

1.0 – INTRODUCTION

The World Bank, the International Monetary Fund (IMF) and other major lenders have played a very significant role in shaping the development of Third World countries. Their structural adjustment loans (SALs), begun in the 1970s and 1980s as a way of restructuring the economies and political institutions of borrowing countries, have been the subject of much debate. While sound economic policies are necessary to achieve economic stability and progress, critics have not only questioned the effectiveness of SALs, but have also examined the associated social and environmental impacts. Negative social impacts of structural adjustment (SA) have been identified and are being addressed. Due to the pervasive use of SA in the Third World, environmental impacts must be examined in order to either mitigate the negative impacts or encourage the positive ones. Acknowledging the links between economic, social, and environmental factors in society is necessary in moving towards sustainable development.

This paper focuses on the environmental impacts of SA in developing countries. It begins by defining structural adjustment and discusses the different approaches to thinking about and assessing adjustment. A brief background on the World Bank and the IMF is also provided. Next, the events leading to the use of structural adjustment are reviewed, followed by a discussion of the elements of SA and the evolution of SA lending. The subsequent sections discuss the link between SA and the environment, followed by a more in-depth look at four aspects of SA and their effects on environmental quality. Finally, the last section brings together lessons learned from different countries' experiences and makes recommendations on the future of SA lending.

2.0 – DEFINING STRUCTURAL ADJUSTMENT

Before discussing the impacts of structural adjustment programs (SAPs) on the environment, it is important to understand what exactly is meant by ‘structural adjustment.’ Several different authors have defined structural adjustment (SA) as a conscious change in the fundamental nature of economic relationships within a society (Reed 1992, and Sparr 1994, as quoted in Mohan 2000). Woodward adds that these changes should “ensure sustained growth,” (1992, in Mohan 2000:25) while Mohan points out that SA reshapes the economies of the Third World to be more market-oriented (2000:25). Killick elaborates that the ‘conscious’ aspect means that it is “a result of the manipulation of policy, not a change that occurs [automatically] through the market as a response to changing demands and opportunities” (1993:68). Furthermore, he defines adjustment policies as “instruments deployed to achieve the desired adaptation and to enhance the economy’s flexibility” (Killick 1993:68). Finally, the World Bank defines adjustment simply as government policy and institutional reforms (World Bank 2002i); this is the definition that guides this paper.

What exactly is the ‘structure’ that is being adjusted in the context of a country’s economy? The term structure refers to how a society employs resources, produces goods, and distributes goods and income (Killick 1993:68). The political system, legal framework, enforcement agencies, established patterns of social organization, public administration, and even demographics of a country all form a country’s institutional base, which, combined with its productive system and physical infrastructure, are all parts of the country’s structure (Killick 1993:5-6).

The production of goods plays a central role in an economy's structure. All goods are either tradable or nontradable goods. Tradable goods are "all goods that do or can enter into trade as exports or imports," and include primarily the agriculture, mining, manufacturing sectors, and certain service industries such as tourism and shopping (Killick 1993:9). Nontradables include everything else; the most important nontradable goods include the construction sector, utilities, and government and other services such as health, education, and defense (Killick 1993:11).

This is relevant to our discussion of the impacts of structural adjustment on the environment because the production of goods is dependent on the extraction of natural resources and on the use of the environment as a 'sink,' or a depository, for the waste products of production. Thus, a significant change in the production system has the potential to have significant effects on the environment of a country, either positively or negatively. According to Killick, "balance of payments difficulties are the largest single motive for adopting adjustment policies in developing countries. Such adjustments almost certainly require the relative transfer of resources out of nontradables into tradables," in order to export more and import less (1993:11).

Beginning in the latter half of the twentieth century, developing countries were plagued by "deeply rooted economic distortions and inefficiencies that had become widespread in their production, distribution, and financial systems (Reed 1992:1). Faced with difficult international conditions, those structural weaknesses left many developing country economies increasingly dysfunctional in the global economy. This led the international financial institutions (IFIs) to recognize that "deficiencies in national policy-making processes in underdeveloped economies and structural weaknesses in their economies were a significant contributing factor to their

worsening economic performance” (Milward in Mohan 2000:24). SA thus became the process by which the IMF and the World Bank based their lending to underdeveloped countries on certain pre-determined conditions.

Munasinghe (1999:9) describes structural adjustment programs (SAPs) as economic reform packages that include stringent monetary and fiscal measures to “stabilize” in the short term and “adjust” in the medium term the macro economy of developing countries. Before taking a more in-depth look at the events that led to the widespread use of SAPs, let us first turn to a short discussion on the different conceptual approaches to adjustment.

3.0 – PERSPECTIVES ON DEBT AND DEVELOPMENT

There are different conceptual approaches to debt and development. These approaches are the frameworks within which people think about and evaluate adjustment policies. The various perspectives are important to consider because they determine what factors are included and how they are prioritized when examining policies such as structural adjustment. The differences in perspectives help to explain the differences between proponents and critics of SAPs. The following four broad perspectives of debt and development will be briefly discussed: neoliberalism, world systems and dependency theory, political ecology, and social equity.

The primary perspective through which structural adjustment is viewed is neoliberalism. This is the perspective held by both the World Bank and the IMF; indeed, SAPs themselves are based on neoliberal ideas, and the “application of neo-classical orthodoxy” (Mohan 2000:xiv). Based firmly in neoclassical economics, the neoliberal approach centers around two main values: the efficiency of free markets and private producers, and the benefits of international trade and competition (Milward in Mohan 2000:28). Neoclassical economists agree that the state should

intervene in case of market failure, but only minimally, and preferably using markets such as taxes and subsidies, rather than regulations (Milward in Mohan 2000:37). Neoliberalists tend to prioritize economic growth and view it as the primary means of reducing debt and promoting development in Third World countries.

A second perspective on debt and development centers on world systems and dependency theory. According to this approach, poverty can't be fully understood without taking into account the interactions between dominant "core" or "center" industrialized countries and the subordinate "peripheral" developing countries (Hopkins and Wallerstein 1982:91). The term 'dependence' refers to one economy being sensitive and subject to the policies of another. For example, in an article entitled "The Structure of Dependence," Theotonio Dos Santos writes (1970:235): "we can understand what is happening in the underdeveloped countries only when we see that they develop within the framework of a process of dependent production." People who approach adjustment with this perspective would see a need for changing the relations between countries, rather than focusing on adjusting the economic policies within a debtor nation.

This system of dependency is seen as a result of colonialism, and has evolved into a financial-industrial and later technological-industrial dependency in the age of multinational corporations (Dos Santos 1970). The system is maintained through various mechanisms, including unequal exchanges, foreign debt, transnational corporate profit remittances, and brain drain. According to Dos Santos (1970:234) "the productive system in the underdeveloped countries is essentially determined by these international relations." Those that see debt and development through the world systems and dependency perspective tend to view structural adjustment as a continuation of "core" country dominance over "peripheral" countries.

A third perspective that is used to examine debt and development is political ecology. According to the Political Ecology Society (PESO), which publishes the Journal of Political Ecology, this is the study of the “political and economic principles controlling the relations of human beings to one another and to the environment” (PESO 2002). Political ecology stems from two main streams of thought: political economy, which links the distribution of power with productive activity, and the study of biological-environmental relationships (Greenberg and Park 1994:1). It is a “historical outgrowth of the central questions asked by the social sciences about the relations between human society, viewed in its bio-cultural-political complexity, and a significantly humanized nature” (Greenberg and Park 1994:1). Political ecologists, therefore, view environmental impacts of human activity within the context of the political economy.

The final perspective used in examining debt and development issues in this paper is social equity. This worldview sees the exploitation of marginalized peoples as the central issue in third world debt and structural adjustment policies and examines the distribution of benefits and costs of policies. The environmental justice movement in the United States is one example of the call for changes in policies based on social equity. Environmental justice has been defined as “the pursuit of equal justice and equal protection under the law for all environmental statutes and regulations without discrimination based on race, ethnicity, and /or socioeconomic status” (Rajzer 1997). In the early 1980s, demonstrations and protests against the siting of toxic landfills in minority communities led to the commission of several studies which found that “race was in fact the most significant factor in determining the siting of hazardous waste facilities” (Rajzer 1997). The social equity framework prioritizes the needs of those with little or no power when forming and evaluating policies.

The different perspectives on debt and development are important to keep in mind as we consider the arguments for and against structural adjustment. Each author frames the issue differently according to his or her approach. The following section gives a brief background on the roles of the World Bank and the IMF as the leading international financial institutions (IFIs) in the world.

4.0 – BACKGROUND ON THE BRETTON WOODS INSTITUTIONS

Although other development banks and even individual countries have implemented various macroeconomic stabilization and structural adjustment measures, the World Bank and the IMF have been at the forefront of promoting SAPs. Other organizations that participate in adjustment lending are major public international financial institutions, such as regional multilateral development banks (MDBs). The three major MDBs are the Inter-American Development Bank (IADB), the Asian Development Bank, and the African Development Bank. Founded in the 1960s, the structure and operations of these institutions are “largely modeled on the World Bank” (Rich 1994:7).

