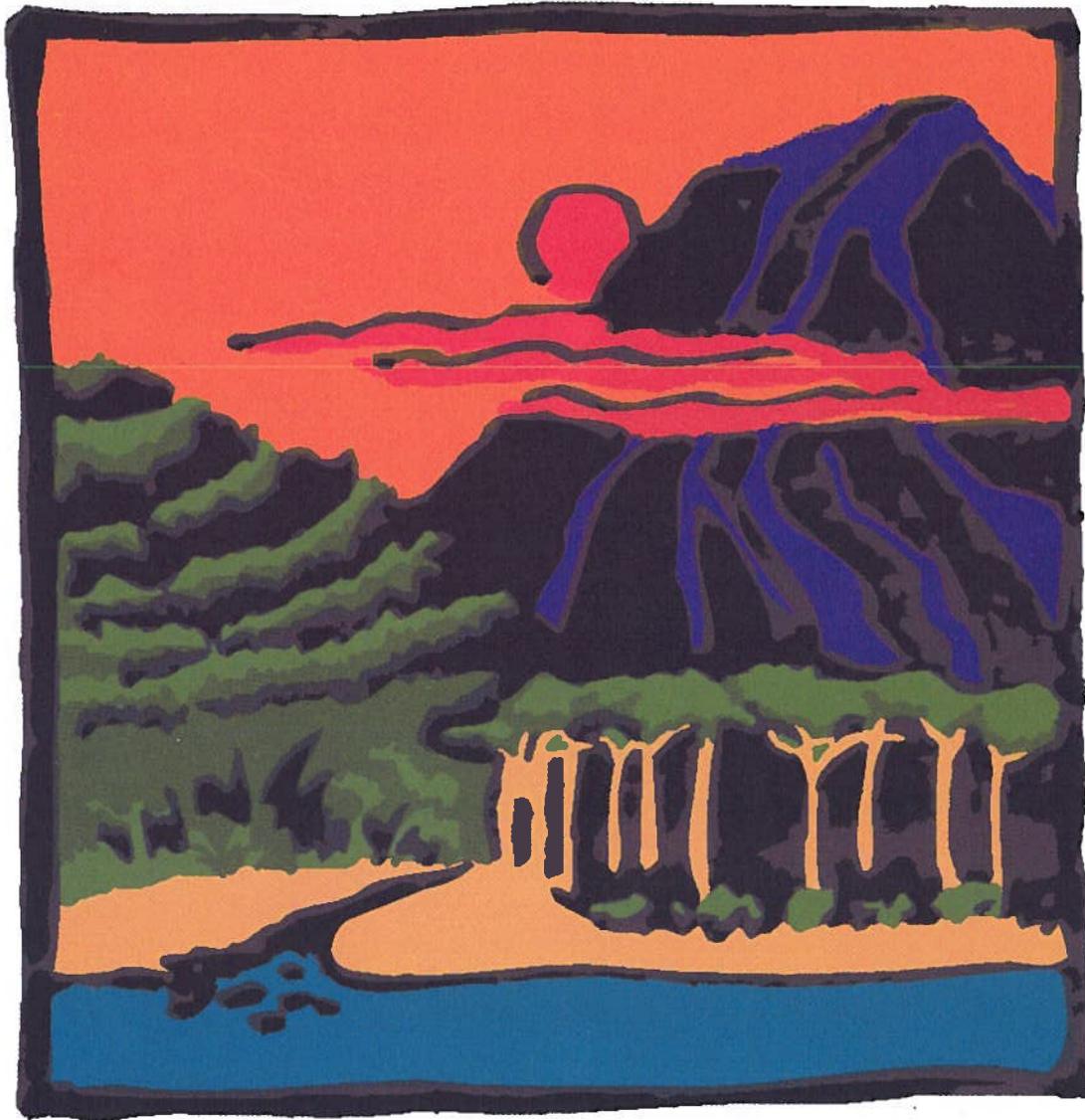


Environmental Strategy

FOR LATIN AMERICA AND THE CARIBBEAN



BUREAU FOR LATIN AMERICA AND THE CARIBBEAN
UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT

Environmental Strategy

FOR LATIN AMERICA AND THE CARIBBEAN

Washington, D.C.
January, 1993



BUREAU FOR LATIN AMERICA AND THE CARIBBEAN
UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT

TABLE OF CONTENTS

I. Introduction: Opportunities and Problems	1
A. Natural Resources and Socioeconomic Trends	1
B. Major Regional Environmental and Natural Resource Management Problems	2
II. Constraints to Remedial Action	4
A. Economic Forces, Subsidies, and Policy Distortions	4
B. Poverty	5
C. Institutional Weaknesses	5
D. Lack of Education and Information	5
E. Lack of Attention to Public Participation	6
F. Lack of Diffusion of Appropriate Technologies	6
III. Strategic Approach for the LAC Bureau	7
A. Goal and Purpose	7
B. Principles for Strategic Action	7
IV. The LAC Agenda: Priority Areas for Strategic Action	10
A. A.I.D. Priority Areas	10
B. Targets for the 21st Century	13
V. Strategy Implementation	15
A. Integration of Environmental Concerns	15
B. Projects and Programs based on Strategic Objectives	15
C. Performance-based Environmental Monitoring	15
D. Population Growth and Family Planning	16
E. Environmental Impact Assessment and Monitoring	16
F. Regional Environmental Programs	17
G. Environmental Staff Resources	17
H. Coordination and Collaboration	17
VI. Conclusion	18

LIST OF ACRONYMS

A.I.D.	United States Agency for International Development
DA	Development Assistance
EAI	Enterprise for the Americas Initiative
IPM	Integrated Pest Management
LAC / A.I.D.	Bureau for Latin America and the Caribbean
NGO	Nongovernmental Organization
P.L. 480	Public Law 480: The Agricultural Trade Development and Assistance Act of 1954, as amended, which governs U.S. Food for Peace program
ROCAP	Regional Office for Central American Programs
USDA	U.S. Department of Agriculture

I. INTRODUCTION: OPPORTUNITIES AND PROBLEMS

A. Natural Resources and Socioeconomic Trends

The Latin American and the Caribbean region is one of promise and contradiction. Democracy is sweeping the region. Most economies are undergoing rapid structural realignments, becoming much more open and increasingly oriented to and affected by the global market. These changes are resulting in renewed economic growth in many countries, after a period of prolonged economic stagnation. Profound societal change is underway.

