

Interim Environmental Review

U.S. - Panama Free Trade Agreement

Office of the U.S. Trade Representative

June 2004

Executive Summary

Pursuant to authority delegated by the President in Executive Order 13277 (67 *Fed. Reg.* 70305) and consistent with Executive Order 13141 (64 *Fed. Reg.* 63169) and its guidelines (65 *Fed. Reg.* 79442), the Office of the United States Trade Representative (USTR) submits this Interim Environmental Review of the United States-Panama Free Trade Agreement (FTA), as provided for under section 2102(c)(4) of the Trade Act of 2002 (Trade Act).

On November 18, 2003, in accordance with section 2104(a) of the Trade Act, U.S. Trade Representative Robert B. Zoellick notified the Congress of the President's intent to enter into negotiations for a FTA with Panama. The formal launch of negotiations took place on April 26, 2004. Four rounds of negotiations are scheduled and, as of the date of this Interim Review, two rounds have taken place. A trade capacity building group met in parallel with the negotiating groups in one round. The negotiations are scheduled to conclude by mid-August, 2004.

The environmental review process examines possible environmental effects that may be associated with the FTA. In identifying and examining these possible effects, the Administration drew on public comments submitted in response to a notice in the *Federal Register* (69 *Fed. Reg.* 19262) and relevant published economic analysis. The review also draws on the environmental and economic expertise of federal agencies. Consistent with Executive Order 13141 and its Guidelines, the focus of the review is on potential impacts in the United States. Additionally, this review includes consideration of global and transboundary effects.

This interim review provides provisional conclusions and identifies areas for further attention in the course of the ongoing negotiations and in the review of the final agreement. The Administration welcomes public comment on these preliminary conclusions:

- Based on existing patterns of trade and changes likely to result from provisions of the U.S. - Panama FTA, the impact on total U.S. production through changes in U.S. exports appears likely to be very small. As a result, the U.S. - Panama FTA is not expected to have significant direct effects on the U.S. environment.
- Based on an analysis of comparable provisions of previous FTAs, the U.S. - Panama FTA is not expected to have a negative impact on the ability of U.S. government authorities to enforce or maintain U.S. environmental laws or regulations.
- As compared to its effect in the United States, the U.S. - Panama FTA may have relatively greater effects on the economy of Panama. Net changes in production and trade may be relatively small, however, because most goods exports to the United States from Panama already face low or zero tariffs and goods production accounts for a small share of the Panamanian economy.

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- The U.S.-Panama FTA may have small, indirect effects on the U.S. environment through economic growth in Panama and transboundary transmission of pollutants (air and water) and through effects on habitat for wildlife in Panama, including migratory species.
- The U.S.-Panama FTA may have positive environmental consequences in Panama by reinforcing efforts to effectively enforce environmental laws, accelerating economic growth and development through trade and investment and disseminating environmentally beneficial technologies.
- The U.S.-Panama FTA provides a context for enhancing cooperation activities to address both trade-related and other environmental issues.

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I. LEGAL AND POLICY FRAMEWORK

A. The Trade Act of 2002

The Trade Act of 2002 (Trade Act) establishes a number of negotiating objectives and other priorities relating to the environment. As relevant here, the Trade Act contains three sets of objectives: (i) overall trade negotiating objectives; (ii) principal trade negotiating objectives; and (iii) promotion of certain priorities, including associated requirements to report to Congress.

Overall environment-related trade negotiating objectives include:

- (1) ensuring that trade and environmental policies are mutually supportive and to seek to protect and preserve the environment and enhance the international means of doing so, while optimizing the use of the world's resources (section 2102(a)(5)); and
- (2) seeking provisions in trade agreements under which parties to those agreements strive to ensure that they do not weaken or reduce the protections afforded in domestic environmental and labor laws as an encouragement for trade (section 2102(a)(7)).

In addition, the Trade Act establishes the following environment-related principal trade negotiating objectives:

- (1) ensuring that a party to a trade agreement with the United States does not fail to effectively enforce its environmental laws, through a sustained or recurring course of action or inaction, in a manner affecting trade between the parties, while recognizing a party's right to exercise discretion with respect to investigatory, prosecutorial, regulatory, and compliance matters and to prioritize allocation of resources for environmental law enforcement (sections 2102(b)(11)(A)&(B));
- (2) strengthening the capacity of U.S. trading partners to protect the environment through the promotion of sustainable development (section 2102(b)(11)(D));
- (3) reducing or eliminating government practices or policies that unduly threaten sustainable development (section 2102(b)(11)(E));
- (4) seeking market access, through the elimination of tariffs and nontariff barriers, for U.S. environmental technologies, goods and services (section 2102(b)(11)(F)); and
- (5) ensuring that environmental, health or safety policies and practices of parties to trade agreements with the United States do not arbitrarily or unjustifiably discriminate against U.S. exports or serve as disguised barriers to trade (section 2102(b)(11)(G)).

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The Trade Act also provides for the promotion of certain environment-related priorities and associated reporting requirements, including:

- (1) seeking to establish consultative mechanisms among parties to trade agreements to strengthen the capacity of U.S. trading partners to develop and implement standards for the protection of the environment and human health based on sound science and reporting to the Committee on Ways and Means and the Committee on Finance (“Committees”) on the control and operation of such mechanisms (section 2102(c)(3));
- (2) conducting environmental reviews of future trade and investment agreements consistent with Executive Order 13141 and its relevant guidelines, and reporting to the Committees on the results of such reviews (section 2102(c)(4)); and
- (3) continuing to promote consideration of multilateral environmental agreements and consult with parties to such agreements regarding the consistency of any such agreement that includes trade measures with existing exceptions under Article XX of the GATT 1994 (section 2102(c)(10)).

B. The Environmental Review Process

The framework for conducting environmental reviews of trade agreements is provided by Executive Order 13141—*Environmental Review of Trade Agreements* (64 Fed. Reg. 63169) and the associated Guidelines (65 Fed. Reg. 79442). The Order and Guidelines are available on USTR’s website at <http://www.ustr.gov/environment/environmental.shtml>.

The purpose of environmental reviews is to ensure that policymakers and the public are informed about reasonably foreseeable environmental impacts of trade agreements (both positive and negative), identify complementarities between trade and environmental objectives and help shape appropriate responses if environmental impacts are identified. Section 5(b) of Executive Order 13141 provides that “as a general matter, the focus of environmental reviews will be impacts in the United States,” but “[a]s appropriate and prudent, reviews may also examine global and transboundary impacts.” Reviews are intended to be one tool, among others, for integrating environmental information and analysis into the fluid, dynamic process of trade negotiations. USTR and the Council on Environmental Quality (CEQ) jointly oversee implementation of the Order and Guidelines. USTR, through the Trade Policy Staff Committee (TPSC), is responsible for conducting the individual reviews.

The environmental review process provides opportunities for public involvement, including an early and open process for determining the scope of the environmental review (“scoping”). Through the scoping process, potentially significant issues are identified for in-depth analysis, while issues that are less significant – or that have been adequately addressed in earlier reviews – are eliminated from detailed study.

The Guidelines recognize that the approach adopted in individual reviews will vary from case to case, given the wide variety of trade agreements and negotiating timetables. Generally, however, reviews address two types of questions: (i) the extent to which positive and negative environmental impacts may flow from economic changes estimated to result from the prospective agreement; and (ii) the extent to which proposed agreement provisions may affect U.S. environmental laws and regulations (including, as appropriate, the ability of state, local and tribal authorities to regulate with respect to environmental matters).

II. BACKGROUND

Panama is an S-shaped isthmus located in Central America, bordering both the Caribbean Sea and the North Pacific Ocean. It sits between Colombia and Costa Rica. It has approximately 2,409 miles of coastline and an area of 78,200 square miles. The climate is tropical maritime with a prolonged rainy season.