The World Bank

The World Bank and the IMF have had much influence in shaping development since the second half of the twentieth century. Immediately after the Second World War (WWII), world leaders saw a need for international cooperation in order to rebuild the devastated countries in Europe. In 1944, in Bretton Woods, New Hampshire, the World Bank Group was founded to fund the reconstruction of Europe, and later, to assist developing countries. It consists of five closely associated institutions, including the International Bank for Reconstruction and Development (IBRD) and the International Development Association (IDA). These two organizations are commonly referred to as the World Bank. The World Bank is one of the

world's largest sources of development assistance. There are currently 183 member countries. Voting power is linked to members' shares, which in turn are based on each country's relative economic strength (World Bank 2002a). In fiscal year 2001, it lent U.S. \$17 billion to its member countries (World Bank 2002b).

The World Bank's stated goal is to reduce poverty around the world (World Bank 2002b). It gets money from the world's capital markets, and IDA funds also come from contributions from some of the wealthier member governments. The IBRD accounts for over 50% of World Bank lending. It sells bonds and securities to pension funds, insurance companies, banks, private corporations, and individuals. The IBRD lends with commercial interest, and the loans must be repaid within 15-20 years, usually with a 3-5 year grace period before repayment of the principal. The IDA was established in 1960 for countries too poor to borrow at commercial interest rates and gives interest-free loans (World Bank 2002c).

The International Monetary Fund

The IMF was established in 1946 in order to maintain global economic stability. It aims to promote international monetary cooperation, exchange stability, and orderly exchange arrangements (IMF 2002). The IMF is the central institution of the international monetary system. It is not a development agency, but a source of loans of last resort in order to achieve short-term stability. It is a member organization, and countries pay substantial amounts to have a "life insurance" policy for their economies. It is organized as a cluster of funds, called "facilities," and aims to prevent crises by promoting "sound economic policies" (IMF 2002). Also, the IMF serves as a fund for member countries needing temporary financing in order to address balance of payments problems.

The Relationship Between the World Bank and the IMF

Membership to the World Bank is open to all countries that are members of the IMF. However, the World Bank and the IMF are complementary, but independent, institutions. The IMF was conceived as an adjustment institution, while the World Bank was designed to be a development institution. At first, their roles were clearly demarcated: the World Bank was to finance long-term projects to promote development, and the IMF was to provide short-term balance of payment loans to cover temporary deficits (Williamson 1982:21). Their roles began to blur after 1974, when world events led to major debts worldwide, which required major structural change. Ever since, both organizations have reached into each other's territory (Williamson 1982:21).

While the World Bank makes loans for both policy reforms and projects, the IMF concerns itself with policies alone. It provides loans to member countries that have a short-term problem meeting their foreign payments requirements (World Bank, 2002d). While the Bank lends only to developing or "transition" countries, any member country can seek aid from the IMF.

World Bank and IMF Influence

Since their creation, the World Bank and the IMF have had a profound impact on the world economy. Their influence in third world countries is particularly powerful. Indeed, Hansen and Hansen (1999:46) have proposed that the World Bank influences other donor agencies, private lenders and investors, thereby strongly influencing all aspects of the country's macroeconomy even when its lending portfolio is insignificant. The World Bank/IMF annual meetings serve as a gathering place for member nations' finance ministers and central bank presidents as well as high-ranking representatives of leading private commercial banks and

investment firms. According to Rich (1994:8), these meetings are “above all an unprecedented opportunity for the world’s bankers, public and private, to cut deals among themselves and with governments.”

Harvard development economist Jeffrey Sachs calls the IMF a “proconsular force” that wields tremendous power in poor borrowing countries; even though the policies are implemented as a result of agreements with the countries in question, “disapproval by the IMF of a country’s economic policies can lead to a denial of public and private international credit and development aid, since multilateral development banks, aid agencies, and private banks defer to the IMF seal of approval” (as quoted in Naiman and Watkins 1999:4).

The World Bank, in conjunction with the IMF, thus became the driving force on a global level in “facilitating and guiding economic restructuring in scores of developing countries” (Reed 1992:3). SA became the lending vehicle by which these two financial institutions “gained access to policy makers, and, through conditionality, tried to induce profound changes in development policy and economic structures” (Reed 1992:3). For example, the World Bank and the IMF insist that borrowing countries open their markets, while industrialized countries are able to increase the protection of their domestic markets against developing countries’ infant light industries. This greatly benefits industrialized countries over the less developed ones (Rich 1994:188).

The economies of third world countries are thus deliberately and systematically being reshaped to be more market oriented, in line with a world view promoted by the World Bank and the IMF: “the prevalence of structural adjustment programs (SAPs) as a curative measure for the macro-economic imbalances within the Third World economies marks the triumph of mono-economics over structuralism” (Milward in Mohan 2000:25).

5.0 – EVENTS LEADING TO SAPS

Economic stabilization and structural adjustment programs have been a major part of multilateral development banks' lending operations since the late 1970s. They account for over 20% of total new lending from the World Bank in the second part of the 1980s and the early 1990s (Milward in Mohan 2000:24). Even before this, however, structural adjustment programs (SAPs) were informally a part of project lending when “institutional and other policy reforms were deemed necessary for project feasibility” (Hansen and Hansen 1999:46). The World Bank began structural adjustment lending because it was seen that first, long-term support was necessary to resolve balance of payment problems, and second, policy mistakes and the intrinsic structure of the economy were retarding the economic development in developing countries (Killick 1993:69).

Setting the Stage for Adjustment

There were many events that led to the increased use of structural adjustment (SA). First and foremost, the OPEC oil embargo in 1973 allowed wealthy petroleum nations to flood petroleum dollars (“petro-dollars”) into the global capital markets (Milward in Mohan 2000:25). First world commercial banks accepted the petro-dollar deposits and looked for places to lend this money abroad. Lesser-developed countries' central banks underwrote loans from the first world banks and passed on funds to private banks. Private banks in these countries then made loans to development projects, many of which were misguided and failed, so they were rendered unable to generate sufficient income to repay their loans. The private banks defaulted on their loans, forcing the central banks to borrow more to cover the losses and service debts. First world private banks would then only lend more with IMF guarantees, and the IMF imposed SA

conditions, or “austerity measures,” which the lesser-developed countries had no choice but to accept (Milward in Mohan 2000:25).

Meanwhile, shock effects of the oil embargo caused inflation rates to increase (hyperinflations), and currency exchange rates spiraled out of control, causing capital flight of U.S. dollars. This only worsened debt problems for developing countries, which were by now accumulating huge debts. The rise in real interest rates, from an average of 1.3% between 1973 and 1980 to an average of 5.9% between 1980 and 1986, led to an increase in unemployment and depression of demand, which greatly undermined the growth of exports in developing countries in the 1980s (Milward in Mohan 2000:26).

Other pre-cursors to the use of SA included: the increased instability of goods, capital and foreign exchange in world markets; deteriorating terms of trade for the primary products exported by developing countries; a recession in the developed countries in the early 1980s; and a general slowdown of growth, so that the demand for the products produced by third world countries went down (Killick 1993:1). The World Bank encouraged numerous countries around the world to “convert agricultural land and tropical forests to increase the production of cash crops such as coffee, cocoa and cotton” (Rich 1994:188). The world price for these commodities plummeted, in part due to the large supply, an effect that could have been foreseen. In West Africa, for example, between 1986 and 1989, cocoa exporters increased their output by a quarter, but saw their foreign-exchange receipts decrease by a third (Rich 1994:188).

According to Bello (1994:25), the “plight of many economies dependent on commodity exports was also exacerbated by advances in biotechnology and materials science,” which resulted in the creation of substitutes for many raw materials from the Third World, such as corn syrup for sugar or “cocoa butter equivalents” for cocoa.

Some authors argue that industrialized countries, led by the United States, deliberately created a situation in which the developing countries would have no choice but to restructure their economies (Bello 1994). In 1982, the United States cut its promised contribution to the International Development Association (IDA) by U.S.\$ 300 million. Other industrialized countries followed suit, leaving the IDA with \$ 1 billion less than it was expecting. The IDA is the World Bank's "soft-loan window," granting loans on concessional terms to the poorest countries. According to Bello, "this was the first step in a process of changing the criterion for allocation of IDA funds from countries that needed them because they were defined as poor to those that were regarded as making the greatest effort to restructure their economies" (1994:26).

Enter Structural Adjustment

The 1980s "saw a veritable explosion of the policy conditionality associated with the Bank and Fund's stabilization and adjustment lending" (Killick 1993:2). The World Bank was moving towards more sectoral and policy-based loans rather than individual project loans; these loans were to support the balance of payments, and policy conditions were attached in order to restore sustainable medium-term growth (Harrigan 1997:848).