The region's boundaries encompass rich natural resources, but these are unevenly distributed, and many countries suffer from serious resource scarcities. Likewise, the human resources of Latin America and the Caribbean (LAC) are potential sources of strength, yet much of the population still lives in chronic poverty. Increasingly, overexploitation, pollution, and environmental degradation are ravaging the natural resources of the region, decreasing their productive potential for current and future generations, sacrificing essential ingredients for long-term economic development, and ultimately threatening human health and the very existence of countless species of plants and animals.

Improvement in quality of life for the people of the LAC region is contingent upon achieving broad-based, long-term economic growth. Such growth, if it is to be sustained, is in turn inherently dependent upon improved management and conservation of the natural resource base.

Demands on natural resources and environmental systems in the LAC region are intensifying due to population growth,

urbanization and industrialization, and poverty. The region's population is 450 million, comprising 8 percent of the world's total, and is growing at a rate of 2.1 percent annually--faster than Asia but slower than in the past (between 1950 and 1975, the region had the world's highest population growth rate, with rates of 2.5 percent or more per year over this period). Most of the current growth is in urban centers, where the average annual growth rate since 1960 has reached 3.8 percent, compared with only 0.4 percent in rural areas. The provision of jobs and services for an additional 8.7 million urban citizens annually strains the infrastructure and political fabric of Latin American and Caribbean societies.

The consequences of rapid population growth are far-reaching. For those people heavily dependent on the exploitation of natural resources, it can mean growing pressures for overexploitation and depletion of the very resources upon which they depend. In LAC urban settings, the maturation of the predominantly youthful populations will mean massive growth of the labor force and demand for jobs in the near future. Urban air and water quality especially suffer from the rapid growth which has overwhelmed the local infrastructure and the insults of unregulated emissions from vehicles and factories.

Throughout the LAC region, there is increasing attention and dedication to sustainable development through environmental protection and conservation. Central American leaders established the Presidential-level Central American Commission for Environment and Development. In South America, the Government of Bolivia began the process of elaborating a National Environmental Action Plan to provide a framework for the integration of environmental considerations into their planning and decision-making process for social and economic development. Across the

Caribbean, leaders and professionals are deepening their commitment to protecting and managing natural resources.

The U.S. is committed to supporting the efforts of Latin American and Caribbean leaders to modernize and liberalize national economies, strengthen democratic processes, protect the environment, and manage natural resources in ways which are consistent with long-term, sustained economic and sociopolitical development. Under the framework of the Enterprise for the Americas Initiative (EAI), President Bush launched his landmark, hemisphere-wide initiative to foster increased trade, investment, and reduction of official debt to the United States. The debt reduction component of EAI includes a mechanism to provide support for environmental projects in Latin America and the Caribbean. Upon reduction of P.L. 480 debt under the EAI, countries that have entered into an Environmental Framework Agreement with the United States are allowed to make interest payments on remaining P.L. 480 debt in local currency that they commit to use to support grassroots environmental programs. This not only helps provide support for local conservation and management of natural resources, but also helps strengthen the role of non-governmental organizations in establishing priorities and awarding grants, building capacity for sound environmental management and empowering the public in environmentally-related decision-making processes. Environmental Framework Agreements have been signed with Bolivia, Jamaica, and Chile.

Environmental degradation, economic decline, and social and political instability are closely linked. Addressing environmental issues means addressing factors that impinge upon public welfare and human rights, as well as the physical resources on which livelihoods depend.

Environmental management dilemmas cannot be divorced from economic and social issues in the region.

B. Major Regional Environmental and Natural Resource Management Problems

The major environmental and natural resource management problems confronting the LAC region and threatening sustainable economic growth over the next decade are broadly recognized and include:

- **Loss of tropical forests and other critical habitats for biological diversity**

Although Latin America contains more than half of the world's remaining tropical forests, the rate of deforestation in the region is about 1.3 percent annually--the highest in the developing world. The consequences are profound. Land degradation, soil erosion and loss of fertility, watershed deterioration, siltation and degradation of coastal resources all result from forest conversion and loss.

Latin America also contains perhaps the richest store of biodiversity in the world. Conversion of tropical forests and human encroachment on other critical habitats--dry forests, wetlands, grasslands, mangroves, and coral reefs--threaten this rich, largely undescribed flora and fauna. Species extinction is occurring everywhere across the region and at unprecedented rates likely to increase in the future.

- **Unsustainable agricultural practices**

Agriculture is an important contributor to the region's economies. It employs about a third of the working-age population and has been fundamental to the historical development of the region. The total area of land cultivated has increased substantially, but per capita agriculture and food production have declined over the past two decades. The

extensive clearing of forest cover on hillsides and mountainous areas and conversion to pasture and agriculture lands, with a general failure to apply soil conservation and land management techniques have resulted in serious problems of land degradation. Export beef-cattle ranches grew rapidly in the 1970s and 1980s, but this trend has slowed, partly due to low prices of beef in international markets. Pesticide contamination of the environment, food supply, and export crops is a widespread and serious problem. Agricultural productivity in the region is generally low for basic food crops. On the other hand, the productivity for some cash and export crops can be quite high. Their substantial requirements for inputs such as fertilizers, pesticides, and irrigation can provide incentives for adoption of more rational, safer, and environmentally sound irrigation and input use. Support for the development of such export and cash crops needs to incorporate environmental concerns, emphasizing appropriate use of pesticides, integrated pest management, promotion of soil conservation, and improved efficiency of water use.