Panama's history has been closely tied with the United States since its independence in 1903. Under the Hay/Bunau -Varilla treaty, Panama granted rights to the United States "as if it were sovereign" in a zone roughly ten miles wide and fifty miles long. The United States completed building and began administering the fifty-mile lock canal in 1914. After nearly a century of U.S. administration of the Canal, as of December 31, 1999, the Panama Canal is solely owned and operated by Panama.

A. Economy

Tables 1 and 2 (Annex II) illustrate the scale of Panama's economy in relation to the United States and provide data that compare economic and social conditions in Panama and the United States. The United States is an important market due to its size and proximity and the existence of relatively few market barriers for Panamanian goods. Under the Caribbean Basin Initiative (CBI) and other U.S. preference programs, including the Free Trade Zones, U.S. tariffs on Panamanian goods are already low and most exports currently enter the United States duty-free.

Panama's economy is based primarily on a well-developed services sector, accounting for 80 percent of GDP. Services include those related to the Panama Canal, banking, the Colon Free Zone, insurance, container ports and flagship registry. Manufacturing, mining, utilities and construction together account for twelve percent of GDP. Agriculture, forestry and fishing account for less than 7 percent of GDP but employ between 15 and 20 percent of the workforce.

The Colon Free Zone alone represents a larger market than Panama's entire internal market. Free zone imports totaled \$4.0 billion in 2003, with exports of \$4.5 billion. Worldwide, the Colon Free Zone is second in size only to Hong Kong and it is the largest of its kind in Latin America. The bulk of the trade flowing through the Colon Free Zone is between Asia and Latin America. The United States supplies 9.3 percent of imports to CFZ and only 4.3 percent of its

exports.

The Panama Canal Authority (PCA) is the Panamanian governmental agency responsible for the administration of the Canal. Since 1992, an annual average of 185 million long tons of cargo has passed through the Canal. In 2003, there were 13,154 ocean-going commercial transits through the canal with toll revenues of \$921 million. Recent improvements to the Canal have included the widening of the Gaillard Cut, finished in 2001, which permits two-way traffic of Panamax vessels and has increased Canal capacity by twenty percent. Canal management is also studying the possibility of projects to improve access to the Pacific entrance and provide sufficient fresh water reserves to operate the Canal well into the foreseeable future.

B. Environment

Although it accounts for less than one percent of the earth's land area, Panama contains considerable biological diversity and a high level of endemism¹. Panama's biological diversity includes approximately 9,000 species of flowering plants of which 1,000 are endemic. Panama contains a large diversity of vertebrates including 1,351 species of ocean fish, 190 species of fresh water fish, 179 species of amphibians, 229 species of reptiles, 957 species of birds and 259 species of mammals.² Tables 3 and 4 (Annex II) summarize selected land use data and biodiversity indicators for Panama and the United States. These data display both environmental challenges (such as rates of deforestation and threats to species) as well as progress in addressing environmental concerns (such as the share of land in protected status, and the area of biosphere reserves). Data in Tables 3 and 4 should be interpreted in conjunction with data in Tables 1 and 2 in order to gain insights into the environment/development nexus.

Panama faces considerable challenges in protecting its environment as it supports its economic and population growth. Panamanian authorities identify the most pressing environmental issues as: deforestation, land degradation and soil erosion, loss of wildlife habitats and wetland destruction, threats to water quality such as water pollution from agricultural runoff and depletion of fishery resources.

Land-Use and Forest Management: While Panama boasts the second highest percentage of protected land in Central America, a significant percentage of wooded lands has been developed over the last fifty years.³ More recently, socio-economic changes have precipitated expansion of urban areas. A decrease in wooded lands has also resulted as more forested land has been cleared for cattle grazing using traditional, inefficient and land-intensive methods. See Table 3 (Annex II) for data on comparative data on land use and forest cover for the United States and Panama. This has contributed to significant loss of forest cover and in some parts of the country

¹ See: "Nature, People and Well Being: Mesoamerica Fact Book." Partners and Donors Conference, Mesoamerican Biological Corridor. Paris, France, December 12-13, 2002. University of Costa Rica Development Observatory and the Central American Commission for Environment and Development.

² See: "ANAM - Panamá Informe Ambiental 1999." ANAM – Autoridad Nacional del Ambiente – Panamá 1999.

³ See: "ANAM - Panamá Informe Ambiental 1999." ANAM – Autoridad Nacional del Ambiente – Panamá 1999

desertification is a threat. Urban migration has added to the stresses of the underdeveloped infrastructure of the largest cities. Slightly more than half of Panama's population is located in Panama City and Colon, and along the transisthmian corridor linking the two cities.

Water Resources: The Panamanian climate produces one of the highest annual average precipitations of water on the planet at 3,000 millimeters. Two-thirds of the water falls on the Pacific Coast, while the other one-third falls on the Caribbean coast. In addition, there is an abundant hydrological system of over 500 rivers and 52 watersheds. However, the Panama Canal places an enormous demand on the water supply. Each lock in the system uses an estimated 10 million cubic meters of water daily in its operation. The Canal is designed to accommodate about 50 ships per day (the maximum has been 65 transits per day) and uses 52 million gallons for one ship to pass through the Canal lock system. In general, 58 percent of Panama's annual rainfall is used in the operation of the Canal; 27 percent in the production of electricity and 6 percent for human consumption. Water quality is most threatened by the disposal of liquid waste and agricultural run-off into the watersheds. Future expansion of the Canal is anticipated and studies are underway to ensure an adequate water supply for such expansion. The Panama Canal Authority (ACP) is responsible for the administration, use and conservation of the hydrological resources of the Canal watershed. Over 50 percent of the water for canal operations comes from land currently under protection through a fund created under the Tropical Forrest Conservation Act (TFCA) debt for nature swap.

Panama has the highest ratio of coastline to national territory of any continental American country although its Pacific and Caribbean coasts are quite different. The Pacific coast has a broad continental shelf which extends to 150 kilometers. The Pacific Coast is also home to most of Panama's 170,000 acres of mangroves which serve as important nurseries for Panama's shrimp and other marine resources. Almost 80 percent of all Panamanians live on the Pacific Coast. The Caribbean coast is rich in biodiversity, highly wooded, less-developed and its population is significantly poorer than those on the Pacific coastline.

Environmental Laws: Panama's Environmental Law (Law No. 41 of July 1, 1998) established the framework legislation for standards of protection, conservation and recovery of the environment. It also created an autonomous entity, the National Environment Authority (ANAM) charged with the development of national environmental policy, management of natural resources and environmental issues, administration and enforcement. ANAM issues environmental regulations concerning environmental emissions, products, procedures and can also impose fines. Law 41 also established the National System of Protected Areas. ANAM controls and regulates access to protected areas and regulates the use and exploitation of forests and soils. Environmental Impact Studies (EIS) are required on all activities and projects, public or private, which could generate environmental risk. Failure to comply with EIS preparation can lead to an admonition or temporary or permanent suspension of activities and fines as high as \$10 million.⁴

⁴ Records of actual fines levied in environmental cases were unavailable.

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Panama's environmental NGO community is active on issues such as environmental education and public awareness. Private industry participation and commitment to integrating environmental issues into its business activities is becoming more visible but still poses a significant challenge to sound integration of sustainable development principles. A notable exception has been the Panama Canal administration which, through necessity, has been a front runner in starting to integrate sustainable development practices into its work.

Panama has passed specific laws on the environment addressing air and emissions controls; water, including water control and effluents; land and biodiversity, and establishing and/or strengthening institutional mechanisms. The government is currently working on laws covering noise pollution and solid and hazardous waste disposal.