The loans came with harsh conditions, or "austerity measures," because the IFIs believed that projects were failing largely due to the inherent distortions and inefficiencies in their economies. Developing countries' governments couldn't control external causes of their debt, but they did have control over their own economies' efficiency and stability. By removing distortions, increasing the internal economic efficiency, and creating a stable macroeconomic environment, "governments could strengthen prospects for long-term productivity improvements, thereby helping to counterbalance adverse international conditions" (Reed 1996:11).

The IMF and the World Bank attempted to help these countries stabilize their national economies by attaching conditions they believed would solve their chronic problems, such as the elimination of subsidies and the removal of trade barriers. From 1980 to 1992, SALs and Sectoral Adjustment Loans (SECALs) averaged a 26% share of total World Bank lending, shifting from SALs to SECALs in the mid 1980s. In the same time period, thirty-eight sub-Saharan countries implemented SAPs with U.S. \$ 7.1 billion from the World Bank (Harrigan 1997:848). The focus of these programs was on reforming and restoring growth in the region's key tradable goods sector, usually agriculture. The specific conditions that are placed on a country undergoing structural adjustment are discussed below.

5.1 – SAP Conditions

Structural adjustment programs (SAPs) involve several different conditions, or tools used to stabilize a country's economy and make it more productive. All of these measures are intended to: a) improve a country's balance of payments by increasing exports, decreasing imports, and decreasing government spending, and b) increase foreign exchange earnings in order to better service debt. The exact conditions of SAPs vary depending on the particular country, but typical elements include (Reed 1992:26; Naiman and Watkins 1999:4; and Saha 1992:51):

1. **Devaluation of currency** in order to promote exports and render the country more attractive to foreign investors.
2. **Reduction of the public sector** to reduce wasteful government expenditures. This includes the privatization of enterprises previously owned or operated by the government and laying off workers.

3. **Elimination of subsidies** to reduce government deficits. This includes subsidies for agricultural inputs and energy, as well as food and other items of popular consumption.
4. **Liberalization of trade** in order to promote competition and free trade. This includes reduction of barriers to trade and foreign investment and ownership, such as the reduction of tariffs on imports, and the removal of price controls on consumer goods.

SAPs also often incorporate monetary tightening measures, such as high interest rates and reduced access to credit, and increased export-oriented production in manufacturing and agribusiness (Safa 1992:51). SAPs “redirect financial and productive resources toward export promotion in order to generate foreign exchange to pay foreign creditors” (Cheru 1991:499).

The impacts of SAPs can be quite harsh, and include increased unemployment, largely due to reductions of the public sector education and health care; the growth of the informal sector; the diversion of prime agricultural land from domestic food crop to export cash crop production; international labor migration; the immiseration of the poor (especially women); and environmental degradation (Cheru 1992; Mohan 2000).

It is this last impact that is the subject of this paper. The relationship between the elements of structural adjustment and the environment will be examined more closely in later sections. The next section briefly describes the history of IMF and World Bank structural adjustment loans.

6.0 – IMF AND WORLD BANK STRUCTURAL ADJUSTMENT LOANS

Beginning in 1982, the IMF supported “major adjustment programs” in Mexico and several other countries facing debt-servicing difficulties (IMF 2002b). On December 2, 1985,

IMF managing director de Larosière and World Bank president Clausen expressed support for a debt initiative proposed by U.S. Treasury Secretary Baker calling for comprehensive adjustment measures by debtors. Baker recommended increasing structural lending and making it more effective (IMF 2002b). Under structural adjustment, funds would be promised on the condition that countries adopt economic policies “along Reaganomic lines—privatization of state enterprises, an end to subsidies, opening the economies to foreign investment” (Bello 1994:28).

The IMF established the Structural Adjustment Facility (SAF) in 1986 “to provide balance of payments assistance on concessional terms to low-income developing countries” (IMF 2002b). The SAF was also intended to coordinate IMF’s short-term stability and the World Bank’s long-term growth goals through adjustment (Bello 1994:30). A year later, the Enhanced Structural Adjustment Facility (ESAF) replaced the SAF in order to “provide resources to low-income members undertaking strong, three-year macroeconomic and structural programs to improve their balance of payments and to foster growth” (IMF 2002b). Table 1 summarizes the different World Bank and IMF structural adjustment loans.

| Table 1 – The Evolution of World Bank and IMF SA Loans | |
|---|--|
| <i>World Bank Loans:</i> | <i>IMF Loans:</i> |
| SAL (Structural Adjustment Loan) | SAF (Structural Adjustment Facility) |
| SECAL (Sectoral Adjustment Loan) | ESAF (Enhanced Structural Adjustment Facility) |
| | PRGF (Poverty Reduction and Growth Facility) |

The World Bank’s objectives for structural adjustment loans include (Jayarajah 1995:1):

- stabilizing the macroeconomic environment
- promoting economic growth and alleviating poverty
- promoting an open economy
- improving transparency in the incentive system
- improving efficiency in resource allocation
- improving the scope for private sector development
- strengthening institutions and the capacity for policy analysis

The first phase of structural adjustment loans funded by the World Bank consisted of “front-loaded, quick-disbursing loans that helped ease the short-term pressure on available capital. This quick infusion of resources was accompanied by immediate measures to reduce domestic demand” (Reed 1992:12). Cuts in public spending and monetary policies were designed to restrain the money supply and thus conserve foreign exchange. The second phase aimed to increase the overall economic efficiency and promote growth by reforming macroeconomic policies and strengthening national institutions (Reed 1992:12).

Table 2 shows the percent of structural adjustment as a percent of total World Bank lending (from World Bank’s *World Bank Annual Report*, 1982-1997). Although in some years the percentages decreased, the overall trend has been for structural adjustment lending to increase and for project lending to decrease as a percentage of total lending. It is clear from the table that by the 1990s, adjustment lending had become a significant portion of World Bank loans; currently, adjustment comprises approximately one third of World Bank lending (World Bank 2002i).

| Table 2 - Structural Adjustment as a Percent of Total World Bank Lending (selected years) | |
|--|-------|
| 1968 | 13.0% |
| 1969-73 | 6.0% |
| 1974-78 | 5.0% |
| 1979 | 4.0% |
| 1980 | 5.0% |
| 1981 | 8.0% |
| 1982 | 9.5% |
| 1983 | 9.9% |
| 1984 | 8.9% |
| 1985 | 4.4% |
| 1992 | 27.0% |
| 1994 | 12.0% |
| 1995 | 24.0% |
| 1996 | 21.0% |
| 1997 | 26.5% |

Recipient countries of SALs not only have to accept conditions, but also have to agree to World Bank and/or IMF monitoring their compliance (Bello 1994:27). The loans are disbursed in several parts, depending on a country meeting specified goals, or “targets,” determined by the World Bank or other lender. This strategy is designed to create incentives to borrowing countries to stick to loan conditions and gives the Bank control to ensure the effectiveness of

programs. However, critics claim that the conditions attached to the loans can be “politically sensitive, socially destabilizing, and institutionally overtaxing” (Reed 1992:26) when actually implemented.

6.1 – Obstacles to Change in World Bank and IMF Policies

There are many obstacles to change and adapting policies in large and complex institutions such as the World Bank and the IMF. These include: a) the need for both internal and external pressure; b) the pipeline effect; c) perverse incentives; and d) institutional structure. First, Fox (1998: 306) discusses two conceptual frameworks for explaining change in large public organizations: external pressure and institutional learning. The external pressure proponents argue that large institutions are not prone to be self-critical or reflective because of entrenched interests, and so change occurs as a result of pressure from outside forces.

On the other hand, those that approach change as a form of institutional learning see these institutions as adaptive, and explain the evolution of policies as a result of learning lessons from past experience. Fox concludes that changes in policies are most often due to the interaction between external pressure and internal reform (1998:334). In reviewing the World Bank’s Resettlement Review, the author notes: “the need to head off potential external criticism reinforced the reformers’ [within the Bank] internal education and lobbying efforts” (Fox 1998:334). For change to occur, it seems that both external pressure and internal reform must be present at the same time.

Second, like any large organization or institution, change in the World Bank and the IMF is slow. Fox (1998:490) explains this in terms of a “pipeline effect.” This refers to the long lead-time between changes in policies by top-level executives and on-the-ground outcomes

implemented by project managers. Project cycles can be ten years or more from design to approval to implementation; thus, projects now being implemented were planned at least ten years ago under old policies, and the effects of new policies may not be seen for several more years. It is therefore difficult to see direct results of policy changes and learn from them.

A third obstacle to change in these large organizations is the misalignment of policies and incentives for staff. In the case of the World Bank, social and environmental policies determine how staff should assess the impact of economic projects, but this conflicts with the interests of specific project managers and their supervisors “who are professionally rewarded for moving money quickly through the system” (Fox 1998:528). This means that in practice, there is a tension between goals and policies set forth by top executives and the performance incentives of the staff that implement the projects.

A final obstacle to change is the internal institutional structure. Within the World Bank, there are no systematic internal rules to ensure that staff follow policies. Also, because the project manager responsible for project design and approval may pick an environmental impact analyst either from inside or outside of the Bank, internal analysts may feel pressured to give favorable reports in order to keep from “biting the hand that feeds them” (Fox 1998:529).