- **Degradation and depletion of water and coastal resources**

The LAC region encompasses abundant freshwater and coastal resources. An extensive network of rivers extends through the region, providing a wide range of benefits. Watersheds protect surrounding areas from erosion and flooding. Coastal areas provide home for most of the region's population, are the location for major transportation centers, include the most productive fishing grounds, serve as major loci for tourism, and provide important sites for industrial facilities.

All these areas are interconnected, fragile, biologically productive, and susceptible to degradation through human activities. Watershed degradation has

contributed to soil erosion, decreased water retention, and flooding. Downstream impacts include siltation of irrigation systems, hydroelectric dams, reefs and estuaries, causing declines in agricultural, fisheries, and hydropower productivity. Water sources, reservoirs, and supply systems for urban areas are negatively affected. Coastal zones are coming under increasingly intensive economic development and population pressures, and are becoming a major recipient of society's by-products. Over the near term, economic development in many countries will depend in large measure on how their freshwater and coastal resources are developed and managed.

- **Environmentally unsound energy production and use**

Energy is fundamental to human survival and to economic development. Its development has helped fuel improvements in income, health, food production, and industrial growth. Nonetheless, energy production and consumption have also been major contributors to environmental degradation in the region. Energy production is the single largest contributor to anthropogenic inputs of carbon dioxide to the atmosphere, with its potential contribution to climate change. Due to incomplete combustion of fuels, carbon monoxide levels in many urban areas are unacceptable. Sulfur dioxide emissions from combustion of sulfur-containing fossil fuels, smelting of ores, and industrial pollution can cause respiratory tract disorders, and have broad impacts including acidification of lakes and rivers through acid rain deposition.

- **Urban and industrial pollution**

Urban growth has accelerated pace in Latin America and the Caribbean over the last two decades. The percentage of total population living in urban areas reached 67% in 1987, and is projected to reach 76%

by the year 2000. This rapid urbanization and unregulated industrialization have led to major environmental problems. Severe water pollution is common in the rivers, streams, and water-supply systems in and around urban centers. Untreated sewage is a primary contaminant. Air pollution chokes many LAC cities, while solid and hazardous wastes pose other serious health hazards and threaten economically important activities such as tourism.

II. CONSTRAINTS TO REMEDIAL ACTION

The main constraints to resolution of environmental problems can be grouped in six general areas: economic forces, inappropriate subsidies, and policy distortions; poverty; institutional weaknesses; lack of education and information; lack of popular participation; and lack of diffusion of appropriate technologies.

A. Economic Forces, Subsidies, and Policy Distortions

Socioeconomic policy conflict is unavoidable in any society, and it is important to remember that policies have usually been established at the highest levels to respond to national priorities as articulated by political forces. Unfortunately, politicians, public servants, private groups, and the general public often lack basic information on the potential conflict among policies and rarely understand the likely impact of past or proposed policies on the natural resource base, the environment, and medium to long-term economic development and well-being of the population. In many cases, policies are determined by a powerful minority to maintain its social and economic power. In other cases, political support is lacking because environmental protection and

resource management can be controversial and politically sensitive for decision-makers. All too often, resulting actions designed to stimulate economic growth counteract other national objectives such as protection of the environment and sound natural resources management.

The failure of markets and economic accounting methods to reflect the true costs of resource depletion, degradation, and pollution are important constraints to improved resource management. Problems include pricing policies that currently undervalue common goods and services (e.g., forests, biodiversity, water, soil, and energy); subsidies, inadequate rents, low or nonexistent user fees, and tax policies that lead to inefficient use and degradation of natural resources (e.g., government subsidies for agrochemicals, water, ranching, and timber); discount rates applied in current economic planning that tend to encourage exploitation rather than conservation of natural resources; and national income accounting systems that treat the drawing down of natural resources as net income, rather than capital consumption. By this measure, consumption and depletion of a nation's nonrenewable, natural resources actually masquerades as economic growth.

Weaknesses and biases in the political and legal frameworks which govern economic and environmental policies and actions also exist. Typically, laws protecting the environment exist on paper, but in practice they are inadequately implemented due to lack of finances and staff for monitoring and enforcement, weaknesses in the legal and judicial systems, or lack of political commitment. Natural resource management programs, strategic planning, and institutional innovations cannot proceed effectively without supportive and compatible national

policies, laws, and regulatory and enforcement capabilities.

B. Poverty

Deeply-rooted, pervasive poverty plays a major role driving environmental degradation. The requirement to meet immediate, critical human needs frequently overwhelms available natural resources. The ability to plan adequately for future needs is severely constrained. In rural areas, inequitable land-tenure systems and land-titling policies can lead to concentration of land ownership and displacement of poor farmers, often forcing them to farm on unsuitable, fragile lands. When people do not have the necessary resources or security of land tenure, they are unlikely to invest in conservation practices such as terracing or tree-planting which have long-term payoffs, but short-term costs. In urban areas, the swelling populations of poor urban dwellers are far outstripping the delivery of essential human services--the supply of potable water and the treatment and disposal of waste.