Although there appears to be good progress in establishing national and regional frameworks for addressing environmental problems, the ability to effectively implement and enforce environmental laws is limited by the lack of fiscal and human resources. The challenges faced in enforcement at the national level include the need to strengthen enforcement and compliance mechanisms and national institutions. However, local and regional levels of government face even greater institutional and fiscal constraints in terms of their ability to implement and enforce mandates and programs. ANAM's regional directors often lack staff and physical resources to conduct enforcement monitoring, but are often able to fine or penalize crimes when they are uncovered. In addition, administrative regulations and procedures for the enforcement of general laws on the environment are in early stages of development.

Panama is a party to international agreements on biodiversity, climate change, desertification, endangered species (CITES), hazardous wastes, law of the sea, marine dumping, migratory species, nuclear testing, ozone layer protection, ship pollution, tropical timber, wetlands, whaling, and has signed, but not ratified the Marine Life Conservation Treaty. In addition, Panama is also a party to regional agreements on tropical tuna, protection and development of marine environment, biodiversity and woodlands protection and transboundary movement of hazardous wastes.

In 1997, the U.S. Department of State established an Environmental Hub for Central America and the Caribbean, one of 12 such regional environmental offices worldwide. The hub is located at the U.S. Embassy in Costa Rica, and its goal is to promote U.S. environmental diplomacy with a focus on transboundary issues. See Annex I for a summary of recent U.S. environmental cooperation activities in Panama.

C. U.S. – Panama Republic Trade

In 2003, two-way trade between the United States and Panama was \$2.1 billion, accounting for less than 1 percent of both U.S. imports and exports (see Table 5, Annex II). U.S. exports to Panama were \$1.8 billion in 2003, an increase of 31 percent over 2002 and a direct reflection of sharply reduced import duties on U.S. goods. The United States is the main supplier of Panama's imports, accounting for more than 40 percent of its imports. Key U.S. exports to Panama include telecommunications equipment, consumer electronics, computers, mineral fuels, aircraft and pharmaceuticals.

Panamanian exports to the United States averaged \$302 million in 2002 and 2003, up from \$293 million in 2001. The United States had a trade surplus with Panama in 2003 of 1.5 billion, a significant increase from 2002, in which the United States carried a \$1.1 billion trade surplus. U.S. Foreign Direct Investment flow for Panama in 2002 was valued at \$946 million. Stock U.S. foreign direct investment is approximately \$20 billion concentrated mainly in the finance, maritime and energy sectors. The importance of Panama's service sector to the United States is demonstrated by the fact that approximately 13 percent of all U.S. registered ocean-going ships travel through the Panama Canal.

D. U.S. Objectives in the Proposed Free Trade Agreement

An FTA with Panama responds to direction from the Congress in the Caribbean Basin Trade Partnership Act to conclude comprehensive mutually advantageous trade agreements with Caribbean Basin countries. The FTA is expected to enhance our efforts to strengthen democracy and support for the fundamental values in the region such as, respect for internationally recognized worker rights, greater respect for the rule of law, sustainable development, and accountable institutions of governance.

The U.S. will build on the CAFTA agreement and the Caribbean Basin Initiative (CBI), a U.S. unilateral trade preference program that has driven the U.S. - Panamanian Republic trade relationship since 1985. By moving from unilateral trade preferences to a reciprocal FTA, the U.S. - Panama FTA will seek to eliminate duties and unjustified barriers to trade in goods of both U.S. and Panamanian origin. The U.S. - Panama FTA is also expected to address trade in services, trade in agricultural products, investment, trade-related aspects of intellectual property rights, government procurement and trade-related environmental and labor matters.

As set forth in the notification letters to Congress, the Administration's specific objectives for negotiations with Panama, essentially the same as those specific objectives we established for the CAFTA countries, were as follows:

· *Trade in Goods:*

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- Seek to eliminate tariffs and other duties and charges on trade between Panama and the United States on the broadest possible basis, subject to reasonable adjustment periods for import-sensitive products.
- Seek to eliminate non-tariff barriers in Panama to U.S. exports, including licensing barriers on agricultural products, restrictive administration of tariff-rate quotas, unjustified trade restrictions that affect new U.S. technologies and other trade restrictive measures that U.S. exporters identify.
- Seek to eliminate government practices that adversely affect U.S. exports of perishable or cyclical agricultural products, while improving U.S. import relief mechanisms as appropriate.
- Pursue a mechanism with Panama that will support achieving the U.S. objective in the WTO negotiations of eliminating all export subsidies on agricultural products, while maintaining the right to provide *bona fide* food aid and preserving U.S. agricultural market development and export credit programs.
- Pursue fully reciprocal access to Panama's market for U.S. textile and apparel products.

Customs Matters, Rules of Origin and Enforcement Cooperation:

- Seek rules to require that Panama's customs operations are conducted with transparency, efficiency and predictability and that customs laws, regulations, decisions and rulings are not applied in a manner that would create unwarranted procedural obstacles to international trade.
- Seek rules of origin, procedures for applying these rules and provisions to address circumvention matters that will ensure that preferential duty rates under an FTA with Panama apply only to goods eligible to receive such treatment, without creating unnecessary obstacles to trade.
- Seek terms for cooperative efforts with Panama regarding enforcement of customs and related issues, including trade in textiles and apparel.

Sanitary and Phytosanitary (SPS) Measures:

- Seek to have Panama reaffirm its WTO commitments on SPS measures and eliminate any unjustified SPS restrictions.
- Seek to strengthen collaboration with Panama in implementing the WTO SPS

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Agreement and to enhance cooperation with those governments in relevant international bodies on developing international SPS standards, guidelines and recommendations.

Technical Barriers to Trade (TBT):

- Seek to have Panama reaffirm its WTO TBT commitments and eliminate any unjustified TBT measures.
- Seek to strengthen collaboration with Panama on implementing the WTO TBT Agreement and create a procedure for exchanging information with Panama on TBT-related issues.

Intellectual Property Rights:

- Seek to establish standards to be applied in Panama that build on the foundations established in the WTO Agreement on Trade-Related Aspects of Intellectual Property Rights and other international intellectual property agreements, such as the World Intellectual Property Organization Copyright Treaty (WIPO) and the WIPO Performances and Phonograms Treaty, and the Patent Cooperation Treaty.
- In areas such as patent protection and protection of undisclosed information, seek to have Panama apply levels of protection and practices more in line with U.S. law and practices, including appropriate flexibility.
- Seek to strengthen Panama's procedures to enforce intellectual property rights, such as by ensuring that Panamanian authorities seize suspected pirated and counterfeit goods, equipment used to make such goods or to transmit pirated goods and documentary evidence.
- Seek to strengthen measures in Panama that provide for compensation of right holders for infringements of intellectual property rights and to provide for criminal penalties under Panamanian law that are sufficient to have a deterrent effect on piracy and counterfeiting.

Trade in Services:

- Pursue disciplines to address discriminatory and other barriers to trade in Panama's services markets. Pursue a comprehensive approach to market access, including any necessary improvements in access to the telecommunications, financial services, energy, express delivery and other sectors.
- Seek improved transparency and predictability of Panamanian regulatory

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procedures, specialized disciplines for financial services, and additional disciplines for telecommunication services and other sectors as necessary.

Investment:

- Seek to establish rules that reduce or eliminate artificial or trade-distorting barriers to U.S. investment in Panama, while ensuring that Panamanian investors in the United States are not accorded greater substantive rights with respect to investment protections than U.S. investors in the United States, and to secure for U.S. investors in Panama important rights comparable to those that would be available under U.S. legal principles and practice.
- Seek to ensure that U.S. investors receive treatment as favorable as that accorded to domestic or other foreign investors in Panama and to address unjustified barriers to the establishment and operation of U.S. investments in Panama.
- Provide procedures to resolve disputes between U.S. investors and the government of Panama that are in keeping with the trade promotion authority goals of being expeditious, fair and transparent.

