienced since the late 1960s. The assertiveness both at the domestic and foreign policy level had far-reaching implications for Brazil's approach towards Amazonia. Geo-politics had come to the fore: national integration and expansion into Amazonia came to be repeated time and again. 'Occupy and integrate Amazonia into the nation to keep it out of the hands of foreigners' was the slogan that epitomized the regime policy towards the Amazon.

Out of the geo-political concerns came the idea of the Trans-Amazon highway.[3] A highway serving no economic or commercial purpose, the idea was just to settle one hundred thousand families along it into agrovilas i.e. small agriculture-based townships. Trans-Amazon highway had two basic objectives: it would facilitate the physical possession of Amazonia; and secondly, help alleviate the social tension building up in the

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[3] Trans-Amazon Highway was a road heading west from Marabá and its sole purpose was to spur the growth of settlement along its length and disperse the urban poor. It had no purpose for transportation.

north-east where extreme inequalities in landownership had left nearly two million peasants landless while enormous sugar estates were owned by fewer than fifty families.

It is significant to note that the military-authoritarian regime in Brazil and elsewhere in South America during the 1970s were excessively concerned with threat of internal subversion. Real and perceived threats of `communist subversion' had military regimes resort to extreme repression and closing off political arenas to majority of the population. Solution in the form of Trans-Amazon highway proved a total failure as, in the end, no more than eight thousand families could be settled into the agrovilas. Reasons were simple: the poor fertility of the soil and its unsuitability for agriculture could not sustain any permanent settlement. Lack of any infrastructure and government support in the form of agricultural banks and marketing facilities compounded the problem.

The need to integrate the nation and solve social problems such as those of landlessness had clearly merged with the geo-political thinking of the armed forces. For whatever reasons, military regimes began entertaining apprehensions of losing Amazon to foreign interests, or of some kind of internationalization. As has been argued earlier, in the evolution of geo-political thinking of armed forces, Amazonia occupied an important place. Now in power with the goal of effecting rapid economic development, the armed forces felt, more than ever, the imperative need to secure the Amazon. Their own

commitment to development and the regional and global economic scenario of the 1970s where competition for raw materials and markets was hotting up, convinced them of the necessity of effectively possessing the Amazonia lest others do so. Military-authoritarian regime felt even more convinced as nationalist regimes in several other Amazon countries began talking of developing their part of Amazon.

Brazil has never given up these apprehensions. The 1972 Stockholm Conference on Habitat aroused nationalist indignation.[4] Since then environmental concerns, focus on human rights of indigenous people and in the 1980s banks policies of linking loans with environmental issues have all been looked at suspiciously. Environmental NGOs and conferences, rights of indigenous people and drug trafficking are subjects that are looked at suspiciously as part of a larger plan backed by developed countries, multinational corporations, multilateral financing agencies, and private banks to impose supra-national guidance over the Amazonia. As a result, Brazilian position on international environmental conference held in Rio de Janeiro in 1992 was one of reiterating its sovereignty over the rainforests.

Such a thinking, as part of the geo-political thinking of the armed forces, remained constant even after the initiation of civilian rule in 1985. The main goal that has remained is occupation of Amazon; and in the process, if goods are created or

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[4] The conference was held to establish consistency of economic development with environmental protection.

economic development occurs, so much the better. It was much later in the late 1980s that environmental considerations began influencing the government thinking.

Critics have pointed out the short-sightedness of several Brazilian projects such as Trans-Amazon highway which could not be justified even on economic grounds. It is the development strategy pursued since the 1960s in Amazonia that has come under the critical scrutiny of environmentalists, bankers and governments of the developed countries. The development planning in Amazonia since the 1960s can be divided into four main phases:
(i) Under the Programme of National Integration (PIN), several long-distance highways were constructed with the object of establishing agriculture-based townships.[5] Under the slogan of "There is land for everyone in Amazonia" several hundred thousand landless peasants migrated to the north in the second half of the 1970s.[6] These ventures permitted the extension of agricultural activities deep into the rainforests after destruction of vast tracts of jungles but neither soil nor climatic conditions, could allow sustainable agriculture.
(ii) With economy registering impressive growth rates from the late 1960s, the military-authoritarian government allowed greater private business activity in the region. Domestic private

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[5] Pearce and Warford, n.2, p.186.

[6] Gerd Kohlhepp, "The Destruction of the Tropical Rainforests in the Amazon Region of Brazil - An Analysis of the Causes and the Current Situation", Applied Geography and Development (Metzingen, Germany), vol.38, March 1991, p.88.

business was granted incentives in the form of tax deduction and credits. This brought in large cattle ranching activity to the rainforests. Large areas were cleared for grazing but again the climate could not sustain livestock herds. Most of these cattle farms were concentrated in the northern part of the state of Mata Grosso and in the southern and eastern parts of Pará. By the end of 1983, such farms, enjoying tax benefits, controlled almost 9 million hectares of land. Though the actual area is reportedly much higher for 1983, it is estimated that out of 350,000 kilometers of land actually acquired for cattle ranching, about 140,000 kilometers were formerly forest areas.

Brazilian government was keen to earn money from the sale of beef to US and Europe.[7] Unfortunately, the export of beef proved an ineffective way of earning foreign exchange. In 1990, in the state of Pará, exports of beef earned only forty-four thousand dollars compared to thirty three million dollars of export-revenues Brazilian nuts produced.[8]

Similarly the policy of granting tax concessions and subsidies to cattle ranching resulted in the subsidies of over one billion dollar between 1975 and 1986. Describing it as "the biggest known subsidy in history for ecological destruction", The Economist commented:

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[7] Patricia Adams, Odious Debts: Lose Lending, Corruption, and its Third World's Environmental Legacy (London, 1991), p.30.

[8] Jake Goldberg, Economics and the Environment (New York, 1992), p.65.

> "Mammon, as much as nature, should persuade Brazil to conserve the Amazon. Much deforestation results from activities fostered by bad fiscal policies: from cattle ranching designed to mop up tax losses, from unprofitable hydro-electric projects built to provide under-priced electricity, from iron smelting built with lavish state aid, from small farmers displaced by the subsidised mechanisation of big farming in the south... A strong, sensible government would save its money, and ultimately create more jobs, by ending all such fiscal folly. Many of the schemes that spring up where the trees come down are intrinsically uneconomic."[9]

(iii) The Polonoroeste programme concentrated in the regions of Rondonia and in the north-western Mato Grosso focussed on colonization by small-scale farmers.[10] By 1985 more than 44,000 families had been settled in the region. Asphalted roads, improved production and marketing infrastructure brought in a continuous stream of landless peasants from southern and north-eastern Brazil. As the flow of new settlers increased, problems of land seizure, occupation of land unsuitable for agriculture, and slash-and-burn methods of clearing forests also increased. As land speculators and cattle farmers followed pushing the small landholders deeper into the forests, the destruction of forests increased further.

All these settlement projects increased the population pressure and led to great urbanization activities in the pioneer parts of Amazonia. By 1970s, the pioneer parts were supporting a population of some 11 million. Many of these projects were clearly part of economic development strategy pursued by the

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[9] Quoted in Patricia, n.7, pp.29-30.

[10] ibid., p.30.

military government in the 1970s. Growth through exports implied adoption of policies and projects that could produce an even larger number of products for international market.

(iv) The Brazilian government also muddled through the Grande Carajás Project initiated in 1980.[11] This was to open a 900,000 square kilometers area to industrial development in the states of Pará and Maranháo.[12] Its goal was to establish a number of infrastructural mining related and industrial projects on the basis of mineral deposits in the region. Sixty nine percent of the area covered by the Programa Grande Carajás (PGC) comprised of rainforests. The industrial projects brought in even larger number of people and greater urbanization activity. A large iron-ore project, railways, the construction of hydro-electric dam and massive water reservoirs and construction of aluminium smelters, all have adversely affected the ecological order of the area, resulting in the encroachments of the Indian reservations, lawlessness and an influx of highly mobile gold-seekers (garimpeiros). Use of the charcoal in the iron smelting plant and railway network have added to further degradation of

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[11] The Greater Carajás story began in 1967 when a Brazilian geologist whose helicopter was forced down in the Carajas region discovered an El Dorado of mineral riches -- 18 billion tonnes of iron are deposits, the world's purest -- made it among the world's two or three largest finds. The government announced a $ 62 billion plan to create an agro-industrial complex.

[12] Andreas Hoppe, "The Amazon Between Economy and Ecology", Natural Resources Forum (Oxford), vol.16, no.3, August 1992, p.233.

environment.[13]

By 1988, the amount of forest which had been felled amounted to 12 percent of the total area of the region, called Legal Amazonia.[14] In 1975 no more than 0.6 percent and by 1980 2.5 percent of the forest region had been cleared but between 1980 and 1988, an alarming four-fold increase occurred (600,000 square km of forest was lost).[15] In 1988, the area of forest destroyed was more than 357,020 square km. Satellite-based Landsat data indicated that by 1991 the area of forest cleared had reached 426,000 square km (10.5 percent of the originally forested area of the Legal Amazon region).[16] The percentage of Brazil's Amazon forests that has been lost so far is a subject of frequent controversy.