6.2 – The Evolution of SAPs

Despite the many obstacles to change in large institutions, adjustment lending has evolved over the last two decades. As structural adjustment lending has matured, both the IMF and the World Bank have changed some of the terms of the loans and the manner in which they arrive at agreements with borrowing countries. For every borrowing country, the World Bank produces a Country Assistance Strategy (CAS) which describes: a) the Bank’s strategy, based on

an assessment of its priorities in the country; and b) the level and composition of assistance, based on the strategy and the country's macroeconomic performance (World Bank 2002e). Before a country can receive a loan from IMF's ESAF, national authorities and IMF staff first drafted a Policy Framework Paper (PFP). This PFP is updated annually, and identifies the country's macroeconomic and structural policy objectives, strategies, and priorities (IMF 2002c).

In 1999, the IMF renamed ESAF as the Poverty Reduction and Growth Facility (PRGF), with the objective to “foster durable growth, thereby raising living standards and reducing poverty” (IMF 2002b). According to the IMF, the PRGF differs from the ESAF in two significant ways. First, it aims to integrate poverty reduction with macroeconomic policies. Second, it places additional emphasis on good governance (IMF 2002e). The PFP was replaced with Poverty Reduction Strategy Paper (PRSP), which, according to the World Bank is a “new approach designed to focus loan operations on poverty reduction” (cited in Grusky no date). The PRSP is designed by the national government in collaboration with IMF and World Bank staff, as well as civil society and development partners. The aim is to “ensure consistency between a country's macroeconomic, structural, and social policies and its goals for poverty reduction and social development” through an open and collaborative process (IMF 2002d).

Increased experience with adjustment lending allowed the Bank to learn from its mistakes. For example, in preparing Senegal's second SAL in 1986, the Bank took into account the factors that contributed to the failure of the country's first SAL in 1982. These factors included the underestimation of risks, poor coordination between external donors, and a lack of consensus within the borrowing government over the loan conditions (World Bank 1997).

On January 21, 1999, World Bank President James Wolfensohn proposed a new, more holistic approach to development. The Comprehensive Development Framework (CDF) is to be

used as a “compass” for a country’s government and all its development partners. It aims to incorporate social, structural, human, governance, environmental, macroeconomic, and financial aspects of development (World Bank 2002f). Furthermore, the CDF is intended to be an overarching guideline; the CAS, PRSP and all other development policy documents or strategies would be subordinate to it. The PRSP should be prepared in accordance with CDF principles, and should be the “operational vehicle” to implement a country’s CDF (World Bank 2002g). Table 3 summarizes the various policy frameworks used by the World Bank and the IMF in their relationships with borrowing countries.

| Table 3 – IMF and World Bank Policy Frameworks: | |
|--|--|
| <i>Name of Document:</i> | <i>Description of Purpose:</i> |
| CAS (Country Assistance Strategy): | Outlines World Bank assistance strategy for its IDA and IBRD loans. It describes a) the Bank’s strategy based on an assessment of priorities in the country, and b) the level and composition of assistance based on the strategy and the country’s performance. |
| CDF (Comprehensive Development Framework): | An approach to development to be used by a country and its development partners as a “compass.” It emphasizes a holistic view, and supercedes the CAS and PRSP. |
| PFP (Policy Framework Paper): | The package of policy conditions linked to IMF loans. |
| PRSP (Poverty Reduction Strategy Paper): | A joint IMF/World Bank initiative replacing the PFP; governs a country’s relationship with the IMF and World Bank. |

In 2001, a joint World Bank-IMF working group developed what will hopefully be a more systematic approach to social impact assessments (SIAs). The working group also developed a work program to operationalize SIA in Bank and Fund programs. The SIAs will

focus on the “distributional impact of policies across social groups based on such factors as gender, ethnicity, land ownership, livelihood and geographic location” (IMF 2002f) and will be integrated in PRSPs and in the World Bank’s CASs.

7.0 – STRUCTURAL ADJUSTMENT: ECONOMIC SUCCESS OR SOCIAL FAILURE?

Although we have over two decades of data on SAPs, the success of these policies in contributing to long-term economic growth and stability is not uniformly agreed upon (Reed 1992:21). Much of the disagreement is rooted in the different worldviews and conceptual approaches (introduced in Section 3.0) through which the reviewers examine and evaluate structural adjustment.

The World Bank and IMF Views

As previously stated, both the World Bank and the IMF approach their analyses of SAPs through a neoliberal framework based in neoclassical economics. The World Bank Operations and Evaluations Department (OED) reviewed evaluation audits and project completion reports for 99 World Bank loans to 42 countries from 1980 to 1992 in order to analyze their outcomes. The authors found that of the 42 countries studied, 32 improved their resource balance, 31 gained foreign exchange reserves, and 21 moved towards a sustainable development path (Jayarajah 1995:2-3). Many countries achieved internal balance, however, through a reduction of infrastructure and social expenditures.

On the other hand, IMF economist Mohsin Khan compared countries that underwent adjustment from 1973 to 1988 with those that didn’t, and found that “the growth rate is significantly reduced in program countries relative to the change in non-program countries” (Khan in Bello 1994:32). In response to growing criticism of SA, the World Bank evaluated the

performance of adjustment in several borrowing countries and blamed factors internal to the country implementing the SAP for failures, rather than the policies themselves (World Bank 2000/2001). According to the World Bank, structural adjustment reforms sometimes fail due to (World Bank 2000/2001:65):

- 1) incomplete financial sector reforms (such as in East Asia)
- 2) corruption (such as in the former Soviet Union)
- 3) inadequate public investment and excessive bureaucracy (such as in sub-Saharan Africa)

According to the OED, there has been a marked improvement in the performance of adjustment programs. For example, in FY 1999-2000, 86% of SALs were rated satisfactory or better by OED, compared to 60% in the 1980s and 68% in FY 1990-1994 (World Bank 2002h). OED attributes the improvement chiefly to the incorporation of lessons from previous lending experience and to the customization of loan design for each country's circumstances (World Bank 2002h). Based on its own studies (focusing largely on economic growth and efficiency), the World Bank concludes that "adjustment is better for the poor than nonadjustment, and that the distributional effects of well-designed policies often favor the poor" (World Bank 1992:19).

Interestingly, another reason stated for the improved performance of adjustment loans is the greater selectivity of the Bank in only providing SALs to "better performing countries with fully owned reform programs" (World Bank 2002h). This seems to indicate that at least part of the improved record of SAPs can be attributed to the fact that only countries that were seen as able to successfully implement them were targeted, rather than to the improvement of the policies themselves.

The Critics' View

Criticisms of World Bank and IMF SAPs are based in a variety of conceptual approaches, ranging from world systems and development theory to political ecology and social equity. The

World Bank's claims of the successes of adjustment have been subjected to fierce scrutiny by the United Nations Economic Commission for Africa (ECA) and the United Nations Children's Fund (UNICEF), among others. In particular, ECA's critique of SAPs "cast doubt on the wisdom of several of the major SAP policy components" (Brown in Mohan 2000:28). The ECA claims that the "selectivity and inconsistency" of World Bank studies lead to misleading conclusions (Reed 1992:32). Another critique comes from a study examining the results of ESAF programs in sub-Saharan Africa. The authors found that developing countries participating in ESAF not only experienced lower economic growth than those not participating, but that neither IMF-mandated macroeconomic policies nor the Highly Indebted Poor Countries (HIPC) Initiative have "sufficiently reduced these countries' debt burdens" (Naiman and Watkins 1999: 2-3).

The key to reconciling the contradictory assessments of SAPs is in recognizing the very different perspectives that proponents and critics bring to the evaluation. For example, a neoliberalist's assessment would focus on macroeconomic indicators because that is what the neoliberal view characterizes as being important. As a result, issues of equity or environmental impacts are ignored. This is not necessarily done intentionally, but by the way the problem is being framed. The following section discusses how structural adjustment lending has evolved in response to growing criticism.

7.1 – Criticisms of World Bank and IMF SAPs

There is a clear contradiction between the Bank's efforts to address on the one hand the debt and macroeconomic growth of developing countries, and on the other hand, "its purported goals of poverty alleviation and increased attention to environmental concerns" (Rich 1994:186).

Perhaps, then it is not surprising that over the years, there have been many critics of SAPs. Some of the most common criticisms are discussed below. Critics claim that SAPs are:

1. **short-term solutions to long-term problems.** According to Killick, a “long-standing constraint about IMF’s policies toward developing countries is that its programs are too short-term to be able to cope with the often deep-seated nature of the countries’ payment weaknesses” (1993:71). This is one of the most common criticisms of World Bank and IMF SAPs. There is a clear tension between the need to address immediate debt and stability problems on the one hand, and long-term prosperity and development on the other.
2. **ignoring external conditions.** The lender tends to overlook the impacts of conditions beyond the control of the borrowing country’s government, such as global market prices for goods.
3. **failing to reduce poverty.** Many critics say that SAPs fail to create conditions for wealth generation.
4. **not government-owned.** The lack of ownership of adjustment programs by a country’s government means that the measures may not be tailored to a particular country’s unique context, and further, government officials may not feel a strong commitment to making it work because it was “forced” on them (Reed 1992:32).

