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Report to Congressional Requesters

July 1999

U.S.-MEXICO BORDER

Issues and Challenges Confronting the United States and Mexico

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United States General Accounting Office
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National Security and
International Affairs Division

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Congressional Requesters

Your June 24, 1998, letter to us expressed concern about the overall well-being of the border region and what appeared to be limited progress in addressing border issues. You also expressed concern that the border region has had to shoulder a disproportionate share of the cost of U.S.-Mexican economic integration. As agreed with your offices, this interim report (1) outlines the nature of major border issues and (2) provides information on U.S. and Mexican efforts underway to address them. We are continuing our in-depth analyses of transportation and environmental infrastructure issues affecting the border region. These studies are aimed at identifying potential options to address these issues, within the context of the overall border situation.

Results in Brief

The United States has pursued a strategy of developing closer relations with Mexico, in recognition that a stable, democratic, and prosperous Mexico is fundamental to U.S. interests. The border region, defined as the area 100 kilometers (62 miles) deep on either side of the almost 2,000-mile long U.S.-Mexico border,[1] is the bridge that binds the two countries. Thus, the border is critical to U.S. objectives. However, the U.S. border region has relatively high unemployment and poverty levels and faces a number of development challenges. And, while growing integration has increased trade between Mexico and the United States, it has also exacerbated some long-standing border problems. At the same time, many U.S. efforts to interdict illicit drugs and illegal immigration take place on the border. As a result, there is a confluence of seemingly competing objectives at the border that have important implications for the United States. (See app. I for additional background on border perspectives.)

The major issues on the border include the following:

- Drug enforcement: The 2,000-mile Mexican border is one of the main battlegrounds of the national war on drugs, as law enforcement agencies

[1]As defined by the 1983 Agreement for the Protection and Improvement of the Environment in the Border Area, known as the "La Paz Agreement."

try to stop the flow of illicit narcotics into America. An estimated 60 percent of the cocaine and 29 percent of the heroin sold across America in 1998 are believed to have come through the U.S.-Mexico border. Further, the cross-border movement of illicit drugs is associated with a high level of violence, as well as corruption of U.S. and Mexican officials and money laundering. Efforts to stop the flow have put pressure on the transportation infrastructure and contributed to congestion at the border crossings. (See app. II.)

- Illegal immigration: The border is the primary checkpoint for illegal immigration. The U.S. Immigration and Naturalization Service apprehended 1.5-million undocumented immigrants on the southwest border in fiscal year 1998. Illegal immigration has been shown to be associated with increased criminal activities and to raise the cost of some federal, state, and local programs. Attempting to assure that only eligible individuals enter the United States places a burden on border infrastructure and affects the cross-border flow of goods and services. (See app. III.)
- Cross-border transportation: The border area provides the transportation infrastructure to facilitate trade between the United States and Mexico, which has more than doubled since the North American Free Trade Agreement went into effect in 1994. Nearly 4 million trucks and 85 million passenger vehicles entered the United States from Mexico in fiscal year 1998. Processing the high volume of commercial and passenger traffic while at the same time interdicting contraband and illegal immigrants has contributed to congestion and air pollution and has placed pressure on the infrastructure of local communities along the border. (See app. IV.)
- Environmental infrastructure and public health: The need for environmental infrastructure[2] improvement is particularly acute on the Mexican side of the border, where many communities are without potable water and adequate sanitation. On the U.S. side, most border communities have environmental infrastructure, but some facilities require repair or expansion. Moreover, most locations are faced with a diminishing supply of clean and safe drinking water. Environmental infrastructure problems have contributed to public health concerns. Many diseases occur at rates much higher in the border region than in other areas of the United States and Mexico. Also, there is an increased

[2]Environmental infrastructure refers to the infrastructure designed to protect human health and the environment along the U.S.-Mexico border by preventing and/or reducing the pollution of air, water, and soil.

concern about the growing number of multidrug-resistant tuberculosis cases in the border region. (See app. V.)

- Economic development: Although the U.S. border region has experienced some recent economic growth, it still has relatively high unemployment and poverty levels. A number of initiatives are underway to address economic development issues. Projections of high population growth and a change in the rules governing the Mexican maquiladora industry could potentially affect the existing economic development challenges.[3] (See app. VI.)