The rate of deforestation in the Legal Amazon as a whole declined significantly between 1981 and 1991. The annual rate of 11,000 square km per year was only half of the 22,000 square km

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[13] Garimpeiros are releasing an estimated 210 tonnes of mercury each year into the rivers, affecting the aquasystem of the region.

[14] The Legal Amazon refers to Brazil's five million square km region covering all or part of nine states. This administrative region is larger than the Amazon River's four million square km drainage basin in Brazil.

[15] Kohlhepp, n.6, p. 104.

[16] Landsat-3 and Landsat-5 launched in 1978 and 1989 respectively are US satellites with sensors and scanner. Different rates are calculated on the basis of the images reported by them.

per year average rate between 1978 and 1988.[17] In 1990 and 1991, the small farmers accounted for 30 percent of the deforestation activity and the other 70 percent was caused by the ranchers.[18]

Growing awareness and demands both from domestic and international environmental organizations finally made Brazil evolve an environmental policy for the Amazonia. Declaring Amazonia as `patrimonio nacional', the 1988 Constitution provides for laws and regulations to preserve the environment. A detailed programme called Programa Nossa Natureza (`Our Nature Programme') was announced in April 1989 laying down the conditions for utilization of the resources and preservation of environment in the Amazonia.[19] The aims of `Our Nature Programme' are, among others to avoid any activities that are harmful to the environment; to promote the systematic organization of environmental protection; to develop environmental education to raise public consciousness on the need to preserve the environment; to organize the sensible settlement of land and utilization of natural resources based on a still-to-be established regional development plan; to regenerate ecosystem damaged by human activities; to legislate the future forest policy in Amazonia; and finally to protect indigenous people and

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[17] Philip M. Fearnside, "Deforestation in Brazilian Amazonia: The Effect of Population and Land Tenure", Ambio (Stockholm), vol.22, no.8, December 1993, p.542.

[18] ibid., p.544.

[19] Kohlhepp, n.6, p.101.

gatherer population i.e. fruit pickers, rubber tappers etc.

A defensive response, the 'Our Nature Programme' sought to meet international criticism and particularly the suspension of development funds from the World Bank. The government of president Fernando Collor de Mello, after March 1990 took some concrete steps such as abolition of all tax incentives for projects that destroy the rainforests. However, a lackadaisical approach still characterizes the Amazon policy of the government.

Brazil began facing some of the pressures from international organizations, US and multilateral lending agencies importantly the World Bank and IDB once it found itself saddled with a huge external debt in the 1980s. These pressures included suspension of loans on grounds of Brazil not taking due care of environment in the implementation of bank-funded developmental projects. Brazil considers such withholding of funds by multilateral agencies as a form of illegitimate interference in its internal affairs. President José Sarney (1985-1989) had even refused to attend the International Environment Conference held at The Hague in March 1989 claiming that discussion of Amazonia by other nations was a violation of Brazilian sovereignty. He stated: "We are masters of our destiny and will not permit any interference in our territory".[20]

Brazil further blames the developed countries especially US for degrading and depleting natural resources. Environmentalists

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[20] Quoted in Rachel McCleary, "The International Community's Claim to Rights in Brazilian Amazonia", Political Studies (Oxford), vol. 39, no.4, December 1991, p.892.

and developed countries argued that Amazonia -- which is the last remaining contiguous tropical rainforest -- is a public good; and its destruction, besides causing soil erosion, sedimentation, floods, release of carbon-dioxide, is also depleting genetic material and destroying the bio-diversity. In sum, the destruction is having a detrimental effect on the welfare of the entire humankind. So the international community has moral rights in the preservation of Amazonia. To make Brazil accede to this moral claim, it is argued that international community can justifiably withhold fund for developmental projects, and even boycott tropical product exports.

At the 1992 UN Conference on Environment and Development (UNCED) held at Rio de Janeiro, Brazilian stand coincided with the stand taken by several other developing countries. Developed countries putting the blame largely on the developing countries identified release of carbon-dioxide deforestation, over-exploitation of forest and other resources, and over-population as principal causes contributing to environmental degradation. Developing countries blamed the developed countries for the release of carbon-dioxide and chlorofluorocarbons as contributing to atmospheric changes. The Convention on Forestry became the main bone of contention between the two sides. The idea was mooted by US and several other developed countries. The idea that tropical forests constitute a common good was outrightly rejected as an interference in internal affairs of developing countries. Rather, developing countries reiterated their old

position that forests are necessary for developmental purposes. They argued that most of their forest products including timber is exported to the developed countries. Such a situation is caused mainly by their huge debt servicing obligations and the need to produce external surpluses. Brazil, like several other developing countries, demanded transfer of environmental-friendly technologies at concessional rates from the developed countries; a participation and sharing in the research and development of new technologies for food and pharmaceuticals from the tropical forests, and rejected any overture to treat forests as common good.

A further argument set forth by successive Brazilian government is that conserving the rainforests is the responsibility of everyone and anyone concerned about preservation. To this end, Brazil has asked for special grants and appropriate technology to support its nature conservation programme. These funds and technology never materialized. Rather, what was offered were environmental loans from the World Bank and "debt-for-nature" swaps. This is why Brazil had serious reservations on these measures.

In sum, Amazonia involves issues that go beyond environment. Geo-political thinking, developmental objectives and perceived security interests are deeply involved making its conservation a complex issue. The onset of debt crisis saw Brazil relying heavily on Amazonian resources to produce export surpluses.

There is, thus, a direct link between the use of Amazonian

resources and external debt. In the following pages, an attempt is made to describe the debt-crisis in Brazil since the 1980s and in that context the efficacy of the "debt-for-nature" swaps.

Making of the Debt Crisis

The avowed goal of military intervention in 1964 was to put the country on the path of rapid economic development. Blaming the populist civilian governments of the past for fiscal profligacy, the government of General Castello Branco set out to put the economic house in order. Tight fiscal and monetary policies, restrictions on wages, an exchange policy to keep the cruzado -- the national currency -- from being over-valued, tax and credit incentives for investment in under-developed regions and in sectors earmarked for growth such as exports and capital market, and initiation of large government projects for development of infrastructure with financial support from World Bank, Inter-American Development Bank (IDB) and United States Agency for International Development (USAID) began providing results towards the end of 1980s.

GDP which had grown on an average of 3.9 percent per annum during 1964-1967 grew on an average annual rate of 121.5 percent between 1967 and 1972. Led by industrial expansion which was an average 3.6 percent per annum during 1964-1967 but reached 12.9 percent per annum from 1967 to 1973, the industry's share of GDP jumped to 30 percent by 1972. Imports increased and truly added to the efficiency and competitiveness of the industry.

The international environment proved conducive to economic expansion. Developed countries experiencing rapid economic growth absorbed large Brazilian exports and facilitated the flow of massive foreign investments. Mainly invested in manufacturing, however, a very reduced number of industries such as metallurgy, chemical products etc accounted for these investments. By 1973, Brazilian exports had increased to $ 6.2 billion with manufacturing accounting for about $ 2 billion. The export-led growth strategy was evidently working with the total share in the GDP rising from 5.2 percent in 1968 to 7.6 percent in 1973.

Expansion and diversification of the public enterprises, and domestic private capital characterized the industrial expansion of the 197Øs. The number of foreign enterprises more or less remained the same throughout the 197Øs with foreign participation even declining, in several industries.

Between 1964-1973, the military-authoritarian government had achieved many of its goals. The sharp rise in the international prices of petrol in 1973, however, upset economic plans and policies of the government. The options before the government of General Ernesto Giesel were difficult: large import especially of oil and slowing down of the economic growth; or finding new sources of external financing and maintaining the growth rates. The political situation did not permit any more suppression of wages and living standards of the working class. Brazil which imported 8Ø percent of its petroleum requirements opted for foreign borrowings. Petro-dollars were available with the banks

who were more than willing to lend and interest rates were low, often negative. Brazil borrowed to meet its ever-rising import bills; which, for instance, rose from $ 6.2 billion in 1973 to $ 12.6 billion in 1974.[21] By the end of 1977, net debt had risen to $ 32 billion and debt-servicing required 51.2 percent of that year's exports.

Price controls which were in force throughout the 1970s did not allow rise in prices corresponding to the rising production costs. Consequently, by late 1970s inflation had started creeping up too. Massive government investments in public projects, rising wages, and an indexation system in effect since the mid-1980s, all fed and fuelled the inflation.

By 1979, the basic economic problem was how to control the inflation, service the foreign debt, and maintain a reasonable rate of growth. Servicing the foreign debt was absorbing about 67 percent of the export earnings.[22] Exports also began coming under pressure especially from US which demanded the removal of export subsidies. This the government could not do for risk of a major devaluation and inflationary situation.