C. Institutional Weaknesses

Efforts to effectively manage natural resources may be thwarted by institutional weaknesses. Most LAC government institutions involved in environmental resource management lack funding, trained staff, technical expertise, adequate information and analytical capability, and other requisites for implementing comprehensive programs and policies. Overlapping mandates and jurisdictions frequently contribute to counterproductive competition and duplication of efforts.

Of concern is a lack of economic incentives for private sector involvement in environmental management. Private sector managers need to develop a better understanding of the costs and financial benefits of investments to improve efficiency and reduce or recycle waste

streams. There is great potential for private enterprise activities, as illustrated by the increasing number of successful "green" investments by companies in the United States and Europe. Yet LAC governments have not created the economic climate to encourage these changes. Many private companies, like public decision-makers, tend erroneously to perceive natural resource management as conflicting with their interests.

Non-government organizations (NGOs) and grassroots groups offer strong potential for stimulating environmentally and socially beneficial changes. However, NGOs tend to have weak financial bases, relatively little political power, and often inexperienced management capacities. These weaknesses, combined with lack of collaboration and turf struggles, can defeat NGO efforts to carry out measures for encouraging sustainable development.

D. Lack of Education and Information

Lack of education and training at all levels is another key barrier to effective environmental action. Throughout LAC, there are insufficient technical training programs, primary and secondary school courses, and university level programs for scientists and policy-makers in the fields of environmental management. The general public tends to have low levels of awareness of environmental problems, which reflects its lack of access to information and education.

Effective management of natural resources is often severely constrained by the lack of information on the status and trends of resource conditions, and by poor understanding of the economic costs and consequences of depletion and degradation.

The lack of indicators of environmental change seriously impedes understanding

and effective management of natural resources.

E. Lack of Attention to Public Participation

The fate of the resource base will be determined largely by individuals' everyday actions. Yet local communities and citizens have not been given opportunities to participate fully in decision-making regarding resource use and management.

Grassroots groups and NGOs have been active in democratic environmental movements, and can be effective agents for local empowerment and heightening public awareness of environmental issues. Unfortunately, they usually lack sufficient tools, incentives, and funding to carry out their efforts, and they tend to lack open lines of communication with decision-makers. The voices of citizens are often not heard in political arenas. Frequently, the role of women is neglected, yet women are often key actors in resource management.

F. Lack of Diffusion of Appropriate Technologies

Certain kinds of technologies are well-adapted and appropriate to mitigate or prevent resource degradation. In rural settings, examples include terracing to

control run-off, contour ditching, mulching, and gully plugs to prevent erosion. In industrial environments, early introduction of pollution control and waste stream recycling technologies to minimize waste and pollution while simultaneously improving production is prudent economically and environmentally: the costs of retrofitting plants to meet new standards can be far higher than financing environmental investments at the design and construction stages. In urban areas, better processes for management and disposal of sewage and solid wastes are essential for improving living conditions. Even though appropriate technologies exist, however, they have not had wide diffusion and adoption in many LAC countries. Financial incentives and institutional support for their adoption tend to be lacking. Private enterprises, including U.S. firms, have had limited opportunity to market and distribute such technologies, even though such investments are potentially lucrative. Support for applied research and dissemination is also lacking, although it is especially needed in areas such as natural forest management, pollution control, and disposal of solid and industrial wastes.

III. STRATEGIC APPROACH FOR THE LAC BUREAU

A. Goal and Purpose

As one of its overarching strategic objectives, the LAC Bureau supports the achievement of broadly-based, sustainable economic growth. In furtherance of this objective, the LAC Regional environmental strategy is designed to encourage preservation and sustainable use of the natural resource base. This environmental strategy is developed from the premise that broad-based and sustainable economic growth, expanded participation in the benefits of this growth, and improvements in the quality of human existence throughout the region are inseparably linked to environmental conditions.

B. Principles for Strategic Action

LAC Bureau actions will be guided by the following cross-cutting, strategic principles:

- 1) Attack root causes underlying environmental degradation, stressing prevention of problems.**

Although many efforts have been made to address the environmental problems of the region, major barriers to effective action remain. One of the principal concerns is that measures often address only the "symptoms" rather than confronting the root causes of problems. The root causes of resource degradation are complex, interdependent, and vary for different issues and regions. Socioeconomic, political and cultural forces often combine to drive environmental degradation. Developing effective solutions requires a long-term, integrated approach. Concerted efforts must be made to stem the deterioration of the region's natural resource base which

has been exacerbated by high population growth and lack of attention to environmental concerns. Prevention of problems is usually more effective and economical than developing remedial efforts after severe damage has already occurred.

- 2) Integrate environmental considerations broadly into A.I.D.-supported sectors and programs.**

Environmental considerations are fundamental to economic growth and social development. Thus policies and actions to ensure environmental and natural resource sustainability must be integrated into development programs in all sectors. For the private sector, experience shows that business enterprises and trade profit from environmentally-sound investments. Critical democratic initiatives can be furthered in important ways through an environmental orientation. Increasing public awareness of environmental concerns, enabling citizens' groups to become engaged in public policy formulation and decision-making affecting the environment, and training of public policy-makers and legislators can help strengthen critical human resources and make a vital contribution to the process of social reform and democratization throughout the region. Concomitantly legislative, legal, judicial, and regulatory systems must be strengthened in order to promulgate effective environmental laws, and assure compliance. In the areas of health and urban and industrial development, prevention and minimization of pollution and provision of safe and affordable water, sewage and waste disposal services are vital to reduce the risk of illness and the spread of diseases, such as cholera, and to improve human health and well-being.

3) Promote economic and environmental policies for sustainable development.

Attempts to achieve sustainable development will fail unless they are supported by appropriate economic and environmental policies. First and foremost, it is essential to reform policies which lead to natural resource degradation, waste, and pollution. Consistency is needed between environmental policies and other development policies.