These problems are being addressed by a number of Mexican and U.S. federal, state, and local agencies that are responsible for specific aspects of each problem. In light of the transnational nature of the problems, various binational institutions, programs, and initiatives have also been created, such as the Border Environment Cooperation Commission, the High-Level Contact Group on Narcotics Control, and the New Border Vision. While such binational mechanisms have been able to make some improvements in certain areas, they have not been able to close the gap between what is needed and what exists. The limits on progress may be due in part to the differing levels of development and dissimilar governmental structures of the two countries. In recognition of the special economic development needs of the U.S. border community, the President on May 25, 1999, announced the Southwest Border Economic Development Initiative, which is designed to coordinate federal and local economic development efforts to raise the living standards and overall economic profile of the border region on a sustained basis.

The total requirements and their associated costs for addressing the border issues described above are unknown, and there remains no single, binational plan to address border problems. As we continue our in-depth case study analyses of transportation and environment issues, we plan to identify potential strategies to overcome the institutional and programmatic challenges that impede improved conditions on the border.

Agency Comments

We provided a draft of this report to officials from the following agencies that had activities discussed in this report: the Departments of Agriculture,

[3]The maquiladora program allows duty-free imports into Mexico of materials and components from foreign suppliers. These processed materials are assembled into finished products that must then be reexported from Mexico unless special approval is given to sell them in the Mexican market.

Health and Human Services, State, Transportation, and the Treasury; the Environmental Protection Agency (EPA); the Immigration and Naturalization Service (INS); the U.S. Customs Service; and the Drug Enforcement Administration.

All agencies provided material to update key pieces of information, as well as some technical changes that we incorporated where appropriate. Treasury and EPA officials commented that the report did not provide sufficient detail about some of the activities underway and accomplishments made in addressing the border issues. We intended this report to be a broad overview of the major border issues and what is being done to address them, rather than a detailed examination of each specific effort. We plan to provide greater detail in our separate reports on the transportation and environmental infrastructure issues.

We also discussed the draft report with officials representing Mexico's Secretariat of Foreign Relations. Their primary concern was that the draft did not give sufficient description of the nature of the drug-trafficking problem, noting that U.S. demand for drugs is a factor. They said that the report should highlight to a greater extent some of the recent counterdrug initiatives they have undertaken. They also emphasized the importance of the New Border Vision, as a binational commitment to work for sustainable economic and social development along the border. They said that this effort will more effectively coordinate the multiple mechanisms already existing at the federal, state, and local levels. Where appropriate, we have added more detail in response to these comments.

Scope and Methodology

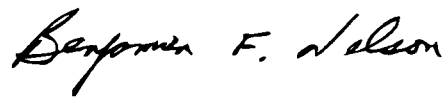
To obtain information on the major issues on the U.S.-Mexico border, we conducted an extensive literature search and relied heavily on a number of issued GAO reports and government studies. We also reviewed documents and interviewed officials from the relevant federal, state, and local agencies and private sector organizations. In addition, we visited Mexico City, where we interviewed U.S. embassy and Mexican government officials. We also obtained and analyzed information from our ongoing case studies of transportation and environmental infrastructure issues at key sister cities along the border.

This report is intended to provide a broad overview of the major issues on the border and their implications. Therefore, it may not include all of the programs and initiatives that may be underway to address specific

problems at the border. Appendix VII contains additional information on our scope and methodology.

We are sending copies of this report to appropriate congressional committees and to the Honorable Dan Glickman, Secretary of Agriculture; the Honorable William M. Daley, Secretary of Commerce; the Honorable Donna Shalala, Secretary of Health and Human Services; the Honorable Andrew M. Cuomo, Secretary of Housing and Urban Development; the Honorable Madeleine Albright, Secretary of State; the Honorable Rodney Slater, Secretary of Transportation; the Honorable Robert E. Rubin, Secretary of the Treasury; the Honorable Thomas A. Constantine, Administrator of the Drug Enforcement Administration; the Honorable Carol M. Browner, Administrator of the Environmental Protection Agency; the Honorable Doris Meissner, Commissioner of the Immigration and Naturalization Service; and the Honorable Raymond W. Kelly, Commissioner of the U.S. Customs Service. We will also make copies available to other interested parties upon request.