According to Bello (1994:27-8), since SA measures “covered so many dimensions of macroeconomic policy, agreeing to a SAL was virtually turning over control of a country’s economy to the World Bank.” The recipients of adjustment loans had to renounce important parts of their national sovereignty, basically agreeing to “revamp their economies into foreign

exchange-earning, export-oriented machines, often to the detriment of long-term domestic social and environmental needs” (Rich 1994:110).

The recent replacement of the IMF’s ESAF with the PRGF may signify a “refocusing of priority on reducing poverty,” (IMF 2002d) but independent reports suggest that the changes are largely cosmetic rather than substantive. One such independent review, conducted with the support of the World Council of Churches, is particularly critical of IMF and World Bank attempts to improve adjustment programs (Jubilee South 2001); the report states that the IMF’s PRGF “speaks of concessional lending with an explicit focus on poverty reduction *in the context of a growth oriented strategy*...it became understood that the final document would not step outside the neoliberal free market ‘growth’ framework guiding the broad economic policies” (italics in original). The study concludes: “in all, SA logic and policy matrices essentially remain unchanged,” and further, “a number of elements are not included in PRSPs because they don’t fit within the obligatory neoliberal parameters” (Jubilee South 2001). This is a clear example of the critics having a markedly different perspective of debt and development than the World Bank and the IMF. Because they approach the issue with fundamentally different assumptions, values, and priorities, it is no surprise that the policies are evaluated differently. The next section outlines how the IFIs, particularly the World Bank, have responded to criticism.

7.2 – IMF and World Bank Response to Criticism

The negative social effects of structural adjustment, first documented in the UNICEF study, *Adjustment with a Human Face*, “provided the catalytic jolt that obligated international lending institutions to consider adjustment’s social dimensions” (Reed 1992:37). The World

Bank, the IMF, and other multilateral development banks began “relying on complementary policies to limit the collateral damage” of their policies (Munasinghe 1999:17).

These efforts to mitigate the negative social consequences of structural adjustment programs, particularly on the poor, are mainly comprised of retaining “social safety nets and crucial public spending, such as education and health” (IMF 2002d) and include “activities that sought to foster income-generation through small-scale enterprises” (Reed 1992:38). Another way that the World Bank has sought to minimize the adverse social impacts of adjustment is by evening the distribution of the burden among the economic classes. For example, lower subsidies on fertilizer and seeds could be offset by higher producer prices (World Bank 1997). World Bank funding of social safety nets and the protection of public spending on basic social services increased dramatically from 5% of the adjustment loan in FY 1984-86 to 50% in FY 1990-92 (World Bank 1994).

The degree to which attention to social impacts of adjustment has really improved the lot of the poor is uncertain, however. Rich (1994:189) argues that further loans to mitigate the social impacts of adjustment for the most poor and vulnerable groups only adds to a country’s debt burden and furthermore, “probably served more of a political purpose in giving adjustment the appearance of a human face” rather than really making a difference (Oxfam 1993 cited in Rich 1994:189).

The change of attitude in the World Bank from regarding debt reduction as strictly a matter of economic growth to a more holistic view of long-term development and sustainability has been a gradual one. This is evidenced by the change in terminology and indicators that are measured over the years. In the 1995 *World Development Report* (WDR), “the main criterion used to classify economies and broadly distinguish different stages of economic development is

GNP per capita” (World Bank 1995). The following year’s WDR, however, stated that “indicators have been redesigned to provide a core set of standard indicators covering the same three development themes: people, the environment, and the economy” (World Bank 1996). Last year’s WDR announced the division of World Development Indicators into five main sections: human capital development, environmental sustainability, macroeconomic performance, private sector development, and global links (World Bank 2000/2001). This is important because, since macroeconomic indicators are no longer the only things on the radar screen, it may signify a change in the neoliberal framework of the World Bank.

The joint IMF-World Bank Highly-Indebted Poor Countries (HIPC) Initiative is partly in response to the Jubilee 2000 movement, and other organizations that have called for the reduction or forgiveness of developing countries’ external debts. HIPC allows eligible country members to qualify for “exceptional assistance with the objective of achieving debt sustainability over the medium term” (IMF 2002c). Eligible countries include those that are pursuing IMF/World Bank-supported programs of adjustment and reform with a good track record as of the year 2000 (IMF 2002c).

Furthermore, in formulating loan terms under the CDF and PRSP, the IMF and the World Bank have made an effort to place “increased emphasis on ownership, transparency, and broad-based participation, as well as much greater emphasis on more effective social policies” (IMF 2002d). These changes are both a result of learning from experience and a response to growing criticism. For example, a World Bank study on the effectiveness of SAPs concludes with the following lessons: first, less ambitious programs with fewer conditions attached are more likely to succeed; second, government program ownership is imperative for success; third, a better understanding of a country’s implementation capacities is needed; and fourth, coordination

between all development banks and agencies is essential so there are no counter-productive policies (Jayarajah 1995:5).

This eagerness to respond to criticism was echoed in an interview with a World Bank consultant conducted by the author. The consultant, John Randa, expressed his belief that the World Bank and the IMF now pay much closer attention to the social impacts of structural adjustment, as well as governance and democracy issues (Randa 2002). The impacts of structural adjustment on the environment have yet to be fully and systematically addressed, however. The paper now turns to the links between adjustment and the environment.

8.0 – STRUCTURAL ADJUSTMENT AND THE ENVIRONMENT

Before discussing the environmental impacts of structural adjustment (SA), it is important to emphasize that SAPs were not intended to address the environmental dimension of development. There are several reasons why environmental factors were not considered, as expressed by World Bank staff. First, when SAPs began in the 1980s, environmental degradation and macroeconomic crises seemed unrelated. This emerges in part from a neoliberal view, which traditionally has privileged macroeconomic effects above all others. When the SAPs were first devised in the early 1980s, the “environmental/population linkages were still being analyzed in relatively simplistic terms where both ‘environment’ and ‘society’ were treated as discrete realms” (Mohan 2000:99). Second, the World Bank and other multilateral development banks didn’t view the environment as a top priority when SAPs began in the 1980s. Third, they assumed that correct economic policies, or “getting the prices right,” would address environmental problems. Finally, environmental protection would increase the government’s budget, which would counter the express goals of adjustment (Reed 1992:3-4).

The impacts of SAPs on the economy, environment, and society of a country are hard to trace due to their complexity and national scope. Furthermore, the linkages are multifaceted and country-specific. Like most comprehensive policies, SAPs can have both beneficial and negative impacts on the environment of a country. The World Bank and IMF argue that adjustment is necessary for a country's long-term stability and development. However, others argue that economic policies like SAPs may be "undermining the environmental resources and social fabric on which the long-term development of nations will ultimately depend" (Munasinghe 1999:9).

A 1992 World Bank Operations Evaluation Department (OED) study acknowledges that adjustment policies affect the environment, although it stresses that these effects may be either positive or negative. For example, trade liberalization may increase the profitability of exporting wood products, and thus increasing deforestation. However, if the liberalization of trade increases the profitability of producing herbs in a particular country, then this would positively affect the environment because tree cover is necessary to protect herbs, and thus forests are preserved (Jayarajah 1995:266). Unfortunately, demand is much higher for commodities that tend to be the most destructive to extract, such as timber, oil, and minerals, rather than more benign products, such as herbs or exotic flowers.

There are many arguments that structural adjustment (SA) is necessary for a country to get out of debt and continue to develop; it could also be argued that SA is necessary for environmentally sustainable development. Some aspects of SA that Munasinghe (1999:11) lists as potentially positive for the environment include: the removal of price distortions; the promotion of market incentives; the relaxation of trade and other constraints; and price, wage, and employment stability. All of these components encourage a longer-term view for households as well as firms, a prerequisite for encouraging sustainable development.

Economic stability reduces uncertainty, enabling businesses, households and political leaders to take a more long-term view, which is a critical factor in natural resource management and in environmental protection. Also, SA tends to create more efficient markets, “reducing environmental diseconomies” (Killick 1993:347-8) such as removing harmful subsidies. Finally, stable living conditions make it less likely to trade future sustainable development for short-term gain, and further, there is more interest in the environment when people’s quality of life is improved. If a country achieves increased development and stability, this would presumably lead to higher incomes, and society may be more willing to pay for environmental protection and may also place less pressure on the land; this would mirror the path from industrialization to increased environmental awareness that western countries have followed. All these are good points in theory, although if adjustment leads to extreme poverty and the degradation of natural resources in the short term, this leaves nothing to build on in the long term. While a nation’s economy may eventually be stabilized by structural adjustment, individuals’ lives are not and they are concerned with survival rather than long-term sustainability of the natural resources they depend on.