Electronic Commerce:

- Seek to affirm that Panama will allow U.S. goods and services to be delivered electronically to its market and to ensure that Panama does not apply customs duties to digital products or unjustifiably discriminate among products delivered electronically.

Government Procurement:

- Seek to establish rules requiring government procurement procedures and practices in Panama to be fair, transparent and predictable for suppliers of U.S. goods and services who seek to do business with Panama.
- Seek to expand access for U.S. goods and services to Panama's government procurement market.

Transparency/Anti-Corruption/Regulatory Reform:

- Seek to make Panama's administration of its trade regime more transparent and pursue rules that will permit timely and meaningful public comment before Panama adopts trade-related measures.
- Seek to ensure that Panama applies high standards prohibiting corrupt practices

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affecting international trade and enforces such prohibitions.

Trade Remedies:

- Provide a safeguard mechanism during the transition period to allow a temporary revocation of tariff preferences if increased imports from Panama are a substantial cause of serious injury, or threat of serious injury, to a domestic industry.
- Make no changes in U.S. antidumping and countervailing duty laws.

Environment:

- Seek to promote trade and environment policies that are mutually supportive.
- Seek an appropriate commitment by Panama to the effective enforcement of its environmental laws.
- Establish that Panama will strive to ensure that they will not, as an encouragement for trade or investment, weaken or reduce the protections provided for in its environmental laws.
- Help Panama strengthen its capacity to protect the environment through the promotion of sustainable development, such as by establishing consultative mechanisms.

Labor, including Child Labor:

- Seek an appropriate commitment by Panama to effectively enforce its labor laws.
- Establish that Panama will strive to ensure that it will not, as an encouragement for trade or investment, weaken or reduce the protections provided for in its labor laws.
- Based upon review and analysis of its labor law and practices, establish procedures for consultations and cooperative activities with Panama to strengthen its capacity to promote respect for core labor standards, including compliance with ILO Convention 182 on the worst forms of child labor.

State-to-State Dispute Settlement:

- Encourage the early identification and settlement of disputes through consultation.

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- Seek to establish fair, transparent, timely and effective procedures to settle disputes arising under the agreement.

In addition, the FTA is taking into account other legitimate U.S. objectives including, but not limited to, the protection of health, safety, environment, and essential security and consumer interests.

III. SCOPE OF THE ENVIRONMENTAL REVIEW

To determine the scope of this review, the Administration considered information provided by the public, advice of USTR's advisory committee on trade and environment issues, the Trade and Environment Policy Committee (TEPAC), and input from environmental, trade and investment experts within federal agencies. In addition to providing guidance on the scope of the environmental review, any information, analysis, and insights available from these sources are being taken into account throughout the negotiating process and are considered in developing U.S. negotiating positions. As envisaged by the guidelines, environmental reviews are an ongoing process to examine environmental issues and inform the negotiating process. This document describes the results of this process at this interim stage.

Section III.A describes the process used to solicit comments and advice on the scope of the environmental review, including a summary of the comments received. Section III.B discusses the possible direct impacts of the U.S. - Panama FTA on the U.S. environment resulting from prospective changes in the U.S. economy. Section III.C describes a number of environmental issues associated with possible transboundary effects of the U.S. - Panama FTA. Although possible domestic impacts are the primary concern of this environmental review, global and transboundary impacts are to be considered as appropriate and prudent.⁵ Section III.C describes possible effects on the U.S. environment resulting from economic effects in Panama and shared ecosystems. Section III.D considers the extent to which the U.S. - Panama FTA might affect U.S. environmental laws, regulations, policies and/or international commitments.

A. Public and Advisory Committee Outreach and Comments

This review was formally initiated by publication of a notice in the *Federal Register*, which requested public comment on the scope of the review (see 69 *Fed. Reg.* 19262; April 12, 2004). Comments and testimony addressing environmental issues received in response to that notice were taken into account in the preparation of this Interim Review.

Two public comments were received regarding the U.S. - Panama FTA. These comments requested that duty free access to the U.S. markets not be permanently granted for either sugar or garlic and dehydrated onion. Both commentators noted that the environmental standards required for the production of these agricultural products are much higher in the United States

⁵ See section I.B, above.

than in Panama. Thus, the common sentiment was that lower or no tariffs for entry into the United States would encourage increased production in Panama which could lead to a net detrimental effect on the global environment.

B. Potential Economically-Driven Environmental Impacts

Although the economy of Panama represents an important market for some U.S. producers and exporters, the impact of the U.S. - Panama FTA on total U.S. production through changes in U.S. exports appears likely to be very small. Exports to Panama currently account for less than one percent of total U.S. exports and a very small portion of total U.S. production. Even if substantial increases in U.S. exports of agricultural and industrial goods to Panama result, these increases in U.S. production will represent a very small change in the aggregate U.S. economy. Although small changes in production and exports in environmentally-sensitive sectors could provide a basis for concern regarding the U.S. - Panama FTA's direct environmental effects in the United States, there were no examples of such concerns raised in interagency analysis.

Liberalization of services can be expected to have an economic impact in the United States although here, too, the effect of the U.S. - Panama FTA is likely to be small, and we could not identify any environmentally sensitive sectors in the United States likely to be affected by such impacts. The United States already allows substantial access to foreign service providers, including in environmentally sensitive areas (*e.g.*, tourism, maritime shipping and services incidental to energy distribution).

As compared to its effects in the United States, the U.S. - Panama FTA may have relatively greater impacts on the Panamanian economy and, through those impacts, on its environment. However, as described above (see section II.C), services, especially delivered to U.S. customers, are the driving force in the Panamanian economy. In addition, given the already low tariffs for many Panamanian agricultural and industrial goods we do not anticipate that the U.S. - Panama FTA alone would cause a surge in Panamanian industrial or agricultural development.

The environmental effects of the U.S. - Panama FTA may be both positive and negative in Panama. Given the long shared history of the Canal, U.S. investment in Panama is already quite high. The U.S. - Panama FTA may further increase investment, trade and production in the region, which may be associated with further pressure on the environment. On the other hand, proposed commitments in the U.S. - Panama FTA, such as those to effectively enforce environmental laws, may have a positive effect, especially when coupled with capacity-building and environmental cooperation activities. The U.S. - Panama FTA also is likely to contribute to increases in per capita income and, through this, to greater demand for environmental regulation within the region over time. The Administration continues to examine the scale and importance of these possible effects and invites public comments on these preliminary findings.

C. Transboundary and Global Issues

While the environmental impacts of expected economic changes in the United States attributable to the U.S. - Panama FTA are expected to be minimal, the Administration examined a large number and wide variety of environmental issues with potential global and transboundary impacts in determining the scope of this review. These were provisionally identified through an open-ended scoping process among agencies with environment, trade and economic expertise. We subsequently eliminated a number of these topics from further and more detailed analysis based on initial findings that there was no identifiable link to the U.S. - Panama FTA. The following issues warranted further consideration.

1. Migratory Birds

Migratory and resident bird species are a critically important global resource. In the United States and Panama, birds pollinate flowers, remove insect pests from many important commercial food crop and forest species and are a critical component of nature-based tourism that generates considerable economic activity. Bird-watching is the fastest growing outdoor activity in the United States, with 46 million Americans spending an estimated \$32 billion a year feeding, photographing and watching birds.⁶

Panama is home to a larger number of bird species than the United States, although Panama's land area is less than one percent of the area of the United States. The Isthmus of Panama, due to its narrow width, concentrates migrations of raptors (including Swainson's Hawks, a declining species, and Swallow-tailed Kites, a declining species dependent on forested habitats) and other bird species. Large numbers of migratory shorebirds, including the Western Sandpiper and a small population of Marbled Godwits, utilize the Bay of Panama as a stop-over site. Panama's national parks and large tracts of protected, intact forests also are critically important to sensitive avian species such as the Olive-sided Flycatcher. In spite of its large range, this low density species is one of 131 species classified by the U.S. Fish and Wildlife Service as Birds of Conservation Concern 2002 "of great conservation concern" and deforestation throughout its range is suspected as a major contributor to population decline.