Establishment of appropriate price, tax, and other economic policies that promote correct valuation of natural resources; encouragement of open, competitive markets; development of incentives to promote conservation and sustainable use of the resource base; removal of inappropriate subsidies; and private sector participation in the management of lands and resources all need to be encouraged. New national economic accounting systems need to be implemented that include the costs of resource depletion and correct the overstatement of real income, output and growth. Concomitantly, it is essential to develop strong policy-enforcement mechanisms. Laws must be implemented and enforced through effective mechanisms. Positive social and economic incentives for private producers and industries are particularly helpful for stimulating conservation and rational resource use.

4) Strengthen institutions, including non-government organizations and government agencies for resource management.

Both government and non-government organizations need strengthened institutional capacities for environmental management. This requires improvements in organization, management, human skills and expertise, and funding, as well as strengthening of legislative mandates, laws and

enforcement mechanisms that pertain to environmental regulations. Other necessary measures include better coordination among institutions, improved organization and use of information/data bases, and avoidance of overlapping jurisdictions and mandates.

5) Strengthen education and training in all areas of environmental management.

Education and training are essential if developmental decisions are to reflect environmental costs and benefits. An informed citizenry can play a more effective role in defining the development agenda in their countries. Education on environmental and resource issues needs to include not only formal schooling, but also practical training courses and informal programs, as well as social marketing to raise the awareness of the public regarding environmental problems. Educational opportunities are needed at all levels: for government policy-makers, scientists and researchers, private sector managers, university students, secondary and primary pupils, and the general public.

6) Build participation and empowerment of the public in environmental initiatives.

Participation of citizens is critical for effective development and conservation. When local people are fully engaged, actions and institutional efforts are more likely to be productive, sustainable, and equitable. Experience has shown that participation of local people needs to occur at all stages of projects. Women are a particularly important group since they play a critical role in health and agriculture. The participation of indigenous people in decision-making on natural resource management issues also needs to be encouraged and strengthened. This participatory approach helps build empowerment, democratic initiatives, and pluralism, basic conditions for the development of stable, democratic

societies and sustained socioeconomic growth.

7) Strengthen the role of the private sector in environmental management and prevention of resource degradation.

LAC Missions should encourage the establishment of an appropriate division of responsibilities between the public and private sector--one that encourages private enterprise to play an important role in investing in urgently-needed environmental management activities and provision of services. Educational programs for the private sector (including technology transfer) are also important. Economic policies that encourage recycling and internalization of costs are preferable to regulatory systems requiring extensive policing. There are possibilities for fruitful collaboration between A.I.D., host countries, other donors and private companies to develop such activities and policies.

8) Promote research, information exchange, and appropriate technology transfer for sustainable development and environmental management.

Ecological knowledge and understanding are needed to detect and monitor changes, evaluate consequences of a wide range of human actions, and plan for sustainable management of natural resources. Research is required to generate this information, and it is essential that findings be shared and applied effectively.

Investments to improve the physical and economic information base, and to establish indicators of success, are vital to allow consideration of both the environmental impacts of development projects and the costs and benefits of new investments in natural resource conservation, protection and restoration.

It is also imperative to improve the flow and exchange of information and appropriate technology. Information

gathered in resource-related management and research projects must be used more effectively in environmental and economic decision-making. Developing innovative information networks among NGOs, universities, and research institutions can help in sharing and disseminating information. Improving technology transfer requires expansion of marketing opportunities, strengthening of extension institutions, and actions to ensure that local people assimilate and effectively benefit from foreign techniques.

9) Strengthen implementation of Agency environmental procedures.

To be an effective planning and implementation tool, environmental review and monitoring needs to be conducted both early in project development and throughout project implementation. The LAC Bureau has made significant progress in the application of Agency environmental procedures, but it has identified certain areas needing strengthening. The Bureau will work to better integrate environmental assessment with project design, improve environmental monitoring and evaluation, and strengthen staff understanding of the process through training. Environmental impact assessment needs to become institutionalized as a part of standard practice in project design and implementation by host-country government agencies and private-sector organizations.

10) Promote donor collaboration and coordination for sustainable development and environmental management.

Donor coordination, commonly promoted rhetorically, but difficult to achieve in practice, can help avoid duplication of efforts and take advantage of areas of respective strength. Furthermore, collaborative activities and pooling of resources may be necessary for projects that require very large capital

investments, such as sewage treatment plants, water systems, and hydroelectric dams. Joint workshops can be useful in planning regional efforts for forest and watershed management and biodiversity conservation. Such approaches can improve communication and facilitate exchange of information among donors.

IV. THE LAC AGENDA: PRIORITY AREAS FOR STRATEGIC ACTION

The LAC Bureau will be working in all five environmental problem areas to some extent. However, LAC resources will be principally focused on the following: conservation of tropical forests and other critical habitats for biological diversity; sustainable agriculture; and improved management and protection of water and coastal resources. The Bureau will also be engaged in the other two areas, promotion of environmentally sound energy production and use and reduction of urban and industrial pollution, on a more limited basis where these problems are particularly significant constraints to development. Individual A.I.D. Missions will generally be expected to focus on three or fewer of the priority environmental problem areas, applying the cross-cutting principles in each problem area chosen. Determining the mix of priorities will be the responsibility of the Mission.