A few studies have found that structural adjustment benefits the environment on the whole, although it is important to note that the IMF or the World Bank have sponsored many of these studies; in other words, they approach SA with a distinctly neoliberal perspective. Killick (1993:349) reports on a study conducted by Hansen (1991), in which 83 SAPs funded by the World Bank and ten by the Asian Development Bank (ADB) were examined. Hansen found that reduced government spending could have both good and bad effects on the environment. He also found mixed effects from measures increasing farmers’ prices; this could increase a farmer’s incentive and abilities to conserve the soil, or it could lead to intensification of cultivation and

then erosion. Measures reducing agricultural input subsidies were found to benefit the environment by reducing fertilizers and pesticides, as well as reducing the waste of water in irrigation systems. Finally, raising energy prices was also found to be likely to confer environmental benefits, because it promotes conservation of fossil fuels (Hansen 1991 in Killick 1993:349).

Hansen's conclusions are not easy to corroborate with other studies. For example, he does not explain how increased prices for agricultural inputs increase the ability of farmers to conserve the soil. In addition, his argument that the raising of energy prices leads to conservation conflicts with the experience in Turkey (Boratav 1996). Hansen also ignores the indirect effects of reducing the availability of fertilizers and pesticides. For instance, if farmers are not given any other type of technical assistance as a replacement, experience shows that it is likely to lead to intensification of cultivation, expansion of cultivation onto marginal lands, and erosion (World Bank 1992; Hansen and Hansen 1999; Holden 1999; Glomsrød 1999; Killick 1993); moreover, if the land is less productive, farmers become poorer, and these problems of desperation are intensified.

Further, the potentially positive aspects of SA must be qualified by the realities of SA conditions. For example, the pressures for quick results created by the loans often cause environmental concerns to be swept aside. In addition, the fact that SAPs push for increased privatization and less government regulation makes the internalization of environmental costs highly unlikely.

Export promotion, trade liberalization, state shrinking, and poverty provide the most important links in the causal chain from debt crises and structural adjustment to environmental

damage (Roberts and Brook 1999:36). It is these four aspects of SA and their environmental effects that are examined in detail below.

8.1 – Export Promotion and the Environment

Export promotion can be both a requirement of SAPs and an effect of other adjustment policies, such as trade liberalization. Pressure to meet World Bank and/or IMF “targets” under structural adjustment leads many countries to unsustainable actions (Killick 1993:350).

Adjusting countries turn to the extraction of their natural resources as a quick means to improve their balance of payments. This pattern has given rise to large-scale agriculture, which puts much more pressure on the regenerative capacities of the resources than traditional, small-scale agriculture, and puts many small farmers out of business.

Countries often adjust to World Bank and IMF conditions by cutting down forests, pumping up petroleum, mining minerals, and depleting topsoil in order to increase exports and pay back debts (Daly 1996:144). Unregulated mining causes severe water pollution, including arsenic, lead, mercury and siltation that wash into surrounding waterways. For example, in Jamaica, bauxite/alumina production has caused dust pollution and the problem of red mud disposal (Mohan 2002:103).

According to Roberts and Brook (1999:26), “some national governments have explicitly linked their need to pay debts with lumber and mineral sell-offs in their development plans.” In an attempt to increase production of exports and to raise hard currency for the payment of debts, countries such as Suriname, Guyana, Nicaragua, Belize, Thailand, Laos and Vietnam have granted huge logging concessions to foreign companies; in most cases, firms have little or no responsibility to restore the lands (Roberts and Brook 1999:26).

Large-scale agriculture, or “agribusiness,” is frequently encouraged by SAPs because it provides necessary income to pay back debt and improve a country’s balance of trade. However, agribusiness often ignores local environmental realities. This type of agriculture jeopardizes fragile ecosystems by replacing intercropping with monocropping. Large-scale agriculture requires large amounts of chemical inputs, which eventually drain into rivers and seep into groundwater. The results include declining soil fertility, sedimentation, salinization and an endangered water supply (Cheru 1992:500). One example of this pattern is Botswana, where an emphasis on beef production leads to negative effects on the land. There, the soil is fragile and there is a lack of water, so the land is very susceptible to erosion, especially when the land’s carrying capacity is ignored (Cheru 1992:501).

Another example is Costa Rica, which had nine IMF and World Bank SAPs between 1980 and 1989. Two key export industries encouraged were the banana farming and cattle raising industries, both of which accelerated deforestation. According to the World Bank, “from an environmental point of view, aside from the issues related to banana production (pesticides, solid waste pollution, sedimentation), the expansion of banana plantations gives rise to concern because it threatens the area’s biodiversity” (Korten 1992 in Bello 1994:60). Further, the destruction of approximately 90% of the coral reef in Talamanca, a region on Costa Rica’s southeastern coast, is linked to chemical runoffs from banana plantations (Korten 1992, as cited in Bello 1994:61).

The emphasis on export agriculture also ignores the resource requirements of millions of subsistence farmers. The rivers and other water sources that used to sustain small farmers are sometimes rerouted to agribusiness. For example, the World Bank-funded Talak-Mafara irrigation project near the Sokoto River in northern Nigeria caused the displacement of 60,000

peasants in three years (Cheru 1992:500). Stonich (1994:64) found that in southern Honduras, where the expansion of export agriculture was encouraged in order to gain foreign exchange and pay back debt, “international development organizations, multinational corporations, the state, and individuals, by focusing on short-term needs, created extremes of wealth and poverty that exacerbated resource abuse.” Finally, in many cases the expansion of agribusiness displaces small farmers from their land, in which case they are no longer to provide for themselves and their families (Stonich 1994:66).

Another increasingly popular export industry is fisheries, especially shrimp aquaculture. Wetland, mangroves and fisheries are being exploited both by the poor and by expanding export industries. These areas are not only ecologically sensitive, but also provide many valuable functions such as flood protection, wildlife habitat areas, nutrient cycling and storage, pollution control, shoreline protection, prevention of salt water intrusion, drainage of watersheds, and freshwater supply. Mangroves are cut down not only to clear areas for canals and shrimp agriculture ponds, but also for oil and lumber extraction.

According to Roberts and Brook (1999:33), “the boom in the shrimp aquaculture provides a clear link between export production and devastating environmental outcomes.” First, the ponds have only a five- to ten-year lifespan, so land must be cleared each time a new pond is built. Second, pesticides are heavily used, and they build up in the ponds. Third, the local water supply is severely taxed, as shrimp production requires enormous inputs of water, some if it freshwater. Fourth, shrimp aquaculture causes the eutrophication of the ponds and productivity declines. Fifth, the ponds threaten the local population and diversity of fish species (Roberts and Brook 1999:34-5).

Because debts owed to the World Bank and the IMF cannot be rescheduled like debts owed to private sources, structural adjustment compels people to overexploit natural resources for short-term gains, and no consideration for sustainability (Cheru 1992:504). Although the promotion of exports is often the main strategy for countries to comply with adjustment policies and pay back their debts, it often comes at the price of long-term sustainability of the natural resource base.

Cheru (1992:505) notes that, often as a result of World Bank and IMF structural adjustment loans, there is a “shift of public resources away from vital social services, support to local farmers, and resource management to export agriculture, mining, and low-wage export industries,” thus adversely affecting the poor. The link between adjustment, poverty, and the environment is discussed in a later section. Also, the pressure to expand exports is further encouraged through the liberalization of trade, one of the major goals of SAPs and the topic of the next section.

8.2 – Trade Liberalization and the Environment

Trade liberalization, a key part of macroeconomic adjustment, encourages export promotion, which leads to excessive extraction and harvesting of natural resources. The liberalization of trade also decreases the ability of the government to protect the environment.

The World Bank argues that trade liberalization may have either positive or negative impacts on a country’s environment. For example, the Bank cites anecdotal data from Chile that, because it is cheaper for northern industries to use the same technologies in developing countries that they use at home, these firms may be contributing to cleaner production in these countries (World Bank 1992:67).

Critics are more pessimistic on the effects of trade liberalization on the environment, not only with regards to structural adjustment, but also in the context of globalization in general. Reed (1996) and Daly (1996) list various reasons why trade liberalization leads to negative environmental consequences. First, trade liberalization discourages the internalization of environmental costs in order to increase competitiveness. With trade barriers down, fledgling companies in developing countries must compete with those in more industrialized countries. There is thus a strong incentive to “cut corners” with environmental safeguards and ignore environmental laws that may be weakly regulated anyway. Second, environmental standards are discouraged and can be attacked as nontariff trade barriers. Third, trade liberalization weakens the enforcement of international environmental agreements, because these often rely on the use of trade sanctions against nations (for example, the Convention on Illegal Trade in Endangered Species (CITES¹) calls for trade sanctions against nations that allow or encourage trade of endangered species) (Reed 1996:20). Daly (1996:164) also adds that, ironically, free trade may be detrimental to a country’s macroeconomic stability by permitting huge international payment imbalances and capital transfers, increasing the pressure to increase the unsustainable rate of exploitation of exportable resources.