Of the 836 migratory bird species currently protected under the U.S. Migratory Bird Treaty Act (MBTA), some 350 neotropical migratory species (mainly songbirds) migrate through or are winter residents in Panama and other Central American and Caribbean countries. The Bay of Panama is a designated site under the RAMSAR Convention on Wetlands of International Importance. Almost all of the long-distant migrant birds to Panama are from North America. Raptors, waterfowl, shorebirds, waders, hummingbirds and other species migrate through or over-winter in Panama. The IUCN Red List of Threatened Species includes 33 species of birds found in Panama, 16 of them classified as vulnerable or endangered (see www.redlist.org). A number of the bird species on the U.S. Endangered Species Act (currently 77 endangered and 15 threatened species) are found in Panama.⁷

⁶ See: Cordell, H. Ken and Nancy G. Herbert, "the Popularity of Birding is Still Growing," *Birding* 34, 54-61.

⁷ Of the MBTA-protected species, 131 are currently listed by the U.S. Fish and Wildlife Service as Birds of Conservation Concern 2002 (increasing from 124 when the list was last published in 1995).

Deforestation and subsequent loss of migratory bird and wildlife habitat is a concern throughout Central America, including Panama. Although Panama has designated large areas as national parks, and large tracts of tropical forests remain intact, a number of areas important for birds and other wildlife have no formal protection and are therefore at risk. A variety of land use practices, including forest loss, commercial and subsistence agriculture and development diminish the extent and quality of habitat for migratory birds in Panama.

Although the services sector dominates Panama's economy and export earnings, approximately half of Panama's current goods exports to the United States consist of agricultural products. In some cases, these are products grown on land converted from forest and coastal ecosystems that are habitats for migratory birds. Shrimp production,⁸ for example, often destroys mangrove forests that are valuable habitats for a variety of wildlife including shorebirds and other migratory species. The tariff provisions of the proposed FTA may have limited impacts, however, because applied tariffs on most products associated with deforestation and forest degradation are low or at zero. It is more difficult to predict the effects of potential increased investment that may be attributable to the FTA. For example, increased investment in sectors such as agricultural activities may contribute to loss of migratory bird habitat. There may be opportunities to address these issues through environmental cooperation in connection with the FTA. Recent cooperative activities address a number of concerns related to migratory birds (see Annex I).

The Administration welcomes public comments on the manner in which these issues might be addressed in the context of the proposed FTA, including public views on possible areas for future cooperative activities.

2. Wildlife and Trade

Wildlife trade exists between the U.S. and Panama. Documented trade in wild plants, animals and animal products is relatively small and most of it is regulated under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). Both the U.S. and Panama are Parties to CITES. Trade between the U.S. and Panama involving wildlife and plants consist of but are not limited to: orchids, caiman skins, live reptiles and amphibians, finished reptile leather products, live birds, live tropical fish and mahogany. The most valuable shipments traded are CITES-listed wild plants and animals. Illegal trade of wildlife from or through Panama is not known to be a major problem although there have been some past problematic instances.

The implementation of CITES in Panama has raised some concerns. Panama has been classified as a "Category 3" country under the CITES National Legislation Project. Category 3 includes countries whose CITES implementing legislation "meets some requirements for CITES

⁸ We note however, that in the trade context, shrimp and fish products are treated as industrial goods.

implementation, while additional legislation is needed in many areas.” Following a review at the 50th meeting of the CITES Standing Committee (April 2004), Panama was formally notified (by the Secretariat) that it had failed to meet deadlines for enacting legislation, and the Parties were notified of a recommended suspension of trade with Panama in CITES-listed species until appropriate legislation was enacted. The United States, as a member of CITES, issued through the U.S. Fish and Wildlife Service a notice to the public that trade with Panama in CITES-listed species had been suspended.⁹

On May 19, 2004, Panama enacted a Ministerial Resolution regarding endangered species of fauna and flora and other provisions. The Secretariat determined that Panama has shown good progress in the adoption of this legislation and thereby removed Panama from its notification list on May 24, 2004. The U.S. Fish and Wildlife Service has since removed restrictions on trade in CITES regulated species with Panama based on the Secretariat’s recommendation.

Generally, U.S. tariffs on wild plants and animals imported from Panama are already low; as a consequence, it appears unlikely that the FTA will cause an increase in wildlife trade. The FTA may have effects on wildlife through changes in economic activities that affect wildlife habitat. Historically, clearing for agriculture has been one of the primary causes of deforestation in Panama. Although agricultural products currently account for a significant share of Panama’s goods exports to the United States, U.S. tariffs on Panama’s agricultural exports (with the exception of sugar) are already low. While it is not possible to provide detailed projections of changes in investment, production and trade at this stage of negotiations, it appears unlikely that the FTA will lead to a significant expansion of agricultural production in Panama. Shifts may occur within the agricultural sector, but these do not appear likely to contribute additional pressure to the forests of the country.¹⁰

U.S. tariffs on other products that are likely to affect wildlife habitat (such as fisheries, forest products and mining) also are low, and production and export of these products are small. The FTA is not expected to significantly alter existing patterns or levels of Panamanian production, and any changes are not expected to have a significant effect on wildlife or wildlife habitat. Given the legal protections for wildlife and endangered species in place in both the United States and Central America, it appears unlikely that the FTA will contribute to an increase in illegal trade of wildlife or endangered species. In fact, proposed provisions related to customs cooperation may help to reduce illegal trade. The Administration welcomes public comments on these preliminary conclusions and the possible effects of the FTA on wildlife in the United States and Panama.

IV. ENVIRONMENTAL COOPERATION

⁹ In the course of the first round of FTA negotiations (April 2004) and on subsequent occasions, the U.S. negotiating team discussed this issue with Panamanian Environment Authority (ANAM) representatives and urged them to expedite the necessary steps to comply with CITES.

¹⁰ The FTA’s effects on goods production in Panama may be limited because Panama’s economy is based primarily on a well-developed services sector, accounting for 80 percent of GDP (see section II.A).

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The Trade Act of 2002 establishes that a principal negotiating objective of the United States is to strengthen the capacity of our trading partners to protect the environment through the promotion of sustainable development. In addition, the Trade Act instructs negotiators to seek to establish consultative mechanisms among parties to trade agreements to strengthen the capacity of U.S. trading partners to develop and implement standards for the protection of the environment and human health based on sound science. Environmental cooperation is expected to be an important complement to the environmental provisions of the FTA.

The United States and Panama already work together on a bilateral basis to address environmental issues through a number of ongoing programs (see Annex I). The United States and Panama also work together extensively through other mechanisms such as the Organization of American States, Inter-American Development Bank, Summit of the Americas and the UN Environment Program and the World Bank. U.S. agencies have several regional and bilateral programs with Panama, principally under the auspices of the Agency for International Development, the Department of Commerce, the Department of State, NASA and the Environmental Protection Agency. Annex I summarizes the major cooperative activities supported by federal agencies.

Panama is expected to enter into the cooperation agreement under development between the Central American countries and the United States. A framework for cooperative activities between the United States, Panama, the five Central American Parties and the Dominican Republic is expected to contribute to national and regional efforts to protect, improve, and conserve the environment. Equally important, it will provide opportunities for more exchange of ideas and cooperation among the Central American states, the Dominican Republic and Panama. Public participation in the cooperative work, including public-private partnerships, is expected to be an important element of this framework.

ANNEX I—Selected Recent Environmental Cooperation Activities with Panama

This annex provides examples of recent environmental cooperation activities between agencies of the U.S. Government and partners in Panama. Although substantial and illustrative of the number and variety of cooperative activities, the list is not exhaustive. Further information on these activities is available from the respective agencies.