The five A.I.D. priority areas and the LAC Bureau's cross-cutting principles address the key environmental problems confronting the region, constraints to action, and potential for effective intervention. Within these areas, Table 1 shows how A.I.D. Missions, at least initially, will focus their efforts over the term of the strategy. Selection of areas of focus within Missions' environmental portfolios is based on the determination by the A.I.D. Mission and the host country

that the selected areas for strategic action: attack those environmental problems that are the most significant constraints to economic development or pose significant threats to human health and well-being; address areas where lack of action will result in irretrievable losses (e.g., biodiversity); and focus resources on areas identified as priorities by the host country that they are capable and committed to addressing. In all but one case, A.I.D. Missions in the LAC region are concentrating their environmental resources on three or fewer priority areas.

While concentrating environmental resources in this manner, the LAC Bureau is equally committed to ensuring that environmental considerations are broadly and fully integrated into Agency-supported sectors and programs, and to addressing problems of the disadvantaged by increasing income generating opportunities and expanding their access to and the efficiency of basic education, and primary health care, family planning, and nutrition services.

A. A.I.D. Priority Areas

1. Conservation of Tropical Forests and other Critical Habitats for Biological Diversity

Although forestry and forest-based economic activities have been neglected elements in development plans, forest resources are very important to development in Latin America and the Caribbean. They are the basis for potential, long-term, domestic and export industries. They provide a wide range of products for local use, and they provide common goods and services such as watershed protection, soil erosion control, and home for countless numbers of plant and animal species. The LAC Bureau is committed to helping stem the loss of the remaining forests in the region. As an important step, it is assisting host country institutions to better manage these forests for multiple uses, including timber and

non-timber products, biodiversity, and watershed protection, and other economic and environmental benefits and services.

To protect biodiversity, the LAC Bureau will assist developing countries to manage and restore ecosystems outside protected areas, in addition to supporting development and management of protected area systems. Major attention will be placed on in situ conservation of species and ecosystems. To the extent possible, the Bureau will seek to leverage additional resources for ex situ conservation efforts, since preservation of germ plasm is biologically and economically essential to help meet present and future needs for breeding disease-resistant, high-yielding crop varieties.

A.I.D. will:

- focus on policy reform, restructuring of economic incentives, and institutional strengthening of responsible management and regulatory institutions to assist the development and implementation of tropical and pine forest management plans for the sustainable production of forest products, water conservation, and other environmental benefits;
- support and strengthen public and private agencies' capabilities to consolidate and manage, on a sustainable basis, priority wildlands and legally declared national parks and reserves;
- engage in policy dialogue, institution building, environmental education, research, and environmental monitoring in support of biodiversity conservation.

2. Sustainable Agricultural Practices

Agriculture is an important basis for the region's economies. A.I.D. seeks to promote the sustainable growth of this important sector. In attempting to

support sustained agricultural productivity while preserving the environment, a systematic approach to pest control is essential. The Agency Pest Management Guidelines provide useful guidance for these efforts. A.I.D. will:

- help governments and NGOs reform policies, laws, and programs required to create incentives and provide a level playing field for sustainable growth of the agricultural sector;
- work with regional and local-level institutions to support research aimed at increasing agricultural productivity on a sustainable basis; develop, disseminate, and integrate conservation technologies into agricultural production systems; and minimize agrochemical contamination;
- support reforms in land titling and promote security of property rights and a functioning land market to encourage increased productivity, investment, and maintenance of resources;
- advocate land-use capability analysis as a central element in planning and promoting protection and sustainable use of natural resources;
- promote and support the adoption of integrated pest management (IPM) and strengthen public and private institutions working in crop protection and pesticide regulation and management through local and regional initiatives.

3. Improved Management and Protection of Water and Coastal Resources.

The conservation and rational exploitation of water and coastal resources is going to depend upon major efforts to protect and better manage watersheds and develop integrated management programs directed at conservation and multiple use of coastal zone resources. The private sector must

play an important role in such efforts in facilitating the adaptation and transfer of appropriate technologies; disseminating environmental management information; and adopting practices designed to mitigate or prevent environmental degradation.

A.I.D. will:

- strengthen programs in support of comprehensive watershed management. Necessary measures include removal of incentives which induce deforestation, protection of watershed forests, land use zoning, soil conservation, and monitoring of water quality and runoff. Major effort will be placed on developing the means to meet the recurring costs of watershed management;
- help increase efficiency and equity in the distribution and supply of water, and help reform water subsidy and pricing policies so that water prices reflect actual supply costs plus its social costs;
- strengthen local capacity to develop integrated, site-specific coastal resource management strategies and programs to advance and demonstrate appropriate coastal resource management technologies;
- strengthen institutional capacity and enhance land-use planning and zoning capabilities to plan and manage development in sensitive areas, especially coastal areas, mangroves, and wetlands, and strengthen monitoring and control of industrial effluent, waste and sewage disposal, petrochemical industry activities, and sand extraction along shores;
- help protect critical, sensitive marine ecosystems and marine biodiversity through establishment of marine parks and reserves, and support

environmental education to increase public awareness of the need for conservation of freshwater and marine resources.

Assistance in the last two environmental problem areas will be provided within the constraints of available funds, where LAC countries view these areas as priorities for addressing national development problems.

4. Promotion of environmentally-sound Energy Production and Use

Energy supply is critical for economic development and increased quality of life. At the same time, its production and use can contribute to many environmental problems. The combustion of fossil fuels, for example, is a major source of air pollution and greenhouse gas emissions in the LAC region. To respond to the Congressionally-mandated Global Warming Initiative to reduce the emissions of greenhouse gases from key Global Climate Change countries, the LAC Bureau will support efforts to improve energy efficiency; develop alternative, renewable sources of energy; and support energy planning in Brazil and Mexico. The energy sector in the Dominican Republic has grave problems that pose particular constraints to development. The A.I.D. Mission in the Dominican Republic will continue to promote privatization of electricity generation and improved energy efficiency.