During 1979 and 1980, several policies were experimented with a view to check inflation, encourage savings and exports,

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[21] Riordan Roett, "Brazil and the Debt: Social Costs", in Robert Wesson, ed., Coping with Latin American Debt (New York, 1988), p.83.

[22] Dionisio Dias Carneiro, "Long-run Adjustment, the Debt Crisis and the Changing Role of Stabilization Prices in the Recent Brazilian Experience", in Laurence Whitehead and Rosemary Thorp, eds., Latin American Debt and the Adjustment Crisis (Pittsburgh, 1987), p.35.

and reduce both consumption and imports in order to reduce the balance of payments deficits. Recession-reducing measures caused a decline in real GDP by 1.9 percent in 1981, with industrial output falling by 5.4 percent. Though exports increased to $ 23.3 billion while imports declined to $ 22.1 billion in 1981, the global recessionary conditions, relentless need to finance oil imports and high interest rates in 1981 increased the debt burden and made new borrowings expensive. Thus, like other Latin American countries, Brazil was saddled with a huge external debt by 1982.

The second oil price rise in 1979, fall in commodity prices, recessionary conditions in the developed countries, and high interest mainly at floating rates worsened Brazil's balance of payment situation. By September 1982, Brazil needed roughly $ 3.6 billion in new loans to cover the deficit in its balance of payments.[28] With banks unwilling to lend, Brazil resorted to short-term borrowings. In 1984 it could, with great difficulty, produce a surplus of $ 800 million.

Stabilization programmes with the approval of IMF were introduced thereafter enabling Brazil to raise emergency credit through the Bank for International Settlement, and from the IMF. Suffering from the unwillingness of private banks and IMF to lend, Brazil's situation by 1983 had worsened. Prior to August 1982, when Mexico triggered off a debt crisis by announcing default on servicing, Brazil announced a major devaluation of

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[28] Roett, n.21, p.173.

currency in early 1983, with a view to raising exports. Such measures however only further fuelled the inflation. Emergency package that materialised in 1983 was not enough to bail the economy out.

High rates of inflation made it difficult to reduce public deficit demanded by the IMF, and creating export surpluses was not possible without cutting down the imports. Several rescheduling agreements brought in new and harsher measures of austerity and new financing that only added to the overall external debt burden.

Through devaluation and tight monetary and fiscal policies and by partially de-indexing wages, Brazil had some sucess in producing trade surpluses. However, other problems importantly large public deficit and inflation continued to bedevil the civilian government of president José Sarney who took over in March 1985. Attempts to check inflation through a price freeze and a fixed exchange rate failed, wiping out in the process, the foreign exchange reserves. As imports surged and exports declined, the trade surpluses of the previous years had become trade deficit in October 1986. The moratorium of February 1987 occurred when interest payments to commercial banks were interrupted. Several other attempts to check inflation only created greater recessionary conditions in the economy. Once again, the government had to stop interest payments which had risen to $ 8 billion by 1989. It is not beside the point that each major policy measures had serious social implications as

they focussed on aspects such as end to price control, wage freeze, increase in public utility rate, and reduction in the size of public sector and eventually privatization of state enterprises. In short, the crisis that began in 1982 led to the failure of export-led growth strategy. Persistence with growth only increased indebtedness.

Data reveals that Brazil's net external debt grew fifteen times between 1973 and 1985, from $ 6.2 to 90.3 billion, with most of the increase taking place between 1979 and 1982. Rising interest rates -- as high as 17.1 percent in 1982 --, global recessionary conditions, rising petrol bill and falling commodity prices, complicated the situation.[24] The debt service, which required 42 percent of Brazilian exports in 1973 was below 7 percent in 1981, increased to almost 100 percent in 1982 and then declined to 78 percent in 1985.

Suspension of interest payments, difficulty in finding new sources of finance and the fact that each new stabilisation programme meant greater hardships for the population and deeper recessionary condition were, no doubt, affecting the natural resources of the Amazon. As has been noted earlier, deforestation increased during the 1980s through the large migration of population in the Amazonia.

It was in this context that proposals for "debt-for-nature" swaps were made to Brazil. Apprehensive of foreign overtures

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[24] Dioniosia Dias Carneiro, "Brazil and the IMF: Logic and Story of a Debt Stalemate", in Stephany Griffith-Jones, ed., Managing World Debt (New York, 1988), p.141.

towards Amazonia in the name of conservation and protection of environment, besides the fact that it was an inflation-ridden economy, made such proposals less attractive.

Response to "Debt-for-Nature" Swap

The energy costs each year were a principal component in Brazil's growing foreign debt, and the government in its effort to find reasonable and cheap substitutes for fuel imports began to mobilize the vast store of natural resources. Simultaneously, pressure began building up for the protection of the tropical Amazon rainforest.

Advocating the "debt-for-nature" deal, US and other foreign conservation groups hoped they would help save the remaining forests of the Mata Atlantica, a lush coastal forest from north of Rio to South of São Paulo State that once covered 400,000 square miles.[25] To save the greenery, conservation groups could buy certain amount of Brazil's foreign debt at a deep discount. They were emboldened by the fact that in 1989, Brazilian debt could be purchased at less than 30 percent of its face value. The suspension of interest payments in 1989 further brought down price of Brazilian debt in the secondary market. Brazil's central bank then would issue cruzado-denominated bonds in the face amount of the original debt. That paper would get turned over to local environmental organisations, which could use

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[25] Clamens P. Work and G. Smith, "Using Red Ink to Keep Tropical Forests Green", US News and World Report (Washington, D.C.), vol.106, 6 March 1989, p.48.

the interest for conservation projects.

Concerted pressure came from the international community to apply this conversion idea to Brazil but on a far larger scale. The rationale for and the scope of this gigantic "debt-for-nature" swap was well expressed in the proposal put forward in an editorial in the New York Times of 3 February 1989, entitled, "Brazil's Debt Can Save the Amazon".

> "... as much as the West's interest as it is in Brazil's, donors in the west would raise $ 4 billion with which they would buy discounted Brazilian debt with a face value of say, $ 8 billion in local currency (which would, in turn) be donated to endow a Brazilian environment institute charged with protecting the rainforest.... Because aid can be so highly leveraged through debt exchange the forests are cheap to save".[28]

The Brazilians, however, were initially divided on this matter:

> "...foreign activists have been insensitive to Brazil's historical preoccupation with maintaining its hold on the Amazon region, fearing encroachments by other South American countries... (and) suspicious that foreigners are planning to grab the Amazon's riches from under a sleeping nations's nose. No matter how you dress up the "debt-for-nature" swaps, the scheme (to the Brazilians) still looks like a foreigner buying a piece of Brazil... (and this applies as well to) recent proposals for the supervision of Amazon preservation measures by an international body".[27]

Besides, nationalistic apprehensions about some kind of international supervision of Amazonia, Brazil also opposed

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[28] Quoted in Morris Miller, Debt and the Environment: Converging Crisis (New York, 1991), p.134.

[27] Quoted in Miller, n.26, p.135.

various debt-conversion schemes purely for economic and financial reasons. In 1989, two Brazilian economists, Arno Meyer and Maria Silvia Bastos Marques, conducted a study which found that debt conversions resulted in a net balance of payments loss for their country; they concluded that debt swaps were ultimately harmful to Brazil.[28] The same year, Mauro Victor, a leading Brazilian ecologist, affirmed that "debt-for-nature" swaps had little utility for his country, "given the size of the country and the magnitude of its external debt".[29] In the first place, as has been noted earlier conversions particularly `debt-for-equity´ swaps only bred more inflation. During the 1980s it was found that most debtor countries financed these swaps by simply printing money. In the 1980s, Brazil's central bank was auctioning more than $ 150 million of external debt at a time when the government had no surpluses to show. The debt thus sold was paid in local currency by simply printing more money.

Secondly, `debt-for-equity´ swaps provided new channels for capital flight. Informal swaps that bypass central banks have been an important source of growth in the secondary market since the late 1980s. In fact, the Cruzado Plan of 1986 failed to check inflation, partially because of the working of informal swaps. Intermediaries sprang up who purchased debt papers, at a discount

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[28] Daniel H. Cole, "Debt-Equity Conversions, `Debt-for-Nature´ Swaps, and the Continuing World Debt Crisis", Columbia Journal of Transnational Law (New York), vol.30, no.5, 1992, p.78.

[29] ibid.

in the secondary market and approached the debtor public sector companies who, in turn, agreed to pay the debt in cruzados, perhaps at a much higher rate than the original rates of the secondary market. The intermediaries now possessing large amount of cruzados, which in fact they had received at much less than the official rate, agreed to convert them in the currency market again at a discount. In the process, the intermediaries made a handsome profit in dollars, so did the local investors or currency dealers. The gravity of the problem can be gauged by the fact that in 1988, the premium on the dollars in the black market over and above the official rate was upto 70 percent. The more the premium is, the more the country loses in foreign exchange. Many exporters began under reporting their earnings to the central bank in order to retain hard currency to trade on the black market.