A. Department of State

1. CONCAUSA Action Plans

The United States, Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua and Panama reached consensus in March 2002 on the Action Plans of the Central American-United States Joint Declaration (CONCAUSA) as called for in the expanded and renewed CONCAUSA Declaration signed on June 7, 2001, in Washington D.C. by Secretary of State Colin Powell and his Central American counterparts. CONCAUSA demonstrates U.S. support to the Central American region, strengthens U.S./Central American relations and supports sustainable development in Central America through increased competitiveness in global markets and improved environmental management. CONCAUSA is implemented through several USG agencies, with USAID playing a central role.

2. Invasive Species - Department of State and World Conservation Union

On June 10-13, 2001, the Department of State co-sponsored the Mesoamerica and the Caribbean workshop on Invasive Species along with the World Conservation Union (IUCN). This workshop brought together representatives from 18 different countries in the region to share information concerning invasive alien species and their social-economic and environmental impact. The event promoted a better understanding on the nature and implications of the effects of the presence and spread of invasive species and it helped to foster greater collaboration within the Mesoamerican and Caribbean regions.

3. Environmental Diplomacy in Central America and the Caribbean

The Department of State, in conjunction with the Centre for Environment and Development at the University of the West Indies in Jamaica, developed a project to encourage greater communication between the principal environmental institutions and agencies in Central America and the Caribbean. On March 13-15, 2002, a workshop was held in Belize to explore collaboration between representatives from Ministries of Environment, the Central American Commission on Environment and Development (CCAD), the Caribbean Community Political Body (CARICOM), the United Nations Environment Program (UNEP), the U.S. Environmental Protection Agency (EPA), and the Department of State's Regional Environmental Hub. The meeting established a foundation for the sharing of critical research, policy tools and inter-regional activities between Central America and the Caribbean. Representatives from both

CCAD and CARICOM met during the past World Summit on Sustainable Development held in September 2002 in Johannesburg to discuss further cooperation activities.

4. White Water to Blue Water Program

Panama participates in the U.S.-led White Water to Blue Water sustainable development initiative (WW2BW) launched at the Johannesburg World Summit on Sustainable Development. The U.S. Government sponsored Panamanian participation in the March 2004 Miami WW2BW Partnership Conference. The Panamanian delegation included government officials, Panama Canal Authority and NGO representatives, and an ANAM journalist. The participating journalist then reported in the Panamanian press on the conference and initiative.

WW2BW promotes public-private partnerships and a cross-sector approach to the management of watersheds and marine ecosystems. It also stresses regional communication and sharing of best practices, and promotes capacity building for governmental and non-governmental stakeholders. Thematically, WW2BW addresses many issues of direct relevance to Panama, including watersheds, marine ecosystems and fisheries, sustainable tourism, and matters related to transportation and shipping such as invasive species and oil spills. It also promotes the goals and objectives of the Cartagena Convention and its Protocols on protection of biodiversity in sensitive habitats.

B. U.S. Agency for International Development

1. USAID Bilateral Environmental Activities in Panama

USAID Panama's bilateral environment program focuses on policy reform and building active community participation in watershed and protected area management primarily in and around the Panama Canal. To enhance the sustainability of watershed protection, USAID provides assistance to encourage the participation of civil society, the private sector and local governments in the management and protection of the Canal Watershed (PCW). Integrated watershed management, policy reform, co-management of parks and protected areas in the PCW, development of environmentally-friendly activities, such as eco-tourism, promotion of clean production and best practices, as well as other incentives for improved environmental management are emphasized. The USAID bilateral program also provides support in strengthening Panamanian government institutions, such as ANAM, ACP, and the Inter-institutional Commission for the Panama Canal Watershed.

In the Darien Province and parts of San Blas and eastern Panama Province, USAID focuses on community-based approaches to provide basic infrastructure and essential public services, such as potable water, waste disposal, schools, etc. This program also focuses on combating the rapid environmental degradation and the unsustainable use of natural resources (mainly deforestation). Activities under development include construction of several community tree nurseries,

sustainable water systems, sustainable community forestry with indigenous communities, studies on legal and illegal logging practices, extensive ranching including reverse incentives that promote clear cutting of forests and degradation of rich fishing areas.

2. Parks in Peril

Parks in Peril is USAID's Central American flagship biodiversity conservation program. Implemented in Panama by The Nature Conservancy (TNC), the Parks in Peril program builds on the capacity of local organizations and provides technical assistance to indigenous and other local communities. Under a \$10 million debt-for-nature swap, TNC works with the Panama Ministry of Economy and Finance, the National Environmental Authority and USAID to develop a new management model for protected areas and a sustainable source of funding to implement a Conservation Area Plan in Panama's Chagres National Park. Components of the program include: environmental education, community investigation and monitoring of natural resources, implementation of key conservation strategies, support for indigenous land titling, and legal assistance for indigenous associations.

3. Central America Regional Environment Program (PROARCA II)

This project's overall strategic objective is to improve environmental management in the Mesoamerican Biological Corridor (MBC) which includes Panama. Activities are organized around four planned results: a) improved protected area management in the MBC; b) expanded market access for environmentally sound products and services; c) harmonized environmental regulations; d) increased use of less polluting technologies. Support for improved protected area management in the MBC focuses on building effective alliances for protected area management, improving financing for protected area management, and increasing the application of protected area management tools and practices in the Gulf of Honduras and Gulf of Fonseca, the Reserva de la Solidaridad (La Mosquita), and the Reserva de la Amistad (Bocas del Toro and Gandoca Manzanillo) on the border of Panama and Costa Rica.

C. U.S. Department of Agriculture

1. Regional Migratory Birds Habitat Conservation and Management Programs

Under the Regional Migratory Birds Habitat Conservation and Management Program, the USDA Forest Service has developed capacity building and training in natural resource management and migratory bird conservation measures. This program has focused on ecological evaluation programs of bird populations and the Spanish translation of a 30-minute video documentary.

2. Copper River International Migratory Bird Initiative

This regional initiative is in conjunction with the Copper River Delta on the Chugach National Forest in the United States, the largest Pacific coastal wetland in North America and one of the

most important migratory bird habitats on the Continent. USDA Forest Service provides coordination on habitat management for over five million shorebirds that stopover on the Delta each year on their migration to Mexico, Central and South America, with Panama being a critical southern migration point. The program links shorebird managers in the United States, Mexico, Central and South America. In addition, USDA Forest Service has produced a 30 minute documentary on Alaska shorebird migration, translated into Spanish.

3. Fire Management:

This regional Caribbean and Central American program provides training and fire management response systems.

D. Department of Commerce - National Oceanographic and Oceanic Administration (NOAA)

1. Data from High Resolution Environmental Satellites

With USAID funds, NOAA established a satellite station at the National Meteorological Institute to help strengthen capacity to receive and analyze high-resolution digital images of atmospheric, oceanic, and geophysics data of Central America. As part of the Hurricane Mitch Recovery effort, the United States transferred a satellite ground station that provides access to high resolution digital imagery from NOAA's Geostationary Operational Environmental Satellites (GOES). This system will allow weather forecasters in the region to perform quantitative analysis of the data, which will lead to enhanced forecasting. From a hub in San Jose, Costa Rica, the data will be distributed to meteorological services in Belize, El Salvador, Honduras, Guatemala, Nicaragua, and Panama.

This new system builds on NOAA's existing partnership with other nations in the Atlantic, Caribbean, and Central American region by employing the latest in satellite meteorological technology to improve hurricane warning systems and programs.