A.I.D. will:

- focus attention on alternative energy sources and end-use energy conservation and efficiency;
- assist the development and adjustment of pricing policies and regulatory frameworks, promote private-sector participation in power supply and privatization of electric utilities, and

heighten awareness of U.S. investors regarding prospects in the LAC region;

- promote adoption of cost-effective and environmentally cleaner technologies;
- strengthen agencies responsible for environmental control of electricity, oil, and gas subsectors, helping them acquire state-of-the-art methodologies and instrumentation and develop adequate standards and regulations for compliance.

5. Reduction of Urban and Industrial Pollution

Urbanization and industrialization are global, inevitable processes--bringing both promise and problems to the Latin America and Caribbean region. Urban and industrial growth offer important benefits, such as job creation, higher income levels, and increases in productivity, but have also led to major environmental problems, such as water and air pollution, dumping of industrial wastes, and inadequate treatment and disposal of sewage and solid wastes. These pollution problems are especially acute in Chile and Mexico, where they constitute serious health threats. In the eastern Caribbean, these problems pose a serious threat to economic development. In these three cases, reduction of urban and industrial pollution has been identified by the LAC Bureau and host countries as a priority area for action. Addressing these serious problems, however, is largely beyond the present financial, technical, and institutional capacities of these host countries or any single development agency.

A.I.D. will work with other U.S. Government agencies to:

- promote greater private-sector responsibility for resolving problems of solid waste management and water and air pollution through support for policy and regulatory reforms,

technical assistance, and feasibility studies;

- encourage the U.S. private sector to provide technical assistance, technology, and training in industrial pollution control, and occupational health and safety;
- catalyze and work with other donors to support the development of infrastructure, technologies, and services for supplying potable water in urban areas;
- collaborate with other donor agencies and the U.S. private sector to demonstrate cost-effective approaches to reducing water and air pollution in urban areas, and to encourage the expansion of recycling programs in the region;
- support environmental planning and improvements to avoid and mitigate natural disasters in urban areas.

B. Targets for the 21st Century

With strong leadership and continued commitment to environmentally sound social and economic development, expanded participation by the public in environmental planning and decision-making at all levels of government, and adequate international support, the goal of sustained socioeconomic development can be attained. Government policies and regulations, better planning and management by both government and private sector, strengthened institutions, and improvements in education and training can reinforce efforts for improved natural resources management. Specific targets for conservation and sustainable use of the resource base will be identified in country strategies and action plans, adjusted when necessary as circumstances

change. At this time, feasible targets for the region include:

Population growth rates in the region continue to decline at or better than declines achieved during the last 20 years.

Economic and environmental policies, laws and regulations are creating a framework and providing incentives and disincentives consistent with open economic and political systems that encourage protection and prudent use of natural resources.

Deforestation rates have decreased and forest resources are being managed for multiple-use with socioeconomic benefits accruing to local communities.

Integrated pest management is widely practiced and reliance on agrochemical inputs has been reduced. Quality assurance programs are in place to ensure that pesticide limits are not exceeded on agricultural exports.

Soil conservation to reduce erosion and improve fertility is increasingly practiced by farmers across the LAC region and rates of soil erosion have slowed.

Coastal zone management policies and programs promote improved land-use planning and zoning capabilities and strengthen monitoring and control of industrial effluent, waste and sewage disposal in coastal areas.

Quality and quantity of water has increased from watersheds on a sustainable basis.

Parks and protected areas are being better managed for conservation of biological diversity and the loss of critical wildlife habitats has slowed.

Safe water supply and sanitation coverage are expanded. Water and sanitation programs are linked to health and hygiene education.

Policies and programs encourage end-use energy conservation and efficient use.

V. STRATEGY IMPLEMENTATION

A. Integration of Environmental Concerns

It is particularly important to recognize the cross-cutting nature of environmental issues. A fundamental objective of this strategy is to direct action towards incorporation of environmental concerns into the development of all sector programs. The LAC Bureau will continue to assure the environmental soundness of its entire program and actively incorporate environmental considerations into its development goals.

B. Projects and Programs based on Strategic Objectives

Achieving environmentally sound, sustainable development requires coordinated actions at many levels. Priority actions will be consistent with country and regional development strategies, guided by the principles and strategic approaches enunciated previously in this strategy, and within the overall framework of the LAC strategic objectives. The LAC Bureau recognizes five critical environmental problem areas that constrain economic development in the LAC Region. Implementation of activities within these areas, and integration of environmental considerations into all areas, may call for changes in current program focus and resource allocation. Efforts will draw on the comparative advantages of the Agency. Resources will be concentrated on problems that LAC Missions and host countries have identified as priorities, and are capable and committed to addressing.

An important element of the LAC Regional environmental strategy will be assistance to host countries to develop national conservation strategies or environmental action plans. These plans

shall be developed through a broad, participatory process engaging host country governments, urban and rural NGOs, local communities, and the public and private sectors. These environmental action plans will identify priority environmental issues for national policy planners and decision-makers. They provide a strategic framework for integrating environmental considerations into overall economic and social decision-making, and foster broad popular support and involvement in planning, formulation, and implementation of environmental policies and programs. They also provide an effective mechanism for donor coordination. Currently, the LAC Bureau is assisting the governments of Bolivia and El Salvador to develop such plans. Through their development, host-country government capability to plan and more effectively manage the use of their natural resources is strengthened. The LAC Bureau will encourage and work actively with other host countries in the region to develop these plans. Broad public participation in the formulation of these plans is fundamental to their success.