Please contact me at (202) 512-4128 if you or your staff have any questions concerning this report. Other GAO contacts and staff acknowledgements are listed in appendix VIII.



Benjamin F. Nelson, Director
International Relations and Trade Issues

List of Congressional Requesters

The Honorable Henry Bonilla
The Honorable Bob Filner
The Honorable Ruben E. Hinojosa
The Honorable Solomon P. Ortiz
The Honorable Silvestre Reyes
The Honorable Ciro D. Rodriguez
House of Representatives

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Abbreviations

BECC	Border Environment Cooperation Commission
DEA	Drug Enforcement Administration
EPA	Environmental Protection Agency
INS	Immigration and Naturalization Service
NADBank	North American Development Bank
NAFTA	North American Free Trade Agreement

The U.S.-Mexico Border in Perspective

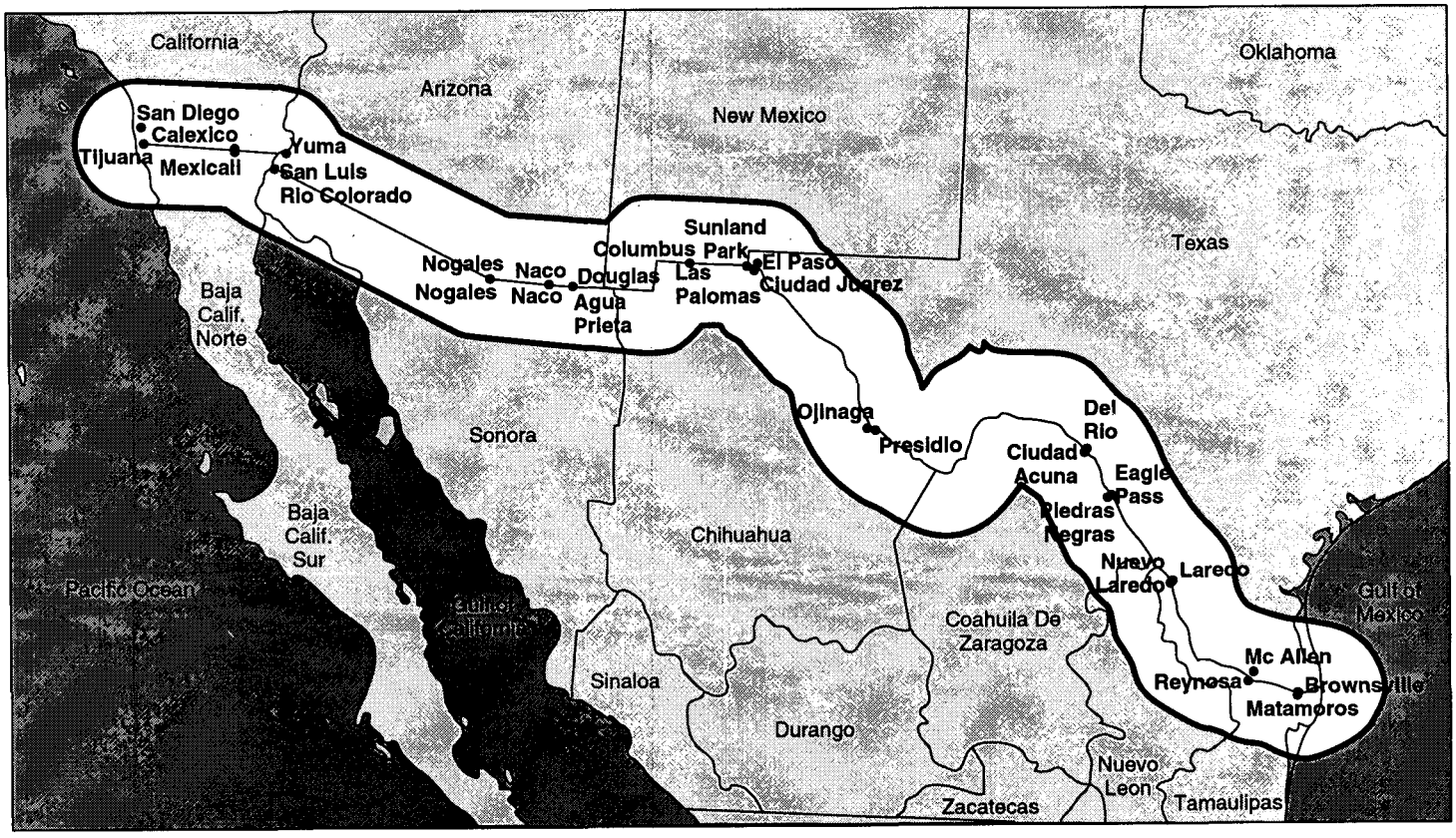
The border between the United States and Mexico extends for almost 2,000 miles, from the Gulf of Mexico in the east to the Pacific Ocean in the west. The border region, as defined by the La Paz Agreement of 1983,[1] is 100 kilometers (62 miles) deep on either side of the border. As can be seen in the map (fig. I.1), there are four U.S. states and six Mexican states along the border. In Texas, which comprises roughly half of the border, the border is defined by the Rio Grande River. California, Arizona, and New Mexico have land border crossings. In all, there are 45 border crossings,[2] with estimates of around 278 million to 351 million persons legally crossing the border from Mexico into the United States in fiscal year 1998.[3]