It was, therefore, far more than the reason of inflation that Brazil suspended its 'debt-for-equity' swaps and president José Sarney tried to curb state-run companies from swapping in the informal market in a bid to check financial malpractices.

Thirdly, the meagre amount thus swapped for 'conservation' purposes hardly made any impact on the overall indebtedness of the country. Brazilians have argued that while not contributing at all to the economic growth, these swaps only add to domestic debt burden.

Lastly, even lenders especially those banks which have a large exposure have been less than keen about the swaps. Many

small banks with modest debt holdings have sold debt in the secondary market. Large banks with large debt holdings generally adopt the attitude of wait and watch forcing the debtors to continue to meet their servicing obligations or seek rescheduling on onerous terms.

The scope of "debt-for-nature" swap was widened with the participation of creditor countries who in 1990 in their Paris Club meeting allowed member countries for the first time to sell or donate debts for swaps. Almost immediately the Bush administration announced plans to retire Latin American debt obligations in exchange for conservation.[30]

In several countries, the "debt-for-nature" swaps have been expanded beyond conservation to meet the specific environmental needs of debtor countries because debtors tended to view resource conservation as chiefly beneficial to the developed world. The broadened use of these swaps would offer the prospect of immediate and tangible benefits for these countries in areas such as pollution control and environmental restoration.

Largely as a result of these developments, debtor countries that formerly criticized "debt-for-nature" swaps began welcoming them. Brazilian president Fernando Collor de Mello declared that Brazil would welcome swaps and by the end of 1990, Brazilian officials began to propose swaps of their own.[31]

In Brazil, the debt-equity swap programme was a major part

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[30] Cole, n.28, p.78.

[31] ibid., p.79.

of the 1988 commercial bank debt restructuring. The deterioration of the economy, particularly the high rate of inflation, however, led to decreased volume of such conversion from 1988 onwards. This gave a spurt to the "debt-for-nature" swaps. In 1992, the first "debt-for-nature" swap in Brazil was completed when US $ 2.2 million of commercial debt (bought at a 66 percent discount) was converted at par into dollar-denominated long-term environmental bonds with a 6 percent coupon rate. The funds were to be used for the conservation of Grande Sertão Verda National Park in Northern Brazil.

This Conservation International (CI) - led swap in Brazil was meagre compared to $ 5.2 billion of total debt conversions transacted between 1984 and 1992, and covering "debt-for-nature", debt-for-development etc. but excluding cash buybacks and debt exchanges. "Debt-for-nature" swap accounted for nearly 42.3 percent of all types of debt conversions.[32] The debt conversion in the same period, in turn, accounted for just 11.4 percent share in the total debt conversion.[33]

In June 1992, at the UNCED, Canada announced a new programme to convert about US $ 145 million of Official Development Assistance (ODA) debt owed by Latin American countries into local funds to finance environment and other sustainable development projects. Brazil is eligible for this programme. The initiative

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[32] World Debt Tables, 1993-94: External Finance for Developing Countries (Washington, D.C.: The World Bank, 1993), p.114.

[33] ibid., p.115.

is subject to specific conditions, related in particular to human rights and democratic principles, as well as sound macroeconomic policies.

The transaction tended to exacerbate inflation by adding to domestic spending, the last thing borrowers such as Brazil, already throttled by hyperinflation wanted. In addition, nationalistic pride and military concerns have probably put the 1.8 million square miles of the Amazon region off limits. Assertions by American legislators that "the Amazon belongs to the whole world - not just Brazil" were galling to president José Sarney who was afraid that "debt-for-nature" swaps would make the jungle an international arena.[34]

Swaps could be no economic panacea because even if Brazilians could agree to $ 1 billion in swaps, that would be less than 1 percent of the nation's total debt.

The operation and supervision of the "debt-for-nature" swap are not a one-off type of transaction that can be signed and left as a fait accompli.[35] Though these swaps may not be large enough financially to be anything more than a modest boost to ease the debt problem, their double-bonus attribute makes them attractive and likely to find sponsorship beyond the funds involved in the swaps themselves.

In short, "debt-for-nature" swap elicited a strong reaction from Brazil. The largest debtor country with the largest tropical

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[34] Work and Smith, n.25, pp.48-49.

[35] Miller, n.26, p.136.

rainforest, Brazil has always looked at any external overture towards Amazonia with apprehensions. Its own perception towards Amazonia has been guided by the need to physically integrate and possess the vast expanse and use the forest and natural resources for development purposes. Brazilian geo-politicians looked at the Amazonia in terms of national security and interest which they defined, especially after 1964, not only in terms of threat from outside but also in terms of internal subversion.

Development-oriented military-authoritarian regimes after 1964, therefore, drew up massive plans for building highways, hydro-electric dams and establish settlements in the Amazonia region. Consequently, massive deforestation and despoliation of resources of Amazonia took place during this period and developed a direct link between deforestation and external debt as the need to promote cheap exports and produce export surpluses compelled the government from the 1970s to rely on its natural resources. As BOP situation deteriorated in the 1980s and Brazil, more than once, suspended payments of interests due on the external debt, it came under increasing pressure to evolve a conservation policy. It did so by developing 'Our Nature Programme' in the late 1980s and cutting down on subsidies and incentives to private sector activities in the Amazonia.

However, it has remained wary of various swap proposals for more than one reason. Apart from geo-political considerations, inflationary situation of the 1980s did not permit Brazil to welcome "debt-for-nature" swaps, more so, since the swaps hardly

made a material difference to its overall debt obligation -- which were $ 115 billion at the end of 1983. Moreover, Brazil's own experience with debt-for-equity swaps proved extremely harmful and contributed to the failure of anti-inflation programme such as the Cruzado Plan of 1986. Some of the swaps only helped the burgeoning market in currency speculation and facilitated the outflow of hard currency.

Various types of swaps including the "debt-for-nature" swap have their inherent limitations in the context of larger debtor countries, which at the same time, have a diverse economic base and greater necessity to revive growth rates. Smaller countries with small debt -- atleast from the viewpoint of the lender -- especially those such as Bolivia and Costa Rica which have gone ahead with market-oriented economic reforms have a comparatively better experience with "debt-for-nature" swaps. As the next Chapter highlights, Costa Rica has been projected as an example of the efficacy of "debt-for-nature" swap arrangement and a model debtor country.

CHAPTER 5

COSTA RICA'S SUCCESS STORY

Brazil has remained reticent towards the evolving innovative debt-reduction proposals, while a liberalizing economy such as that of Bolivia welcomed deals such as buybacks and "debt-for-nature" swap. In Central America, Costa Rica again welcomed "debt-for-nature" proposals and has had even a greater success than Bolivia in reducing its external debt obligations. A country of 51,022 square kilometres area in the semi- tropical isthmus of Central America, Costa Rica is unique in having no army; a relative social stability and sophisticated welfare apparatus; a long tradition of democracy; and a heavily indebted agro-export economy. Bereft of domestic capital to finance development and welfare measures, Costa Rica became increasingly dependent on conditioned loans from the IMF and USAID in the 1970s. To service the debt, Costa Rica had to ultimately open its economy, cut public services and welfare and undertake large scale deforestation and other environment-unfriendly practices. The debt in short, led to ecological degradation. It was imperative that some steps be taken to halt this destruction. The "debt-for-nature" swap proved an ideal tool for tackling the two related problematic issues.

This Chapter delves into the ecological issues and deforestation in Costa Rica in the first section and the two subsequent sections are devoted to describing the making of the debt crisis and the approach to solving this crisis through

"debt-for-nature" swap transactions respectively.

Deforestation and Other Ecological Issues

Costa Rica's stable democracy is rooted in the fact that there was relatively equitable land distribution. This was because Costa Rica never had a very large Indian population; and without a large Indian population to enslave, the Spanish colonialists could not establish the system of latifundismo (large land-holdings).[1] Instead, the Spanish colonists had established small farms, which could be worked by a single family. A coffee oligarchy did emerge with the advent of the coffee boom in the late nineteenth century. It has been estimated that one out of six rural families in Costa Rica is precarista i.e. in a 'precarious' position on land to which they do not hold legal title.[2]

Costa Rica is one of the most ecologically diverse regions of the world. It is covered with sweltering tropical rainforests and is divided into distinct bio-regions. The intensely fertile, lowland Pacific region, has a 'Dry Forest' cover.[3] Today most of this land is covered with plantations and only two percent of the original 'Dry Forest'. The new

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[1] Bill Weinberg, War on the Land: Ecology and Politics in Central America (London : Zed Books Limited, 1991), p.100.

[2] ibid., p.104.