Furthermore, an increased flow of foreign investment into extractive sectors “is a direct result of SA policies” (Mohan 2000:103). The shift of production away from nontradable (chiefly service) sectors to tradable goods (agriculture, mining and manufacturing) means that environmentally damaging effects are intensified, exemplified by accelerated depletion of nonrenewable resources, increased pollution, and increased greenhouse gas production (Killick

¹ Some African countries, as well as the London Environmental Economics Center, argue that a ban on trading products such as ivory drives up the prices for these products in the long term, making poaching more lucrative. Furthermore, outright bans don’t allow individual countries the choice to sustainably manage those resources, which

1993:350). An example of this is the increase of free trade zones (FTZs), many of which are built away from the capital, on “greenfield” sites, such as Matamoros, Mexico, which is one of the many “maquiladora” towns along the United States-Mexican border. These sites are chosen for their cheap resources, often suspended labor and environmental laws, and the avoidance of trade unions in urban centers. Governments often provide the infrastructure such as electricity, roads, water, and sewage, prompting the need for the construction of coal power plants and massive hydroelectric dams (Roberts and Brook 1999:17).

Trade liberalization promotes the unsustainable extraction of natural resources and discourages the protection of the environment. The following section discusses the environmental impacts of the reduction of the public sector under structural adjustment.

8.3 – Public Sector Reduction and the Environment

The reduction of the public sector, an important aspect of adjustment, is the reduction of the size of government through worker layoffs and the decrease or cutting of programs. It can be positive or negative, depending on the degree. For example, increasing efficiency and removing unnecessary workers may make available government funds for environmentally and socially beneficial programs. On the other hand, reducing the public sector too much could result in firing so many people that nothing gets done, or eliminating beneficial programs altogether. Reducing the public sector too much affects the environment in several ways: first, it reduces the ability of the state to protect the environment; second, it eliminates subsidies for such as necessities such as energy, water, food, and fertilizer; third, it contributes to poverty by reducing government wages and decreasing the workforce.

could be used as revenue from hunting and tourism to fund law enforcement and improve the quality of life of the local people (World Bank 1992:67).

In 1988, the UN Economic Commission for Africa (ECA) conducted a survey of World Bank and IMF structural adjustment lending and concluded that SAPs essentially consisted of “the reduction or removal of direct state intervention in the productive and distributive sectors of the economy” (Bello 1994:31). Indeed, between 1990 and 1996, \$155 billion in state assets were sold off globally (World Bank 1998:108). The access reduction of the public sector affects the environment in both direct and indirect ways. The direct ways include first, the cutting of environmental protection and program expenditures, second, the reduced capacity to monitor and regulate polluters, and third, the elimination of subsidies. Environmental protection and/or preservation programs are easily cut from state budgets because they can be deemed unessential or even as hindering the economic growth necessary to pay back loans.

While encouraging industry in export promotion as discussed in the section above, structural adjustment (SA) reduces the ability of governments to monitor and regulate heavy polluters (Munasinghe 1999:12). The international financial institutions’ push for less government planning, increased privatization and deregulation undermines the state’s ability to protect the environment and regulate industries. Power is redistributed to the private sector, so it is politically more difficult for the state to stand up to industrial polluters in order to protect public welfare (Killick 1993:351). Moreover, government leaders feel pressured to prioritize increasing revenue over enforcing environmental laws. For instance, one researcher found that, when Chile underwent adjustment, “the Chilean government has been particularly loath to force state-owned mineral operations to comply with the [environmental] laws. At times, the prospect of major revenue from projects leads government officials to simply ignore environmental rules or studies” (Young 1992, in Bello 1994:59).

This situation only compounds the pre-existing institutional constraints to environmental regulation and protection that are present in many developing countries, including the lack of public accountability, inadequately defined property rights, and weak enforcement of environmental laws (Munasinghe 1999:12). Turkey, for example, followed structural adjustment between 1981 and 1992. The decrease in size and pay of the bureaucracy led to poor quality public administration, as well as more power concentrated in the hands of the politically elected leaders, such as ministers of departments. These officials are more influenced by businessmen; indeed, “personal connections of businessmen with ministers gradually became the determining factor in access to the ‘spoils; emanating from the government” (Boratav 1996:378).

One fundamental finding in several case studies of the impacts of the environmental impacts of structural adjustment is that market forces fail to protect the environment in the absence of government intervention (Reed 1992:141). While good economic policy is a necessary condition for the wise management of natural resources, it is not sufficient: “Sound environmental policies through government intervention is an integral part of sound macroeconomic management...Left to its own logic, economic growth tends to destroy the conditions of production—that is, clean water, unpolluted air, uncontaminated soil, and a healthy work force—on which economic well-being depends” (Reed 1992:161).

Another common way to reduce government spending during structural adjustment is to eliminate subsidies. Although the removal of subsidies for energy, water, and agricultural chemicals has the potential to be an environmental benefit of structural adjustment, in reality, when trying to improve a country’s balance of payments, the focus of SAPs is on increasing the foreign exchange and cutting government spending through the lowering of wages and shrinking the government workforce, which result in larger reductions in spending (Rich 1994:187).

States often reduce all extension services to farmers, such as technical aid, small-scale credit and inputs, leading to a decline in productivity. When small farmers can no longer afford agricultural inputs, they are often forced to extend production to marginal or fragile lands (Mohan 2000:103). To make up for the decreased capital investments, small farmers in Turkey increased the intensity of land use, extended cultivation in marginal areas, and cleared forestland. Shortened fallow periods led to a decline in the nutrients in the soil, “which together with forest clearing, exacerbated the extent of soil erosion” (Boratav 1996:382). More intensive agricultural practices decrease the immunity of crops to pests and render it necessary to increase the use of pesticides (increased dosages or frequency of spraying). This results in what Resources For the Future (RFF) refers to as the “pesticide treadmill”: a cycle of increased dependence on chemicals, diminishing returns, increased water pollution, plus higher expenditures (RFF 1994).

In Venezuela also, the removal of farmer subsidies combined with the increased import prices caused by devaluation of the currency, another element of SA, meant that the farmers couldn't invest in sound production techniques (Mohan 2000:104). The decrease of agricultural extension and price supports means that small farmers are unable to compete, and the wealthier, large-scale export agribusiness farmers have all the advantages and can buy up more land. This leads to increased rural poverty. The environmental impacts are direct: “since scarce land, water, credit, and technology are being preempted to the export sector, poor farmers, lacking financial means and technical support, overexploit the natural resource base, including marginal areas, to eke out a living” (Cheru 1992: 498).

One example of an environmentally-beneficial subsidy adjustment policy occurred in Brazil, which discontinued its fiscal and credit incentives to ranchers, thus not only saving the government \$300 million per year, but also easing deforestation pressures because it decreased

the relative profitability of clearing forestland in order to graze cattle (World Bank 1992:68). Evidently, the removal of subsidies required by SAPs can be either harmful or beneficial for the environment, depending on the environmental effects of the original subsidy.

The indirect way that state shrinking affects the environment of countries undergoing adjustment is that government cutbacks often mean massive layoffs, so that many people are left unemployed or with drastically reduced salaries, increasing poverty. The decrease of environmental monitoring and regulation combined with an increase of poverty leads to the “illegal and/or unregulated logging, mining, collection and smuggling of endangered flora and fauna” (Roberts and Brook 1999:22). The impacts of poverty on the environment are discussed in more detail below.

8.4 – Poverty and the Environment

The increase of poverty due to SAPs is interlinked with the environmental impacts because “poverty determines the activities, investments and use of natural resources” (Roberts and Brook 1999:21). Killick (1993:349) explains that the growing poverty leads to desperation, which is likely to promote degradation of the environment through over cropping, over grazing, and denuding of forests because concerns over immediate survival take priority over sustainable development.

The poor are forced to use “coping strategies” which often means overexploiting natural resources, which are seen as free and available (Mohan 2000:105). Also, a rise in unemployment and lower wages can lead to migration away from urban areas in order to work marginal lands. This was the case in Nicaragua, where reduced government expenses led to the reduction of government jobs and, in turn, reduced urban migration. This increased the pressure on open land.

Glomsrød (1999:20) found that the primary cause of deforestation in Nicaragua was this “advance of the agricultural frontier” as settlers move into forest reserves because of a lack of economic opportunities; in the Philippines and Brazil, adjustment policies worsened the plight of the landless poor, who “became shock troops of tropical deforestation, vainly seeking to eke out a living” (Rich 1994:8).

Other examples of the same pattern of poverty leading to deforestation can be seen in Zambia and in the Philippines. In Zambia, structural adjustment decreased the profitability of maize, the main cash crop. Households increased their use of shifting cultivation, which resulted in more rapid deforestation (Holden 1999:69). In the Philippines, two SAPs in the 1980s led to increased poverty, and since there were no jobs in either the urban or the rural areas, people moved to the open access areas. According to Hansen and Hansen (1999:53), “given the knowledge of the lack of incentives for sustainable land management, widespread environmental degradation could have been foreseen in the fragile open access forested uplands and the coastal areas” by either the World Bank or the Philippine government.