C. Performance-based Environmental Monitoring

This strategy calls for both integration of environmental concerns wherever feasible into all sectors, and a concerted effort to achieve better program concentration and improve impact measurement for programs targeted specifically at improving environment and natural resources management. Only by setting measurable targets can the Bureau track its progress towards environmentally sound development. Unfortunately, reliable, comprehensive statistics on the environment and natural resources are very limited, and performance indicators regarding the effectiveness of natural resource policies, programs, and actions are currently not available in any systematic or

standardized form. To remedy this situation and analyze the performance, impact, and cost-effectiveness of Agency environmental and natural resource management actions, the Agency is initiating a major evaluation of its environmental programs. The goal is to identify the most efficient, cost-effective mechanisms to address environmental issues through development programs, document environmental program performance, and provide lessons learned for better management. The LAC Bureau will actively participate in this evaluation to help determine what types or combinations of interventions (policy reform, education and training, institutional strengthening, or on-the-ground activities) have a greater chance for success, and improve its measurement and monitoring capabilities for environment and natural resources management programs.

The LAC Bureau has developed environmental indicators based on an assessment of host country environmental and natural resource objectives, policies and institutions for use in evaluating host country performance. The Bureau will include environmental considerations as an important element of the overall country performance rating, which informs decisions on a portion of DA allocations among countries.

D. Population Growth and Family Planning

The projected growth in population in Latin America and the Caribbean, especially in urban areas, is likely to be a major force with a powerful impact on economic and social development and natural resource management. Decreasing access to essential services can exact a heavy toll on human health and living conditions. The LAC Bureau will support policy and institutional reforms to expand access to basic primary and preventive health care and family

planning services. Improvements in delivery systems will be assisted through improving management and administration, and encouraging removal of constraints to participation and investment by the private sector. Expanding economic opportunities and education, especially for women, are also important means for reducing population pressures.

E. Environmental Impact Assessment and Monitoring

Environmental impact assessments of A.I.D.-supported projects and programs ensure that environmental factors and values are incorporated into A.I.D. and host country decision-making. The LAC Bureau attaches considerable importance to the environmental review process, and seeks to improve implementation of environmental procedures. Environmental procedures must be integrated into the Agency decision-making process. This builds Agency credibility, promotes U.S./host-country trust, allows for "no surprises" to the decision-maker and affected public, and contributes to successful project implementation.

The LAC Bureau will seek to better involve interested and affected parties during the environmental assessment process. By involving these parties early and often, trust and support for the project is built, ownership by all parties is enhanced, and the Agency can better take advantage of outside expertise.

Experience has shown the importance of inculcating environmental review procedures as an integral part of project design practice by host countries. This will require additional host-country guidelines, policy reform, and human resources.

A current weakness in A.I.D. environmental procedures is the lack of monitoring to gauge compliance or

changed conditions. Efforts will be made to improve environmental monitoring during project implementation. Project evaluations will examine the success of actions taken to mitigate environmental impacts during project implementation to assure that project activities are environmentally sound.

F. Regional Environmental Programs

The dimension of the environmental crisis is such that nations cannot always effectively address problems on their own. Issues such as climate change, acid rain, marine pollution, and tropical deforestation transcend national boundaries and demand coordinated responses on regional scales. The LAC Bureau will develop regional initiatives in support of the strategy. In the Caribbean, program development will recognize the importance of economies of scale and support regional approaches to addressing environmental problems, harmonizing policies and regulations, and strengthening environmental monitoring and enforcement.

In Central America, the Regional Office for Central American Programs (ROCAP) will continue to support bilateral environmental programs with a combination of regional institutional programs and direct technical support, and take the lead in developing regional programs, in collaboration with country Missions.

In South America, the LAC Bureau will foster efforts to reduce deforestation in the Amazon. Activities will involve policy reform, institutional strengthening, training, and research. These activities will focus on both the development of sustainable forest management systems for timber and non-timber products, and also the development of techniques for rehabilitating degraded agricultural lands and practicing sustainable agroforestry in

order to reduce pressures for further forest clearing.

G. Environmental Staff Resources

The LAC Bureau has insufficient staff with environmental expertise to properly manage its rapidly growing environment, natural resources and energy portfolio. The Bureau will strive to improve this situation by: acquiring additional A.I.D. direct-hire staff experts in the environment and energy fields in each of the next three years (FY 92-94) to design, implement, and monitor environmental projects and programs; making senior managers, economists, and program and project officers more aware of basic environmental issues and approaches to their solutions; initiating a comprehensive and coordinated training program for A.I.D. staff; and training at least one staff person in each A.I.D. Mission over the next three years in environmental impact assessment techniques.

H. Coordination and Collaboration

Execution of this strategy requires A.I.D. to be a lead U.S. agency in marshalling and coordinating the technical and programmatic expertise found in the United States. This demands effective collaboration with other Federal agencies, including the U.S. Department of Agriculture, Environmental Protection Agency, U.S. Department of Interior, and the Peace Corps, in implementing environmental programs abroad. The Agency can also influence programs funded by other bilateral and multilateral donor agencies, building a coalition of interests in support of bilateral and regional environmental and natural resource management programs that complement U.S. efforts. A.I.D. will look for opportunities to leverage or cost-share activities with these agencies and organizations.

VI. CONCLUSION

Sustained economic growth in developing countries is fundamentally dependent upon proper management of natural resources. The LAC Bureau will continue to provide leadership in the LAC region in the area of environmental management and strive to embody environmental considerations in all A.I.D.-supported development activities. We seek to imbue environmental concerns into sociopolitical and economic decision-making of developing countries. The Bureau will continue to work with other U.S. and international organizations to develop and support environmental projects and programs in Latin America and the Caribbean.

The objectives of the Bureau's environmental activities extend far beyond immediate environmental and natural resource concerns. The ultimate goal is to sustain economic growth and improve the quality of human existence while preserving resources and options for future generations: important elements of the U.S. foreign assistance program.