[1]The 1983 Agreement for the Protection and Improvement of the Environment in the Border Area, commonly referred to as the "La Paz Agreement."

[2]According to the State Department. This number includes two bridges that are currently under construction.

[3]These numbers are based on the differing estimating techniques of the U.S. Customs Service and the Immigration and Naturalization Service, respectively, and include both vehicle and pedestrian traffic.

Figure I.1: U.S.-Mexico Border Region and 14 Sister Cities



There are 14 sister or twin cities on the border, accounting for around 92 percent of the border population. While legally separate cities, in reality, sister cities often constitute binational and bicultural "single" communities. Many families in the region have members on both sides of the border. Further, many people live on one side of the border and commute daily to work or school on the other side.

Border Population

The border region's population has changed dramatically since 1965 when Mexico initiated the Border Industrialization Program to foster job growth in its northern region by sponsoring a maquiladora, or export assembly,

industry.[4] As more jobs were created, more Mexican workers moved to border cities, which experienced significant population growth. For example, the population of Ciudad Juarez, Mexico, grew from 650,000 in 1980 to an estimate of over 1.1 million by 1999. Tijuana, Mexico, grew from 428,000 in 1980 to about 989,000 in 1995. Its twin city across the border, San Diego, went from 875,530 in 1980 to over 1.1 million by 1994. In 1997, the Environmental Protection Agency (EPA) estimated that the population of the U.S.-Mexico border region was greater than 10.5 million people, with about 6.2 million people in the United States and about 4.3 million in Mexico. The population on both sides has grown far faster than the population in either country as a whole. The population on the U.S. side of the border is increasing at an annual rate of 2.7 percent, compared to a total U.S. growth rate of 0.95 percent. The population on the Mexican side of the border is growing at an annual rate of 3 percent, compared to a total Mexican population growth rate of 1.8 percent. Current population projections forecast a doubling of the border population over the next 20 years.

The Maquiladora Industry

As of March 1999, the Mexican government statistical agency reported a total of about 3,200 maquiladora plants throughout Mexico, with total employment of 1,090,000. Mexico's border region had a reported 1,751 maquiladora plants with 651,580 workers, according to the statistical agency. The border states of Chihuahua, Baja California Norte, and Tamaulipas employed the most maquiladora workers in Mexico, together accounting for about 61 percent of maquiladora employment. The top locations for border maquiladoras included the cities of Ciudad Juárez and Tijuana. In March 1999, the number of workers employed in maquiladora plants in these two cities reached nearly 370,400 workers, or approximately 34 percent of total Mexican maquiladora employment.[5] Table I.1 shows the number of plants and employees in the major border cities.