[3] The forest is known as Dry Forest because it receives rain only during the rainy seasons. It is home to armadillos, iguanas, coatimundis and white-faced monkeys.

agro-export zone created to produce cotton occupy most of the region. On the mountain peaks and on the highlands, there is an extremely rare and threatened type of tropical forests called the 'Cloud Forest'.[4]

These forests play an important role in regulating both regional and global climate. It is argued that the effects of their destruction will ultimately take a toll throughout the isthmus. Costa Rica has 5 percent of all biological diversity on earth. Between national parks, wildlife refuges, private reserves, Indian reserves and forest reserves, over 25 percent of Costa Rica's national teriritory is officially protected wilderness -- a percentage higher than for any other country in the Western Hemisphere. The most extensive national parks and conservation programme in Central America was started in the 1960s. The first nature reserve was established at Cabo Blanco -- the cape at the southermost tip of the peninsula -- under the supervision of the government and the World Wildlife Fund (WWF).

Then in 1975, a National Park was established at Corcovado -- the rainforest which covers the Osa Peninsula on the Pacific coast. Corcovado is the only Pacific coast rainforest anywhere in Central America and due to its inaccessiblity, has remained forested and home to incredibly profuse flora and fauna including crocodiles, tapirs and jaguars. Corcovado is today one

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[4] So called because it draws much of its water from constant low cloud cover. It is cool, moist, mossy and home to an amazing profusion of species including quetzal and multicoloured frogs.

of the largest national parks in Central America spread over an area of 40,000 hectares.[5] Until recently, it had few facilities for tourism and was largely inaccesible. In recent years Corcovado has been threatened by the discovery of gold in the Osa Peninsula. After 1968, a large transient population sprang up comprising mainly of gold-seekers.[6] By the 1980s, there were some 1,500 oreros working illegally in Corcovado National Park.[7] Soon larger economic interest followed and bought mining concessions. There were nearly 3,500 legal mineral concessions surrounding the Park. While the oreros, with their low-tech methods, were responsible for some small degree of deforestation, just outside the Park boundary highly mechanized mining companies were using open-surface mining, which not only deforested on a massive scale but also destroyed soil systems which had taken millenia to develop. More and more local farmers joined the ranks of the illegal oreros as the large-scale mechanized mining made agriculture in the area more and more difficult.

Yet another threat to Osa Peninsula rainforests emerged in early 1989. Nearly 750 US Army Corps of Engineers personnel arrived in Osa to build roads and bridges to strengthen link

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[5] Weinberg, n.1, p.109.

[6] Oreros were landless peasants hoping to find new means of economic survival by sifting the precious grains from the silt of Osa's waterways. Few could afford to travel to San José to apply for a permit so were forced to work illegally.

[7] Weinberg, n.1, p.110.

between the isolated jungles and the Pan-American Highway.[8] Environmentalists feared a more uncontrollable development and exploitation drawing comparisons with the construction of the Trans-Amazon highway in Brazil.

The Santa Elana Peninsula is also covered with tropical Dry Forest. The southern part of the peninsula includes one of Costa Rica's most popular national parks named Santa Rosa. Its popularity is also due to the fact that it is a historical site.[8] President Oscar Arias (1986-1990) had plans to convert the entire Santa Elana Penisula into a national park, expanding on the already existing Santa Rosa National Park. The new park, called Gunacaste would actually extend inland from the peninsula to include two volcanoes of the Central Mountain chain.[10] The logic was to protect the habitats of migratory animals which shuttled between the Pacific Dry Forest and the cooler highland forest of the volcano slopes.

The creation of the national park at Santa Elana was postponed because of the discovery of a secret airstrip in 1986. It had been reportedly built by a private intelligence network of the US under the guise of a 'tourism project' to keep the contras -- the anti-Sandinista rebels of Nicaragua -- active in

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[8] ibid.

[8] William Walker, a US adventurer, in 1857 was trying to secure monopoly over ocean-to-ocean transport through Nicaragua. He declared himself the king but the Costa Rican forces repulsed him at Santa Rosa.

[10] It was named after the name of the province and Costa Rica's national tree.

the 1980s.[11] It is said that president Arias was threatened with a cut-off of USAID assistance to Costa Rica if he made the discovery of the airstrip public. But in summer 1987, when the Costa Rican environmentalists had almost accepted the fact that Gunacaste project might be a lost cause, president Arias announced the national park plan which would even include the airstrip.

The task of the Gunacaste project was recovery rather than preservation of the Santa Elana Peninsula which had been turned into a pasture, thanks to the beef production industry. Funding would come in from international conservation organizations such as the Nature Conservancy and the WWF.

A major cause and effect relationship between economics and politics is apparent. Ecological destruction has been the major underlying cause of strife in Central America, and the militarization which had been introduced in response to the strife itself became a form of ecological destruction. Absurdly skewed pattern of land use provide the raw materials of social unrest. Paradoxically, while land had been at the root of the insurgency, land has also been destroyed by the wars of the 1980s. The same factors which have brought Central America to political crisis are creating an ecological crisis. Militarism remain the largest threat to Costa Rica's wild areas and national parks. Santa Elana demonstrates the link between militarization and ecological destruction.

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[11] Weinberg, n.1, p.119.

Another place which also clearly reflects this link is the Monteverde Cloud Forest straddling the continental divide in the north of Costa Rica's Central Mountain chain.[12] When the Costa Rican army was disbanded in the early 1950s, they settled on a 3,000 acre area on the slopes of Monteverde and soon grew prosperous producing the famous Monteverde cheese consumed throughout Costa Rica. The Monteverde Cloud Forest providing a habitat for an amazing diversity of species, and also protecting much of the watershed for Costa Rica's largest hydro-electric dam Arenal, was adversely affected. The surrounding area of 150 square miles is threatened by land speculation and cattle interest. A lesser problem is presented by eco-tourism.[13] It is in danger of becoming an ecologically isolated island. The forest area covers only 16 square miles.

Costa Rica's most critical environmental problem is extensive deforestation and land degradation. Although it was originally completely forested, only 31 percent of the nation was forested in 1977. One half of the destruction has occurred since the 1950s. At the 1983 deforestation rate of 600 square kilometers per year, all forested areas (including national parks and reserves) will be gone by A.D.2010.[14]

Overpopulation is an important cause of deforestation. An

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[12] ibid., p.122.

[13] ibid.

[14] James D.Nations and Daniel I.Komar, "Rainforests and the Hamburger Society," The Ecologist (Dorset, England), vol. 16, no.4-5, 1987, p.162.

estimated 3.5 million people in the year 2000 would mean 335 people per square kilometer of arable land -- a population density comparable to India. This would mean that much of the best of farmland would be taken out of production, so as to be used for settlement of this enhanced population.

Another significant cause of increased deforestation has been the expansion of cattle industry. From 1960 to 1980, land in permanent pastures increased from 19 to 31 percent of the land area, while forests dropped from 56 to 31 percent.[15] Since only 9 percent (4656 square kilometers) of Costa Rican land is suitable for permanent pastures, most of the extension of the pastures have been on lands better suited either for forestry or farmland. This meant either waste of good farmland or loss of natural capital through inappropriate use of forest land. Moreover, increases in economic value have come from extensive use of new land rather than from more intensive use of land already in cattle ranching sector of the economy. There is a net government subsidization of cattle ranching.

There are incentives in the form of low interest loans by the banks. Part of the reason for the expansion of cattle industry in Costa Rica is pressure for exports. Exports have comprised 44 percent of total beef production from 1961 to 1986. The disproportionate influence of the ranching lobby on

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[15] George Foy and Herman Daly, Allocation, Distribution and Scale as Determinants of Environmental Degradation: Case Studies of Haiti, El Salvador and Costa Rica, Environment Department Working Paper No.19 (Washington, D.C.: The World Bank Policy Planning and Research Staff, September 1989), p.18.

government has enabled cattle operations to receive the bulk of the agricultural credit regardless of allocative efficiency concerns. Explosion of cattle ranching resulted in serious waves of peasant displacement and consequently in a frightening rapid rate of deforestation. The exodus of this peasant population threatens to render the wilderness preservation programmes irrelevant.

Cotton has also contributed to environmental degradation. Costa Rica saw a cotton boom in the nineteenth century. But it is not the ideal place to grow cotton. After four or five years of consecutive years of cotton cultivation with excellent yields, the lowland soil begins to leach and yields decline dramatically. The humidity and heat of the Pacific zone provides fertile breeding conditions for insects which feed on cotton.[16] In response to checking the pest menace, US companies stepped in with pesticides, chemical fertilizers and other technological fixes.[17] In the short-run, these techno-fixes imported from the US seemed capable of solving any agricultural problem in the cotton zone. In the long run, they led to contamination of land and water.

In addition to agro-chemical abuse, the cotton boom has also meant the destruction of Dry Forest. There was decline in basic staples and grains for local consumption as more and more land was turned over to cotton cultivation. Costa Rica's

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[16] Weinberg, n.1, p.16.

[17] ibid.

self-sufficiency in food grains declined. A highly skewed income distribution pattern emerged as food grain had to be imported.