F. Environmental Protection Agency

In October 1995, the U.S. EPA began providing support to USAID in the environmental protection component of PROARCA, the Regional Environmental Program for Central America created to support U.S. commitments made under the CONCAUSA agreement. EPA's primary goal was to help develop, strengthen, and implement environmental laws and regulations in the region, but EPA also has worked on wastewater treatment; pesticides; solid waste management; cleaner production in cheese and tannery facilities; safe drinking water; and a pilot program for air quality monitoring. More specific examples of cooperative activities include the following:

1. Environmental Legislation Project

EPA has supported efforts to develop and strengthen environmental laws, as well as their implementation and enforcement, in Central America. This has involved providing technical input and training to assist in the further development of environmental framework laws, for example in Panama, El Salvador and Honduras. EPA also has provided technical assistance and training to support the development of specific laws and regulations under these framework laws, for example regarding pesticides, environmental impact assessment, water quality, and the implementation of international environmental agreements. EPA also has consulted with countries in the region to help establish and design environmental ministries and/or other bodies to support the implementation of these laws.

EPA also has helped to (a) build a network of experts in the field to exchange information and build capacity, and provide specific technical input upon request in the development of individual laws, regulations and institutions; (b) develop an Environmental Law Manual as a reference for policy makers in designing effective environmental laws and providing training and technical input on the development of laws, regulations and institutions at regional workshops; (c) design a regional database that summarizes key elements of environmental laws in each Central American country; and (d) carry out training to build compliance and enforcement capacity.

The manual addresses the general elements of environmental legal systems, for example: guiding concepts and principles; regional and international law considerations; the role of institutions and civil society; cross-cutting themes in designing laws and regulations; the tool-box of methods, such as standards, environmental impact assessments, economic incentives, that can be included in laws and regulations, and compliance and enforcement. EPA and the Central American Commission for Environment and Development. have used the manual in the delivery of training sessions and as technical input at a number of meetings and workshops in the region, initially in support of efforts to strengthen five new national environmental laws in Panama, Belize, Nicaragua, Costa Rica and Guatemala. It has also been used as a resource for technical discussions of specific aspects of environmental legal regimes, such as tools to promote civil society participation, environmental impact assessments, pollution prevention and clean production, and in technical workshops on pesticides and water quality cases.

2. Solid Waste Project

To help address the environmental and public health problems stemming from inadequate waste collection and disposal, EPA and its partners have worked to provide alternative approaches to open dumping and ineffective landfills. Specifically, EPA and its partners provided assistance in siting, operation, and maintenance of sanitary landfills, and expertise on solid waste management. In addition, EPA and its partners promoted source reduction and minimization, composting, recycling, alternative packaging, market development of recycled products, and other economic and market incentives regarding a comprehensive solid waste management.

For one of its solid waste demonstration projects, the team assisted the municipality Bocas del

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Toro, Panama, where it is providing technical assistance on landfill siting and inspecting the construction of the sanitary landfill.

From 1996 through 2001, the team has conducted several workshops on solid waste management and recycling, siting, construction, and operation of sanitary landfills, development of material recovery facilities, environmentally friendly packaging, and plastics waste management throughout Central America. These workshops were typically attended by civil engineers, representatives from the ministries of health and the environment, municipal officials, waste management industry personnel, and nongovernmental organizations.

G. Department of the Interior

Fish and Wildlife Service: Working with a Panamanian NGO, this project specialized working with local community partners to build local support for a wildlife refuge system.

U. S. Geological Survey - Mangrove Wetlands Study:

USGS is conducting an ongoing in-depth study in mangrove wetlands forests of Central America as part of a National Science Foundation grant. The study focuses on interrelated processes and biocomplexities in mangrove wetlands forests. The resulting information is used for management and conservation.

U. S. Geological Survey – Soil and Hydrological processes

USGS is sponsoring a one-year detail to assist the Smithsonian Tropical Research Institute (STRI) in developing new research examining the influences of soil and hydrological processes on tropical ecosystems. USGS has a long history of working on the Panama Canal Watershed Monitoring Project and the soil and hydrological influences on the distribution of tropical tree species. This research is critical to understanding the biodiversity of tropical forests and the role these forests play in global carbon cycles.

National Park Service - Park Flight Migratory Bird Program : Over the last 2-3 years, the National Park Service has provided technical assistance to Panama through the Park Flight Neotropical Migratory Bird Program. This has included assistance in interpretation and environmental education techniques focused on both migratory shorebirds and the Harpy eagle, the development of a "sister-park" type partnership between the Cuyahoga Valley National Park and the protected areas along the Panama Canal, and the sponsoring (through the NPS International Volunteers in Parks program) of Panamanian biologists to work on bird conservation and education projects at U.S. national parks. Further information is available at: <http://www.nps.gov/oia/topics/flight.htm>

The U.S. National Park System provides critical habitat for many species of migratory birds, from raptors and shorebirds to songbirds. Because these species use parks on a seasonal basis, their protection cannot be assured without conservation efforts occurring in the habitats the birds use throughout the year. This requires cooperative, coordinated programs between the United

States and Latin America, such as the *Park Flight* Program, to protect breeding, migration, and wintering habitats, as well as a pro-active migratory bird conservation program within the National Park Service (NPS). The Park Flight Migratory Bird Program works to protect shared migratory bird species and their habitats in both U.S. and Latin American national parks and protected areas through developing bird conservation and education projects and creating opportunities for technical exchange and cooperation.

Park Flight is a partnership between the NPS, National Park Foundation, and National Fish & Wildlife Foundation/USAID, and is made possible through the generous support of American Airlines and the NPS Natural Resource Challenge. Technical direction is provided through the University of Arizona Desert Southwest Cooperative Ecosystem Studies Unit and the NPS Biological Resource Management Division.

D. NASA

1. Environmental Monitoring and Disaster Management from Space

In 1998, NASA teamed up with the Central American Commission for Environment and Development (CCAD), to cooperate in establishing the Mesoamerican Biological Corridor, which links hundreds of protected areas from Mexico to Colombia. This partnership combines NASA's expertise in space-based observation with the intimate knowledge of local ecosystems held by a multinational cadre of Central American researchers.

As a result of the successful collaboration between NASA and the CCAD, NASA has expanded its efforts in the region in 2002/2003 by joining forces with the US Agency for International Development and the World Bank to develop an advanced decision support system for Mesoamerica. This decision support system, named SERVIR, will be used by scientists, educators, and policy makers to monitor and forecast ecological changes, respond to natural disasters (earthquakes, hurricanes, drought, and volcanic eruptions), and better understand both natural and human induced effects upon the regional climate.

The "SERVIR" decision support system will intensively utilize current and historic datasets acquired from NASA's constellation of Earth-imaging satellites. This includes MODIS for fire detection and carbon management, and ASTER and Landsat data for tracking changes to the landscape, such as deforestation, over the past 30 years. Instruments aboard NASA's TRMM and AQUA satellites will also be used to understand mechanisms driving the past, present, and potential future climate variability of Mesoamerica. For more information, see: <http://servir.nsstc.nasa.gov/home.html>

2. Panama GLOBE Program

The Agreement between the US NOAA and Panama's Ministry of Education for Cooperation in the Globe Program was signed in 1997. (Note: The GLOBE program was transferred from

NOAA to NASA in 2002.) The GLOBE program is an international environmental science and education program that brings students, teachers, and scientists together to study the global environment. GLOBE has created an international network of students at primary, middle and secondary school levels studying environmental issues, making environmental measurements and sharing useful environmental data with one another and the international science community.

F. Peace Corps

Peace Corps/Panama concentrates its efforts in agroforestry, community environmental education and community economic development. Peace Corps/Panama collaborates with the Ministry of Education Environmental Education project.

There are approximately 30 Peace Corps Volunteers currently assigned to the Community Environmental Education project working in rural primary and junior high schools. The main goal of the Community Environmental Education Project is to increase knowledge and awareness of the environment and natural resources of Panama and to achieve changes of attitude, values and behavior regarding the environment among students and teachers in rural Panamanian schools. Volunteers also help communities understand and benefit from Panama's protected areas and stimulate community participation in natural resources management and defense.