[4]The maquiladora program allows duty-free imports into Mexico of materials and components from foreign suppliers. These processed materials are assembled into finished products that must then be reexported from Mexico unless special approval is given to sell them in the Mexican market.

[5]For a detailed discussion of the maquiladora industry in historical perspective, see Lucinda Vargas, Business Frontiers, Issue 4 (Dallas, Tx: Federal Reserve Bank of Dallas, El Paso Branch, 1998).

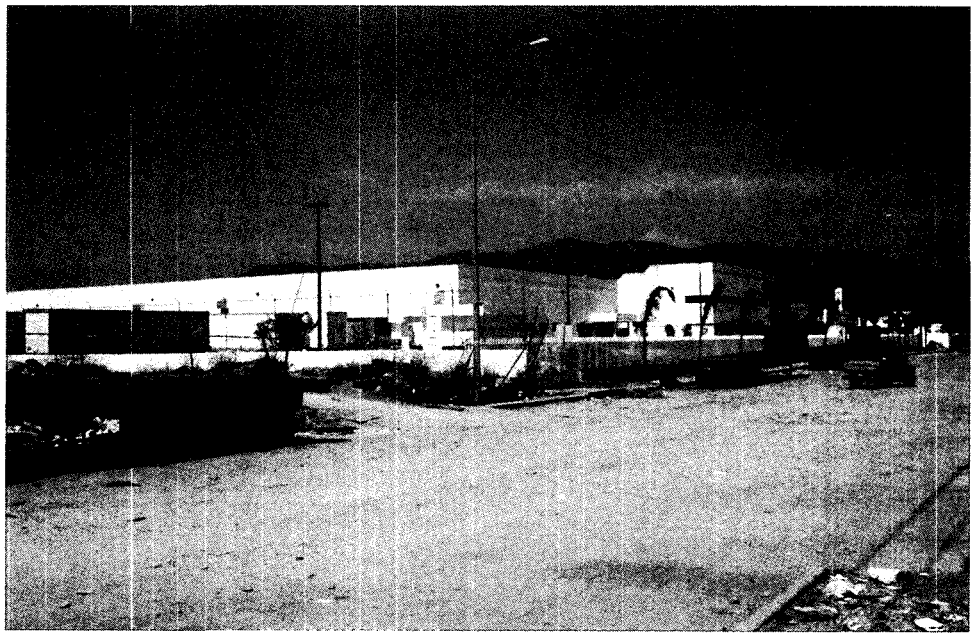
Table I.1: Selected Maquiladora Industry Statistics, by City, March 1999

City, state	Number of maquiladoras	Number of employees
Tecate, Baja California Norte	123	11,730
Mexicali, Baja California Norte	179	50,368
Tijuana, Baja California Norte	731	153,453
Nogales, Sonora	85	33,644
Ciudad Juarez, Chihuahua	254	216,945
Piedras Negras, Coahuila	44	15,687
Ciudad Acuna, Coahuila	57	33,426
Nuevo Laredo, Tamaulipas	54	21,533
Matamoros, Tamaulipas	118	56,734
Ciudad Reynosa, Tamaulipas	106	58,060
Total	**1,751**	**651,580**

Source: Mexican National Institute for Statistics, Geography, and Information.

In 1994, the North American Free Trade Agreement (NAFTA) established new rules that affected the maquiladora program. For example, by 2001, Mexico will restrict the duty preferences available to maquiladoras for non-NAFTA-originating raw materials used in the manufacture or assembly of finished products. In addition, changes brought about by NAFTA and Mexican law will virtually eliminate all restrictions on foreign investment in the manufacturing sector, making it unnecessary to establish a maquiladora facility to assemble in Mexico. It is too early to predict what the effects of the changes in the maquiladora law will be for the border region. (See app. VI for details.) Figure I.2 illustrates a maquiladora plant in Tijuana, Mexico, near the Otay Mesa crossing.