The impact of the large scale deforestation have been devastating. Deforestation has resulted in soil erosion, which has led to siltation of rivers and this in turn resulted in declining efficiency of hydro-eletric dams, ultimately resuting in electricity rationing. An example is the 23-year old Cashi hydro-dam in Costa Rica.[18] The siltation run-off from erosion had clogged the reservoir resulting in revenue losses of upto $ 274 million. Similar problems are plaguing the mega-scale hydro-dam in Arenal. The Inter-American Development Bank (IDB) and the World Bank were considering construction of the Boruca dam, with 85 percent of its power to be supplied to an aluminium processing US multinational plant.[18] The dam would have flooded a large area of the Boruca Indian reserve. Organized resistance from the people delayed the start of the project.

Deforestation in Central America is also contributing to the North American `Silent Spring'.[20] Many North American song-birds have been killed by overuse of pesticides by planters, but many are dying because the rainforests to the south where they migrate for the winters have gone. With their winter habitat destroyed, every year in spring fewer song-birds return from Central America. It only shows that the integrity of

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[18] ibid., p.33.

[18] ibid., p.34.

[20] ibid., p.24.

the ecosystem in the distant places such as the United States depend on the integrity of rainforests in Costa Rica.

For over a century, United States' policy in Central America has been based on making it safe for US interests. US private capital invested in agriculture or mining has contributed directly to environmental degradation by owning and clearing large areas; by supporting and sustaining an oligarchy of large land owners and by pushing the landless into forested areas. It is time that some energy is devoted to making Central America safe for its own ecological interests. Beside being the result of outside forces, the ecological disaster has been due to the efforts of the government to come out of the shackles of indebtedness. In order to increase export earnings, land-degradation promoting practices such as cattle ranching and plantations were encouraged through subsidies and other incentives. The debt situation had worsened during the 1970s and the 1980s on account of several reasons which are dealt with in the next section.

Making of the Debt Crisis

When a journalist interviewed president José Maria Figueres (1948-1949) on how he had brought about an economic miracle in Costa Rica, he replied, "That's easy, by borrowing."[21] A sophisticated welfare state apparatus erected

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[21] N.Patrick Peritore, "Costa Rica: The Crisis of Demilitarization", in Constantine P.Danopoulos, ed., From Military to Civilian Rule (London, 1992), p.84.

on external borrowings must eventually suffer from its own artificiality. In the 1980s Costa Rica reached the point of bankruptcy. Debt service, or the amount of exports needed to pay the debt, equalled 106.4 percent. Of this, 60 percent was incurred at variable interest rates.[22]

Costa Rica's productive structure is characterized by primary exporting sector, dominated by sugar, beef, banana and coffee. This export sector showed a remarkable growth during the decade of the 1970s. During 1980s, it started losing its importance due to slump in the world prices for the primary commodities and due to the importance gained by secondary and tertiary sector within the welfare state. During the 1960-1977 period the Costa Rican economy had grown dramatically, with an inflation rate of only 1.9 percent and high production growth.

But this could not continue for very long. There was a high level of public deficit which touched an all time high figure of 11,948 million colones in 1984.[23] This was a rise over the period of economic growth's deficit by more than 11 percent. There was an excessive rise in internal demand due to conspicuous consumerism, a result of growing tendency among the Costa Ricans to adopt consumption habits of developed nations. The current expenses portion of the expenditure grew

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[22] ibid.

[23] Rafael A. Trejos, "External Debt and the Economic Development of Costa Rica", in Antonio Jorge and others, eds., External Debt and Development Strategy in Latin America (New York, 1985), p.92.

significantly. To maintain imports, mostly of consumer goods, and to allow for the economic recovery, the government became increasingly dependent on external credit.

External credit financed a large part of the gross formation of capital. In the decade of the seventies the external credit financed the equivalent of 45 percent of the total investment.[24] Obviously, a sophisticated welfare state apparatus was erected on debt.

Large public expenditure, excessive demand and a growing inflation, the oil crisis and a precipitous drop in coffee price steered Cost Rica to the brink of bankruptcy. The external debt tripled by 1982.[25] Debt repayments in 1983 equalled 85 percent of export income, and the interest payment alone accounted 65 percent of GDP.[26] Also, the rise in interest rates in international market led to increase in the amount of total debt as most of the debt was incurred at variable rates.

Another aggravating factor was the change in the debt's composition. In 1972, 66 percent of the loans came from the multilateral or government organizations and only one-third came from commercial sources; while by 1981, only 40 percent of the loans came from multilateral and official sources and those coming from private sources increased to 60 percent. The magnitude of the debt and the government's inability to obtain

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[24] ibid., p.87.

[25] Peritore, n.21, p.84.

[26] ibid., p.85.

new credits from abroad, together with heavy loss in international monetary reserves, led to default on external payment. The government opted for a unilateral moratorium in August 1981. By early 1983, Costa Rica had a public debt equivalent to US $ 3.7 billion while private debt amounted to US $ 1 billion. This meant devoting 10 percent of its export income to pay for the debt.[27] The continued emphasis on agricultural export production to earn revenue for debt servicing had devastating ecological effects.

The Costa Rican ecologist Alexander Bonilla realised that the political and economic problem in Latin America were a part of the environmental problem.[28] As for seeking a new deal with the IMF, the World Bank and other lending organizations, Bonilla supported a new plan that would link debt forgiveness to preserving tropical rainforest zones in the debtor nations. He postulated that the debt crisis and the deforestation crisis are already linked, therefore, the solution must be linked as well. And if the current rate of deforestation continues, in another decade Costa Rica would be left with no forest outside of protected areas.

Working of "Debt-for Nature" Swap

The deforestation/land degradation problem had to be

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[27] Trejas, n.23, p.90.

[28] Bonilla, Formerly director of two National Parks (Santa Rose and Poas Volcano), formed the Ecology Party to promote agrarian reforms in Costa Rica.

integrated into Costa Rica's economic policy and agricultural export plans. The encouraging gestures began with significant importance being given to environmental issues in the 1988 Country Economic Memorandum.

The international banking community has funded and encouraged Costa Rican cotton and beef production as a means of generating foreign exchange in order to enable it to pay off its debt to these institutions. But not only did Costa Rica end up even deeper in debt, because they had to pay off the new loans undertaken for the development of the cattle industry, the ecological effects of this industry have actually threatened or even destroyed some of the very projects financed by the original loans.

Costa Rica was spending three-quarters of its export earnings just to pay the interest on its $ 3.7 billion debt. Under Bonilla's vision, the debts of tropical countries such as Costa Rica could be cancelled in exchange for a commitment to redirect resources into effective rainforest protection. This concept had its roots in the "debt-for-nature" swaps which are being arranged by the world's leading environmental groups. In such an arrangement the US based Nature Conservancy purchased $ 5.6 million of Costa Rica's debt at a reduced $ 784,000 provided by world environment groups and the Swedish government with the funds to be used in support of the Costa Rican national parks programme, specifically the restoration of the Pacific Dry at

Santa Rosa National Park.[28] The banks holding Costa Rica's debt co-operated by selling the debt at a greatly reduced rate.

Most of the debt were donated to the Fundacion Neotropica -- a Costa Rican conservation organization.[30] The bonds were worth 75 cents on the dollar in local currency. The conservation group could use the bond as collateral and draw 25 percent interest on them.

The Fleet Bank of Rhode Island also took advantage of the scheme. In February 1988, it donated $ 250,000 to Costa Rica for land acquisition and park management by retiring a portion of the country's debt with the Bank. The Fundacion and the central bank then transformed the donation into nearly $ 1 million in colones, the local currency, for conservation. The receivables were acquired in the secondary market at an average discount of 85 percent and then converted to 75 percent of their nominal value in local currency bonds. The bonds were issued for a five-year period but provided an annual cash-flow of 25 percent. Most swaps have been structured according to this pattern.

The success of the first swap led the Costa Rican government to undertake three more swaps. In 1988, the Dutch Foreign Ministry purchased $ 30 million of Costa Rican debt at

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[28] ibid., p.114.

[30] In February 1987, the government of Costa Rica established the Fundacion de Pargues Nationalas and the Ministry of Environment to, act as trustees for a comprehensive "debt-for-nature" programme.

15 percent for $ 4.5 million. This debt then, was converted to bonds at 30 percent of their face value. In this deal nearly $ 9 million of Costa Rican bonds were obtained. The revenue yield from the bonds were to be used for agro-foresty and reforestation. This was the first agreement to involve a government and also extended the asset purchased beyond land to be conserved.[31]

In 1989, a consortium led by the Nature Conservancy arranged for a deal where $ 5.6 million of Costa Rican debt were purchased. The government issued local currency bonds equal to 30 percent of the principal amount.