The Agroforestry Extension Project focuses on strengthening rural agricultural and forestry production by improving upon those traditional practices that have been destructive to the country's forests, soil and watersheds. The agroforestry Volunteers coordinate activities with other Volunteers and government counterparts working in community small business programs to promote integrated rural development actions.

G. Smithsonian Institution - Smithsonian Tropical Research Institute

The Smithsonian Tropical Research Institute (STRI) in Panama, the only bureau of the Smithsonian Institution based outside of the United States, is dedicated to understanding biological diversity. STRI also plays a role in supporting better management of tropical environments around the world by disseminating the results of its international research activities and bridging the gap between scientists and policymakers.

During the construction of the Panama Canal, Smithsonian scientists were asked to conduct a biological inventory of the new Canal Zone in 1910. Barro Colorado Island (BCI) in the Canal Zone was designated a biological reserve in 1923, making it one of the earliest biological reserves in the Americas. In the 1920s, BCI became an outdoor laboratory for scientists from US universities and the Smithsonian Institution. In 1946, BCI became a bureau of the Smithsonian Institution and in 1985 Panama granted STRI International Mission status.

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What began in 1923 as small field station on Barro Colorado Island today is one of the world's leading research institutions. The Isthmus of Panama provides an extraordinary natural laboratory for studying the tropics. As a barrier between two oceans, the Isthmus enables biologists to examine how new species are formed through the evolutionary process and as a land bridge between North and South America, the Isthmus is a laboratory for studying the results of the merger of previously distinct floras and faunas from two continents.

STRI is one of the world's leading centers for basic research on ecology, behavior and evolution of tropical organisms. Its international staff of more than 30 scientists from around the world conducts investigations in fields including animal behavior, plant ecology, canopy biology, paleoecology, archaeology, evolution, genetics, marine ecology, anthropology and conservation science. STRI facilities provide a unique opportunity for long-term ecological studies in the tropics, and are used extensively by some 600 visiting scientists from academic and research institutions from across the United States and other countries every year. Research facilities include scanning electron microscopes, seawater systems to maintain marine organisms, tower cranes to access forest canopies, and genetic, chemical, and digital imaging laboratories. STRI also operates several field stations in Panama and an ocean-going research vessel. Field stations provide access to seasonal, lowland forests within the Barro Colorado Nature Monument (BCNM); montane forests at Fortuna; mangrove forests and emergent reef flats at Galeta; and mangrove forests, rain forests, and coral reefs at Bocas del Toro. These facilities are open to all scientists associated with STRI and with Panamanian institutions. STRI researchers also carry out research in more than 30 countries throughout the world, in close collaboration with host country institutions, expanding research possibilities further.

STRI maintains a dynamic international program of collaboration and exchanges with academic and research institutions. Existing educational agreements are directed towards hosting and supporting short and long term field courses and academic work and scientific exchanges. STRI also has a long history of collaboration with Panamanian scientists, students, and the country's academic, governmental, and conservation organizations. In addition to participating in a range of research programs, STRI scientists, fellows, staff, and students are involved in a large number of conservation-related initiatives. STRI also maintains cooperative agreements with academic, governmental, and conservation organizations in tropical countries around the globe. For more information, see: <http://www.stri.org/index.php3>

ANNEX II—Data Tables

Table 1—Population, economic and trade data for Panama and the United States in 2002

	Population <i>Millions</i>	Gross National Income			Exports	
		Total <i>Billion US\$</i>	Per capita <i>US\$/capita</i>		Total <i>Billion US\$</i>	As a share of GDP <i>Percent</i>
			Nominal	PPP ^a		
Panama	2.9	11.8	4,020	6,060	3.6	28.2
United States	288.4	10,200	35,400	36,110	974.1	9.8

^a Purchasing Power Parity is represented in International dollars. Data are for 2002.

Sources: World Bank, U.S. Department of Commerce.
 Data available at: <http://www.worldbank.org/data> and
<http://www.ita.doc.gov/td/industry/otea/usfth/aggregate/H03t01.html>
<http://www.worldbank.org/data/databytopic/GNIPC.pdf>

Table 2—Selected development indicators for Panama and the United States in 2002

	Population density <i>People per square km</i>	Urban Population <i>Percent</i>	Access to		Under-5 mortality <i>No. per 1,000 births</i>	Life expectancy at birth <i>Years</i>
			Improved water source <i>Percent</i>	Improved sanitation facilities <i>Percent</i>		
Panama	40	57	90	na	25	75
United States	31	77	100	100	8	77

Source: World Bank, World Development Indicators, 2003.

Data available at: <http://www.worldbank.org/data>

Access to an improved water source-refers to the percentage of the population with reasonable access to an adequate amount of water from an improved source, such as a household connection, public standpipe, borehole, protected well or spring, and rainwater collection. Unimproved sources include vendors, tanker trucks, and unprotected wells and springs. Reasonable access is defined as the availability of at least 20 liters a person a day from a source within one kilometer of the dwelling. (World Health Organization and United Nations Children's Fund, Global Water Supply and Sanitation Assessment 2000 Report).

Access to improved sanitation facilities-refers to the percentage of the population with at least adequate excreta disposal facilities (private or shared, but not public) that can effectively prevent human, animal, and insect contact with excreta. Improved facilities range from simple but protected pit latrines to flush toilets with a sewerage connection. To be effective, facilities must be correctly constructed and properly maintained. (World Health Organization and United Nations Children's Fund, Global Water Supply and Sanitation Assessment 2000 Report).

Table 3—Land area, land use, and forest cover change for Panama and the United States

	Land area <i>Kilometers</i> ₂	Land use <i>Percent total land</i>		Annual change in forest cover, 1990-2000 <i>Percent</i>	Share of land in protected status <i>Percent</i>
		Forest	Agriculture		
Panama	75,520	39	30	-1.6	25
United States	9,600,000	25	46	.2	26

^a Less than 1 percent.

Sources: United Nations Food and Agriculture Organization; World Bank 2004 World Development Indicators

Data available at: <http://www.fao.org> and <http://www.worldbank.org/data> and <http://www.anam.gob.pa/portadanew/anamweb.html>.

Table 4—Biodiversity indicators for Panama and the United States

	Number of protected areas <i>Number</i>	Area of biosphere reserves <i>Thousand hectares</i>	Species threatened <i>Number (Percent known species)</i>		
			Mammals	Birds	Plants
Panama	41	1515	20	16	192
United States	7,448	31,570	37 (8.6)	55 (8.5)	169

Sources: United Nations Environment Program; World Bank; Earth Trends Country Profiles
Data available at: <http://www.unep.org>, <http://www.worldbank.org/data> and www.earthtrends.wri.org

Protected areas: Refers to management categories I through V of the International Union for the Conservation of Nature and Natural resources (IUCN). (See <http://www.iucn.org> for additional information.)

Biosphere reserves: Refers to areas representative of terrestrial and coastal/marine environments that have been internationally recognized under the United Nations Educational, Scientific and Cultural Organization (UNESCO) Man and the Biosphere Programme. (See <http://www.unesco.org> for additional information.)

Species Status: Includes species listed as having a threat status of vulnerable or higher on the IUCN Red List of Threatened Species (see www.redlist.org).

Table 5—United States goods trade with Panama, 2001-2003

Billion \$

Trading partner	United States exports			United States imports		
	2001	2002	2003	2001	2002	2003
Panama	1.3	1.4	1.8	.293	.303	.301
All U.S. partners	729.1	693.1	723.7	1,141.0	1,161.4	1259.4

Source: U.S. Department of Commerce

Data available at: <http://www.ita.doc.gov/td/industry/otea/> and <http://dataweb.usitc.gov>