Figure I.2: Mexican Maquiladora Plant



Poverty on the Border

Relatively high levels of poverty exist in the border region. Many of the poorest counties in the United States are found there, especially in Texas. There are also low levels of educational attainment, a relatively young population, and a high percentage of new immigrants. Using Census data, we calculated that about 24 percent[6] of the population living in U.S. border counties in 1996 lived in poverty,[7] compared with a national poverty rate of nearly 14 percent in this same year. In Texas alone, the population living at or below the poverty line is 35 percent, based on 1990 Census data. Income distribution also varies widely along the border. For example, according to Census data, about 16 percent of residents in San Diego County, California, were below the poverty line, as compared to about 52 percent in Starr County, Texas, in 1996. Three of the 10 poorest counties in the United

[6]Poverty rate estimates are our calculations based on Census data. The Census data has a 90-percent confidence interval.

[7]The Census Bureau updates poverty thresholds each year for use in calculating all official poverty population figures. Thresholds are estimated by size of family and age of members. For example, in 1996, the poverty threshold for a single person aged 65 or older was $7,525, while that of a family of four with two children under 18 was $15,911.

States are located in the border area, and the federal government has designated 21 U.S. border communities as economically distressed.[8]

The poverty is more acute in the border areas called colonias. The term "colonia" generally refers to an unincorporated, low-income community endemic to the U.S.-Mexico border. These communities are characterized by substandard housing, inadequate roads and drainage, substandard or no water and sewer facilities, and no garbage disposal services. Although colonias are found in all four U.S. border states, they are most common in Texas and New Mexico. EPA estimated in 1997 that the colonias' population includes over 390,000 people in Texas and over 42,000 in New Mexico. Figure I.3 illustrates an example of a U.S. colonia.

Figure I.3: A Colonia in Douglas, Arizona

Although poor by U.S. standards, Mexico's northern border is considered to be one of the more affluent areas of the country. Compared to other areas

[8]An area of general economic distress is defined, for all urban and rural communities, as any census tract that has a poverty rate of at least 20 percent, or any designated Federal Empowerment Zone, Supplemental Empowerment Zone, Enhanced Enterprise Community, or Enterprise Community. Furthermore, any additional rural or Indian reservation area may be so designated after considering the following factors: (1) unemployment rate, (2) degree of poverty,(3) extent of outmigration, and (4) rate of business formation and rate of business growth.

of the country, the Mexican side of the border has lower unemployment, higher incomes, more even income distribution, and more services. Although better off than much of the rest of Mexico, communities on the Mexican side of the border also confront deficiencies in basic services. According to a 1996 EPA study, about 12 percent of the population in major Mexican border cities lack access to safe drinking water, and only about 69 percent live in residences connected to sewage collection systems. Furthermore, only 34 percent of the wastewater produced in Mexican border cities is treated.

What Are the Unique Challenges in Addressing Border Issues?

The transnational nature of the border issues, the differing levels of development in the United States and Mexico, and the dissimilar governmental structures make border issues difficult to address. Many of the major border issues are essentially not "domestic," but transnational issues that transcend political boundaries. For example, El Paso, Texas, and its sister city, Ciudad Juarez, have a serious air pollution problem. The mountains surrounding the cities create a single air basin, causing airborne pollution to stagnate over the area. Only by working together to mitigate the sources of the pollution will either city enjoy clean, healthy air. The situation is essentially the same for many other important border issues, such as drug interdiction, immigration, congestion at border crossings, availability and management of water, and health concerns (such as the high levels of tuberculosis in the border region). Addressing these complex transnational issues requires coordination and cooperation among numerous U.S. federal, state, and local agencies, and with their Mexican counterparts.

Transnational Nature of the Issues

The United States and Mexico recognize the transnational nature of the major issues on the border and have worked to build a closer bilateral relationship. To this end, they have created numerous binational institutions to foster joint action. Among them are the U.S.-Mexico Binational Commission, established in 1981, and the Border Liaison Mechanism, which was created in 1993. The Binational Commission meets annually at the Cabinet level and works on a wide range of issues, such as drugs, immigration, and border cooperation, that are critical to U.S.-Mexican relations and the border region. The Border Liaison Mechanism is chaired by the consuls-general or consuls in the sister or pair cities. It brings together the U.S. and Mexican sides—local federal, state, and municipal officials, as well as business and community groups—in order to develop joint actions to help resolve local problems, such as