Finally, the Swedish government in early 1990s purchased $ 25 million of commercial bank debt and than exchanged this for conservation bonds. The local currency bonds were equivalent to 70 percent of the principal of the debt.[32]

Critics maintain that these swaps mainly serve to provide banks with a tax write-off on funds they would probably never collect. Also, through the swaps, corps of conservationists have made concerted efforts to revert the deforestation and their efforts have been impressive and lauded by the international community. Costa Rica has been a magnet for overseas money for conservation because it possesses tremendous biological diversity. Lack of national funds had hampered the country's own

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[31] David W. Pearce and Jeremy J.Warford, World without End: Economics, Environment and Sustainable Development (New York, 1993), p.352.

[32] ibid.

conservation activities. A reversal of policies occurred when the Nobel Peace Prize winner, president Oscar Arias established a new Ministry of Energy, Mining and Natural Resources in Costa Rica headed by an environment enthusiastic Alvaro Umana. Umana believed that debt swapping "was very crucial" to Costa Rica's conservation efforts.[33] The swaps substantially multiply a contributor's investment, thus providing for an added incentive.

Mario Boza, executive director of the Fundacion had said: "Debt swapping is the most important tool to achieve conservation. You multiply money by five. It's a lot of money that's free. We can use it to buy land, pay personnel, and do everything. It's an incredible scheme."[34] The "debt-for-nature" swap benefits the parties to the transaction: foreign banks because they get rid of bad debt; the Costa Rican government because the scheme internalizes its debt, saving dollar reserves to pay off their foreign loans and finance import of essential capital goods; and the deal is particularly beneficial for the American banks because the Internal Revenue Service ruled that banks could write off a portion of their debt as charitable deductions.[35] US banks, conservation groups, and US Treasury Department officials are discussing whether the face value rather than the discounted market value can be

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[33] M. Sun, "Swapping Debt-for-Nature", Science (Washington, D.C.), vol.239, 18 March 1988, p.1367.

[34] ibid.

[35] ibid.

deducted, which, if allowed, would give banks an even bigger incentive to engage in "debt-for-nature" swaps.

Those opposed to the swap think that it takes land out of local control and places it into the hands of foreign conservation groups, forcing governments to allocate resources according to a foreign agenda. But Bonilla maintains that the swap approach can be a means of international support for a pre-existing local environmental agenda, allowing the nations of the North to take their share of responsibility for reforestation in the tropical South.[36] He also sees it as perhaps the only way to avoid the twin global disasters of economic collapse brought about by massive debt default and ecological collapse brought about by rampant tropical deforestation.[37]

The money raised through "debt-for-nature" swaps have already exceeded Costa Rican government's expectation. But it needs a lot more, thinks Umana. The money raised from debt swapping "will provide for variable costs" he says.[38] The greatest momentum that debt swapping gained was during the presidentship of Oscar Arias. He had chalked out a political and biological time-table to get the Costa Rican conservation in order. In the due process, Costa Rica was able to reduce its debt liability by 5 percent through debt swapping. Though a small amount, it holds a lot of promise because the ecology has

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36 Weinberg, n.1, p.114.

37 ibid., p.58.

38 Sun, n.33, p.1367.

actually benefitted through implementation of projects by the money freed as a result of the transactions.

Costa Rica classifies as a medium-income country. The productive structure has been dominated by a primary exporting sector. The oil crisis and drop in prices of agricultural products during 1970s and 1980s precipitated its external indebtedness. The much needed credit inflow began only when it addressed the crisis by elimination of import-substitution, encouraging exports of primary goods to US and dismantling the welfare state. A 10 year structural adjustment programme was started by president Monge (1982-1986) which included exchange market regulation; reducing government's deficit; raising interest rates; and reducing imports while developing non-traditional exports. The results were positive and during 1992-1993 a growth rate of 6 to 7 percent was registered. Per capita income climbed up to $ 2,300 annually by 1993.

It would be befitting to bring in the social and ecological cost at which this progress was made. The self-employed small landholders started selling off their land to foreign banana growers and tourist companies with the opening up of economy. Peasants were driven into urban slums as these maquilas (foreign industrial export enclaves) established themselves and slashed large tracts of forests. Not only this, a pesticide called DBCP, used on the banana plantation near Limon, a port town on the Caribbeen coast, to combat minute worms, resulted in widespread sterility.

External debt and intrusion by companies of the foreign countries led to ecologically destructive practices being undertaken. A treat to such a dynamic and opulent bio-diversity would have its repercussion in other parts of the world. Therefore, the largest country on the continent, viz. the US, volunteered to enchance substantial aid to fund the preservation of the bio-diversity. Arias' efforts were appreciated the world over. Financial institutions came forward to allow debt swappping and the discount thus available would entice these creditors as well as the conservationists to indulge in further transactions.

The "debt-for-nature" swaps proved useful but without the concept of sustainable development this would create certain problems for the farmers or those engaged in lumbering, felt Alvaro Umana. This new concept has begun at a small scale. It has brought modest relief to Costa Rica. Nonetheless, a beginning has been made towards international ecological co-operation. Costa Rica has reduced its hard currency indebtedness by more than 5 percent with the help of "debt-for-nature" swaps. Though small, the sum can has substantial effects on the debt-ridden Costa Rican economy.

What can be inferred from the Costa Rican experience is that the swap is beneficial to economies which are small. Also, the success of the swap was on account of the openness of the economy. Domestic conditions not being hostile to foreign investors, it lured them to make fruitful investments. The US

interest was greatly involved because of the direct implications of Costa Rican environmental degradation on its own environment. So more and more funding was arranged for. The issue of inflation being fuelled by this swap arrangement was falsified because the conversions were to bonds. But the greatest contribution of the swap is, undoubtedly, raising environmental awareness in the host country.

CHAPTER 6

SUMMARY AND CONCLUSION

The onset of debt crisis in the 1980s, admittedly, had a devastating effect on Latin American countries. It derailed the economic momentum making 1980s the 'lost decade' for the entire region. What triggered off the crisis remains debatable with creditor banks and governments blaming financial profligacy and the very import-substitution policies followed by Latin American countries as responsible for the growing indebtedness. On the other hand, several governments and scholarly circles in Latin America have focussed on the international economic scenario and the policies pursued by commercial banks and multilateral agencies as causing indebtedness.

Be that as it may, fall in the flow of foreign investments and lendings caused economies to shrink. By 1986, the per capita Gross National Product (GNP) in the Latin American countries was 8 percent lower than that of 1980. By 1992, the external debt liabilities in the region as a whole, including the Caribbean had reached a staggering $ 446 billion of which three-fourths was public or public-guaranteed. Initially suggested as a short-run liquidity problem, more Latin American countries opted for import suppression; and once that did not help, switched to a policy of trade liberalization and export promotion. International lending agencies such as the IMF and World Bank and creditor government especially US encouraged, rather made fresh landings contingent upon internal reforms and trade liberalization. These measures

hardly alleviated the burden of external debt. Export promotion and policies of trade liberalization, however, entailed launching internal adjustment and restructuring. For internal adjustment was necessitated by reduction of imports, therefore it rested upon reducing demand beside shifting resources from domestic to the export market.

Internal adjustment worsened the inflationary situation in several countries. Stabilization programmes seeking currency devaluation, financial liberalization and domestic credit control, as well as reduction in fiscal deficits through increase in revenues and cuts in public expenditure, could not produce the desired result. For instance, the need to reduce public expenditure was frustrated by the rising proportions of public revenue absorbed by interest payments on both external and internal debts. Consequently, in countries such as Brazil, the rapid rise in interest payments absorbed nearly one-third of the GDP in the late 1980s. Worsening the situation at a time when most revenues were going into servicing the debt, was the precipitous fall in government revenues.

The upshot of various policy measures was an ever-increasing debt servicing and the realization that debt in its entirety, perhaps, cannot be paid. Such a realization resulted, among others, in policies of privatization and dismantling of public enterprises primarily to secure increased government revenues.

From the middle of the 1980s, new and innovative proposals began to be put forward to tackle the problem of debt servicing.

Underlying these proposals and schemes was the admission that debt problem could not be resolved unless economic growth is revived in the indebted countries. The Baker Plan of 1985 envisaged additional credit of $ 29 billion over three years to the most hard-hit indebted countries. However, private commercial banks showed little interest and the scheme failed to take a practical shape. The Brady Plan of 1989, named after the US Treasury Secretary, again spoke of fresh lendings for investment purposes and also mentioned the need to reduce the real value of debt in lieu of Latin American countries introducing structural reforms. Apart from these, many more new proposals also emerged calling for debt relief. These included proposals for "debt-for-debt", buybacks, debt-for-equity and "debt-for-nature" swaps.

Most of the proposals evolved in the realization that the burden of debt servicing may lead to widespread defaults and, therefore, to disruption of international financial system. Besides, since 1982, there has evolved a secondary market in debt where debt instruments have been traded regularly at deep discount. Many of the private banks wanting to reduce their exposure have been keen to sell off debt papers in the secondary market.