Even the World Bank notes the link between poverty and environmental harm: the 1992 *World Bank Development Report* described the “mutually reinforcing relationship” between impoverishment and ecological degradation: “Because they lack resources and technology, land-hungry farmers resort to cultivating erosion-prone hillsides and moving into tropical forest areas where crop yields on cleared fields usually drop sharply after just a few years. Poor families often have to meet urgent short-term needs, prompting them to ‘mine’ natural capital through, for example, excessive cutting of trees for firewood and failure to replace soil nutrients” (World Bank 1992:30).

While poverty may lead to environmental degradation, the relationship is more accurately portrayed as a “vicious circle,” in which both exacerbate each other; indeed, Reed (1992:156) found that poverty is both a cause and an effect of environmental degradation. Ironically, government policies aimed at addressing poverty often cause environmental degradation, which in turn endangers the long term welfare of poor rural populations. In Ghana, for example, mining, deforestation, fisheries exploitation and the dumping of toxins from mines and industries are “undermining the main assets of the poor—land and water resources” (Abugre 1993, cited in Bello 1994:650). Ultimately, understanding the roots of poverty and inequality and protecting disempowered groups is important in mitigating the environmental impacts of structural adjustment: “addressing environmental destruction without poverty will fail because poor people are forced to use their environment in unsustainable ways” (Roberts and Brook 1999:36). The following section examines how the World Bank has addressed the environmental impacts of structural adjustment.

8.5 – World Bank and IMF Responses to SAP Environmental Effects

Since 1987 the World Bank has made, at least on paper, a commitment to encouraging sustainable development, and has made a conscious effort to incorporate environmental considerations into projects. While environmental considerations have become more frequent in Bank-funded projects, the environmental impacts of SAPs were largely ignored up until the 1990s. The World Bank’s view in 1990 was that “although adjustment programs have not focused on environmental issues, most of them included measures that, on balance, appear more likely to help than hurt the environment” (World Bank 1990:51, as cited in Reed 1992:6). The World Bank’s 1992 *World Development Report*, however, recognized that projects supported by the World Bank “have caused damage by failing to take environmental considerations into

account or to judge the magnitude of the impacts” (World Bank 1992:871). The Bank still maintained, however, that policies promoting macroeconomic stability and liberalizing trade and investment “will facilitate environmental protection” (World Bank 1992:64).

The Bank makes a convincing case that trade liberalization, one of the central components of SAPs, should not be sacrificed for environmental and natural resource protection. The Bank defended adjustment as necessary to long-term development and environmental protection goals, while conceding that “the requirement of sound economic policy may appear to jeopardize environmental goals” (World Bank 1992:65-6). Liberalized trade and investment policies are used as an example: the Bank states that these policies may bring environmental improvement in the long-term through greater economic efficiency, but can sometimes lead to environmentally harmful changes in the structure of economic activity, such as an increase in resource exploitation.

According to the World Bank, “using trade restrictions to address environmental problems is inefficient and ineffective” (World Bank 1992:67). The Bank asserts that liberalizing trade leads to greater efficiency and higher productivity, so it is desirable. However, “trade policies are a blunt and uncertain tool for environmental management” because they only indirectly influence environmental resources. Thus, the Bank insists on continuing to promote free trade, but agrees that environmental regulations and enforcement may be necessary: “because greater openness also makes export production more profitable, it can exacerbate environmental pressures. Where there is open access, liberalizing trade may encourage more intensive exploitation” (World Bank 1992:68). The Bank therefore advises that a country undergoing adjustment should accompany trade liberalization with targeted policies for combating deforestation, soil erosion, or industrial pollution (World Bank 1992:67).

To summarize, the view of the Bretton Woods Institutions regarding adjustment and the environment is that it is “usually more appropriate to introduce better policies for environmental protection than to sacrifice economic gains by restricting trade” (World Bank 1992:66). The difficulty in implementing effective environmental programs and enforcing environmental laws within the framework of structural adjustment were discussed in the section on reducing the public sector, however.

Others disagree than the so-called “austerity measures” promoted by the World Bank and IMF are necessary to long-term growth and stability. In a World Wildlife Fund for Nature-sponsored study of the impact of adjustment on the environment in Côte d’Ivoire, Thailand, and Mexico, for example, Reed (1992:148) concludes that “in all three cases, it is clear that the economic growth that has been achieved could have been realized with less environmental damage had better environmental and economic policies been followed.” Once again, the different perspectives on debt and development that people bring to their critique of structural adjustment largely determines their priorities and values, and as a consequence, their conclusions as well.

9.0 – CONCLUDING LESSONS AND RECOMMENDATIONS

The links between structural adjustment (SA) and environmental impacts are clearly multifaceted and complex. Macroeconomic policies may not be inherently good, benign or bad for the environment, but without careful consideration of the environmental impacts, degradation is often the result. Whether the net result of the environmental impacts is damaging or benign depends on the specific mix of SA policies and the country’s underlying economic, institutional, political, and social framework.

Past SA experiences indicate that in many cases, export promotion, trade liberalization, public sector reduction, and increased poverty have the potential to have very damaging environmental effects. Further, SA can greatly affect the ability of developing countries to sustain their natural resource base in the long-term. Ultimately, adjustment tends to cause countries to prioritize short-term balance of payments improvements while short-changing long-term sustainability and development goals. Indeed, Reed (1992:161) concludes that, “adjustment lending has had, at best, a random impact on the environment and, without qualification, has failed in placing adjusting countries on a sustainable development path.” Public outcry due to the negative environmental effects of SAPs is reflected in arguments for forgiveness of Third World debt and to end World Bank involvement in development.

To summarize, the following lessons can be drawn regarding structural adjustment’s effects on the environment:

- trade liberalization and other SA factors may promote the unsustainable exploitation of exportable natural resources;
- public sector reductions can have harmful effects due to lack of regulation, lack of social services, and increased poverty;
- the removal of subsidies and increased poverty may lead to degradation of agricultural land and deforestation; and lastly,
- sound economic policies are not sufficient in protecting natural resources and environmental quality.

It is clear that adjustment efforts need to be improved. However, it is difficult to formulate highly specific recommendations for several reasons. First, as stated above, there are many interconnected factors involved in structural adjustment. The effects of these are often difficult to disaggregate from other existing economic, political, social and environmental conditions.

Second, the World Bank and the IMF have already changed adjustment lending policies as a result of past experiences and in response to criticism. However it is too soon to tell whether these are really substantive changes and if they will reduce the negative environmental effects of adjustment.

Some observers have suggested that, as we move into the twenty-first century, “structural adjustment lending, and the policy of conditionality associated with it, is at an end” (Pender 2001:397; Randa 2002). The World Bank and the IMF have recently adopted longer-term and more holistic views of debt management and poverty alleviation, through the Comprehensive Development Framework (CDF) and the Poverty Reduction Strategy Paper (PRSP). The CDF is supposed to be based on a relationship of partnership between the borrowing country and the World Bank (Pender 2001:397), rather than one of conditionality, with a renewed emphasis on poverty reduction. In the PRSP formulation process, borrowing countries have more ownership of adjustment conditions as they write their own proposals and present them to the Bank.

These changes in the relationship between the lending institutions and borrowing countries are only a few years old so it is too soon to evaluate how effectively they have responded to criticism. Despite the criticism by some that the CDF and PRSP still lack genuine ownership of development policy by the borrowing country (Pender 2001:408), perhaps their greatest strength in regards to the environment of developing countries is that these new frameworks include an international mandate for participation of civil society in drafting them. This increased participation may allow for more voices to be heard, especially those that will be affected by economic policy changes, and could make it easier to incorporate environmental impacts of structural adjustment, other macroeconomic, and development policies. Overall, there does seem to be a shift in the World Bank and other major lenders towards more holistic

and interdisciplinary efforts at development. This shift in paradigm may be due to both external pressures and internal reforms as a result of learning from experience. However, it must be emphasized that this is indeed a shift, rather than a change, in paradigm. That is, the World Bank and other multilateral lending institutions are still overwhelmingly staffed by economists trained to frame problems in terms of neoclassical economic principles. The critiques stemming from different worldviews has led to the consideration of issues such as environmental impacts and social equity in debt relief and development policies, but they have not yet displaced the neoliberal approach as the dominant framework for addressing these issues. Instead, the neoliberal approach seems to be adapting to criticism by “widening the radar screen.”

Structural adjustment was conceived as an attempt to get developing countries out of debt. Therefore, the reasons why they fell so heavily into debt should be given another look. The Bretton Woods institutions were quick to focus on the internal problems of the countries accruing debt, rather than the external conditions that contributed to their increasing debt situation. More attention should be given to these external reasons for mounting third world debt.

When seeking to reduce the harmful impacts of structural adjustment on the environment, it is also critical to note the importance of changing not only the lender’s policies, but also those of the borrowing government, which may have greater incentives to promote harmful policies such as the unsustainable exploitation of natural resources in the short-term, rather than the fostering of more sustainable policies in the long-term. Ultimately, it is necessary for all development actors to recognize the interdependence of the economic, social, and environmental realms in a society, and to create policies that cause all three to mutually enforce each other.

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