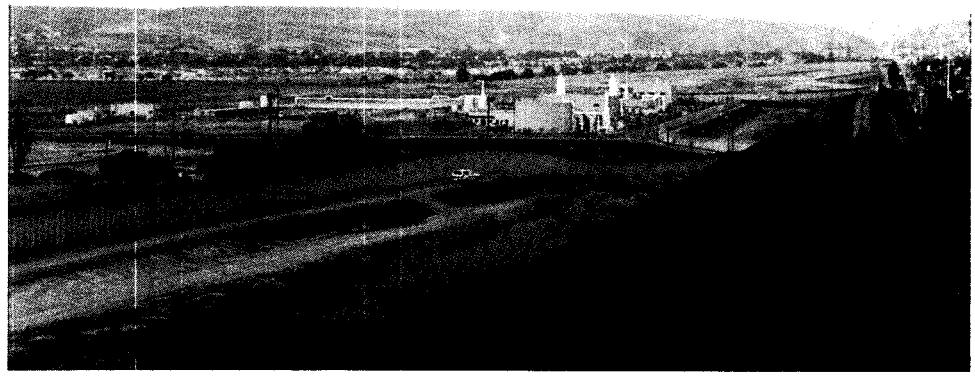
cross-border law enforcement issues, health concerns, and coordination of port security and operations.

The U.S. and Mexican governments have recently developed an initiative called the New Border Vision. In May 1997, President Clinton and President Zedillo proposed to devise a comprehensive and long-lasting strategy to transform the border into a model of bilateral cooperation. They agreed on the need to promote sustainable economic and social development as well as to improve the well-being and safety of families and communities along the shared border.

Disparity in Development Levels

A second challenge in addressing border issues is the disparity between the United States and Mexico in terms of level of development. This, in turn, results in differing levels of resources available to address border problems. Many parts of Mexico's northern border are poor by U.S. standards, yet the northern border is relatively well off as compared to other parts of Mexico. In addition, the Mexican government has been focused on improving its overall economy, reducing government spending, and dealing with less-developed regions in the south. This means that the amount of funding that is available from Mexico for border projects is limited. For example, the United States and Mexico agreed to jointly finance a new wastewater treatment plant in South Bay, California, and a plant expansion at Nogales, Arizona, to treat waste generated on the Mexican side of the border. As a result of limited resources and higher priorities elsewhere in the country, Mexico contributed $17.8 million of the total cost of $321.9 million for both projects. The United States financed Mexico's share of project costs and agreed to 10 annual installment payments to repay the loan. Figure I.4 illustrates the new South Bay wastewater treatment plant, just inside the border near San Diego, which exclusively treats wastewater from Tijuana, Mexico.

Figure I.4: South Bay International Wastewater Treatment Plant



Differences in Government Structure

Differing U.S. and Mexican governmental structures also create a challenge to joint action. Mexico has had a centralized government structure in which authority is generally contained in Mexico City. Policy and resource allocation decisions that affect border issues are typically made in Mexico City. Thus, Mexican states and local governments in the border region generally have not had the authority or resources to address border issues. While Mexico is beginning to delegate more authority to state and local officials, this shift in authority is made more difficult because local officials can only serve one 3-year term. The resulting turnover among officials makes building institutional expertise and continuity difficult, and new relationships have to be developed between U.S. and Mexican counterparts. It also means that there are no assurances that the initiatives of one administration will be carried out by its successor.

In the United States, the federal government shares authority and responsibility with the states on matters such as natural resources management, the environment, transportation, and health issues. For instance, most highways in the United States are planned, built, and maintained by the states. Decisions about the location of a new highway are typically made by state and local officials. Because of these differences

in government responsibilities, on certain issues, the Mexican counterparts to U.S. state and local authorities have not had the authority to make decisions on actions to address common border problems. The U.S. officials have had to negotiate with Mexican federal officials, who have many priorities in addition to the northern border.