Among these innovative schemes, "debt-for-nature" swap is considered better and superior to other conversion schemes. Beside, reducing debt obligations, the swap also intends to check deforestation and other activities causing environmental degradation. As has been discussed in the first Chapter, forest

and other natural resources came under greater exploitation during the 1980s when debtor countries attempted to generate new sources of revenues for the purpose of debt servicing. The emergence of secondary market facilitated the evolution of various innovative debt conversion schemes; growing consciousness about environment put a premium on "debt-for-nature" swap scheme. Unlike the debt-for-equity swap which, many have argued, is inflationary and raises control of foreign equity holders over productive assets, "debt-for-nature" was considered as free from such economic drawbacks.

For long, environmentalists and others have been highlighting the disastrous consequences of ill-conceived development strategies for the environment. The realisation that developing countries together are losing nearly 15 billion hectares of forest each year and that by the year 2000 about 40 percent of the existing forest cover would be gone made governments in both the developed and the developing countries and international political and economic organizations take note of environmental issues. Apart from its impact on environment, deforestation also is causing irreparable damage to bio-diversity for producing new types of food and medicine. Latin American region alone possesses about 70 percent of the world's bio-diversity. Moreover, deforestation for development and for generating new receives also directly contributes to the increase in greenhouse gases.

Though external debt burden is and was not the sole reason

for the destruction of environmental assets, it, nevertheless, contributed greatly to the environmental problems. As has been noted in the second Chapter, the "debt-for-nature" swap arrangements are found in the interest of both the lending banks and borrowing countries, and governments and citizenry alike. The banks are able to get rid of a virtually irredeemable debt, reduce their tax liabilities in their home country and earn a goodwill for having funded a conservation programme. The governments of the debtor countries relieved of a portion of their external debt obligation, channel some resources into environmental activities and also enhance their prestige, both at home and abroad. As the discussion in the previous Chapters indicate "debt-for-nature" swaps arranged so far have not proved inflationary. In most cases rather than issue local currency, governments have issued long-term bonds, proceeds from which go into conservation efforts. To that extent, another criticism that conversion schemes involve transfer of property and lowering of national sovereignty is also mitigated.

The complex mechanisms and modalities of "debt-for-nature" transactions involving a large number of actors have been highlighted in the second Chapter. What emerges from the discussion is that notwithstanding complex negotiations involving several actors, the actual transactions made so far are limited involving only small sum. Since 1987, when the first "debt-for-nature" swap was concluded in Bolivia, thirty one such transactions, most of them in Latin America, have taken place

until 1992. Through this mechanism, a total of $ 128 million have been raised for various environmental projects at an initial cost of only $ 47 million on an average discount of 62 percent. Notably, not only the amount transacted is meagre but the particular debt instruments were deemed virtually irredeemable and were sold at deep discounts in the secondary market. Besides, as the facts highlight, major swaps in Costa Rica have been for reforestation and restoration of conservation zones whereas, in the case of Bolivia, the swap actually went into the preservation of Beni Biosphere. Quite often, debtor countries have agreed to such swaps only when revenues from a particular forest region have been low or negligible. The point is that, more often than not, both debtor countries and the creditor banks and their governments have gone in for such swaps more out of narrow, immediate economic considerations rather than by lofty ideas of conservation. Again, it has often been noted, swaps lack follow-up action; and ironically permit what is described as `sustainable exploitation' of forests.

Bolivia was the country to have concluded the first such swap in 1987. Deeply dependent on tin mining and therefore, on foreign investment and markets, Bolivia in a sense remains an open economy. The precipitous fall in the prices of its major exports combined with economic mismanagement and political instability brought Bolivia to the brink of collapse in the 1980s. The implementation of the New Economic Policy (NEP) since 1985 sought to stabilise the economy through deregulations,

privatization and liberalization of trade. NEP was pursued at a high social cost which, in turn, severely strained its environmental resources. Excessive mining, logging, migration of impoverished population and cultivation and processing of coca contributed to unsustainable exploitation of natural resources. External debt which had, as early as 1979, nearly equalled the value of national product, was the principle cause behind environmental destruction. By 1989, the debt to GDP ratio was at 135.5 percent -- the highest in the region -- and the ratio of debt to exports was 538.5 percent. Besides, the country was sunk in the mire of hyper-inflation which was running at 25,000 percent in 1985.

With both economy and environment devastated, the civilian government of Paz Estenssoro came under pressure to both introduce structural reforms and pay attention to the environment. Therefore, it was a government pursuing policies of restructuring that agreed to execute the first ever "debt-for-nature" swap agreement in June 1987. The transaction involved debt with a nominal value of $ 650,000 purchased at $ 100,000, that is, about 15 cents on the dollar. The money came from international donors and conservation organizations. On its part, the Bolivian government agreed to protect nearly 4 million acres of forest and grassland in the Beni Biosphere Reserve. It also agreed to open the area for research purposes, and more significantly for controlled commercial activities in the surrounding buffer zones including limited logging. While logging

for timber is going on reportedly, as of 1989, not a single tree had been planted in the buffer zone. Notwithstanding these problems and shortcomings, Bolivia has since then concluded few more swaps reducing its bilateral debt to US by about $ 372 million. It is not out of place to mention that the other innovative scheme under which Bolivia bought back a fraction of its external debt was again funded by foreign donors and governments. In short, a small dependent economy undergoing the process of economic restructuring concluded "debt-for-nature" swap involving tiny amounts that were considered irrecoverable, and were selling at 5 to 10 percent of the face value in the secondary market. This raises the question whether the Bolivian example can be replicated elsewhere.

The answer emerges from Brazil, the country with the largest external debt among developing countries and also possessing the biggest environmental asset viz., the Amazonia.

Amazonia is a major concern for the environmentalists who consider its conservation imperative for maintaining global climate and preserving bio-diversity. Amazonia is also a major concern of Brazil for it deems the physical possession of the vast rainforests necessary for national integration, security and, above all, economic development. It has looked at any discussion on Amazonia suspiciously apprehending attempts by US and other developed countries to internationalize or, atleast, circumscribe Brazilian sovereignty over Amazonia. Such considerations apart economic factors have also dissuaded Brazil

from accepting various innovative debt-reduction proposals including the "debt-for-nature" swap. Its experience with the debt-for-equity transactions and the way these contributed to the failure of the 1986, anti-inflation Cruzado Plan further dissuaded Brazil from going ahead with conversion schemes. Though it did conclude its first-ever "debt-for-nature" swap in 1992 involving a commercial debt of $ 2.2 million only which was bought at a 66 percent discount and converted into long-term bonds for the conservation of Grande Sertaó Verda National Park. Since then it has concluded few more transactions involving conservation of rainforests. Overall, Brazil has however, remained reticent towards "debt-for-nature" swap. Apart from the inflationary impact, Brazil has felt that swaps of this kind hardly mean any reduction given its over-indebtedness of $ 115 billion. For a large, diversified, value-added economy such as that of Brazil, the major goal has not really been search for solutions that would marginally reduce its external debt but the greater necessity to revive growth rates. In sum, Brazil has found "debt-for-nature" swaps attractive neither for economic reasons, nor for larger geo-political and developmental reasons. For Brazil, environmental issues are inextricably linked with security and developmental considerations, and rightly so.

As Chapter five highlights, it is once again a small, liberalising export-dependent economy such as that of Costa Rica that found "debt-for-nature" swap attractive and acceptable. The major example of the success of "debt-for-nature" swap, Costa

Rica, has been able to reduce its external debt obligations by as much as 5 percent. Whatever be the factors such as its unique and rich treasure of bio-diversity; impact of deforestation on the environment of countries as far away as the US; the need to keep Costa Rica stable in the midst of revolutionary turmoil in the rest of the Central America during the 1980s; and substantial foreign, especially US, private investments in logging, coffee, cotton and other economic activities, creditor banks and governments alike offered generous terms of swaps to Costa Rica.

An attempt was made to make "debt-for-nature" swap even more attractive when the OECD countries agreed to write-off debt in return for conservation measures in the debtor countries. Also, US private banks were allowed tax benefits on the amount written off for conservation purposes. The all-important question whether "debt-for-nature" swap can be replicated in other debtor developing countries remains a moot point. In principle, the swap is a laudable effort since it helps a developing country manage its external debt and secondly, provides financing for worthwhile environmental activities. In reality, however, the swaps have so far a mixed response and a mixed outcome. For a country like Brazil with a large diversified and developed economic infrastructure, the idea of the swap remains without any great appeal; more so since issues of national sovereignty and choice of economic policies get intertwined with any environment related debt relief. Bolivia and Costa Rica attained a modicum of success essentially because of their dependent and open economies. In the

case of Bolivia, most debt transacted for nature were irredeemable while in the case of Costa Rica, economic and probably political considerations, rather than purely environmental concerns, played a decisive role. Given the complexity of mechanisms and modalities of "debt-for-nature" swap, it is clear that creditors would like to go on case by case basis rather than evolve uniform and standardized procedures and mechanisms. Is environment becoming a tool of interference or intervention in the making of policies and choice of development strategies in debtor developing countries? The answer is in the affirmative.

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