Drug Enforcement

The need to stop the flow of illicit narcotics from Mexico to the United States has had major implications for the U.S.-Mexico border area, where much of the enforcement effort takes place. This drug enforcement mission affects the processing of both people and cargo that cross the border. The cross-border movement of drugs has been accompanied by other criminal activities on both sides of the border, including the corruption of law enforcement officials, violence, and money laundering. The United States and Mexico consider drug trafficking to be a major threat to their respective national security and have attempted to address drug-trafficking issues through coordination and the development of a binational counternarcotics strategy. Much of the U.S. efforts are focused on providing assistance to U.S. law enforcement organizations along the border to enhance their drug interdiction capabilities. The principal U.S. agencies combating the flow of drugs across the border are the U.S. Customs Service, the Drug Enforcement Administration (DEA), the Department of Defense, and the Immigration and Naturalization Service (INS).

What Is the Nature of the Drug Problem?

At present, Mexico is the principal transit route for most of the cocaine and much of the heroin and foreign-produced marijuana that is consumed in the United States. U.S. agencies estimate that about 60 percent of the almost 340 metric tons of cocaine entering the United States in 1998 passed through Mexico and, despite Mexican drug eradication efforts, Mexico remains a major source country for marijuana and heroin sold in the United States. According to DEA, almost all of the estimated 6 metric tons of heroin produced in Mexico in 1998 will reach U.S. markets. In February 1999, the DEA Administrator testified that a study DEA has underway indicates that as much as 29 percent of the heroin used in the United States is smuggled in by Mexican drug-trafficking organizations. DEA also estimates that the majority of the methamphetamine available in the United States is either produced in Mexico and transported to the United States or manufactured in the United States by Mexican drug traffickers.

The drug-trafficking problem in the United States and Mexico is associated with corruption of law enforcement officials, violence, and money laundering:

- A major impediment to U.S. and Mexican counternarcotics efforts is the corrupting influence that drug trafficking activities have on law enforcement. According to one U.S. estimate, Mexican narcotics traffickers spend billions of dollars a year to suborn Mexican

government officials at all levels.[1] Recognizing the impact of corruption on law enforcement agencies, the president of Mexico (1) expanded the role of the military in counternarcotics activities and (2) introduced a screening process for personnel working in certain law enforcement activities. However, neither of these initiatives can be considered a panacea for the narcotics-related problems confronting the two countries. In fact, since these initiatives, a number of senior military and screened personnel were found to be either involved in or suspected of conducting drug-related activities.

Drug-related corruption of law enforcement is not limited to Mexico. Some U.S. Immigration and Naturalization Service and U.S. Customs Service employees on the U.S.-Mexico border have engaged in a variety of illegal drug-related activities. Such activities have included waving drug loads through at the border crossings, coordinating the movement of drugs across the border, transporting drugs past U.S. Border Patrol checkpoints, selling drugs, and disclosing drug intelligence information to drug traffickers.[2]

- Violence is also an outgrowth of the illicit drug situation that affects both sides of the border. Organized crime groups from Mexico have relied on violence as an essential tool of their trade. For example, between September 1996 and February 1999, DEA recorded 141 threats or violent incidents against U.S. law enforcement personnel, their Mexican counterparts, public officials, or informants in Mexico or along the border. According to DEA, much of the drug-related violence, which has become commonplace in Mexico, has spilled over to communities within the United States.
- Money laundering is another byproduct of drug trafficking. According to the Department of State, Mexico continues to be the primary haven for money laundering in Latin America. Drug cartels launder the proceeds of crime in legitimate businesses in both the United States and Mexico, favoring transportation and other industries that can be used to facilitate drug, cash, and arms smuggling or to further money-laundering activities. In May 1998, Customs concluded Operation Casablanca, the largest and most comprehensive drug money-laundering investigation in the history of U.S. law enforcement. This 3-year investigation netted

[1]See Drug Control: Update on U.S.-Mexican Counternarcotics Activities (GAO/T-NSIAD-99-98, Mar. 4, 1999).

[2]See Drug Control: INS and Customs Can Do More to Prevent Drug-Related Employee Corruption (GAO/GGD-99-31, Mar. 30, 1999).

about $100 million in illicit drug proceeds and culminated in the arrest of 168 individuals from 12 of Mexico's largest banking institutions.[3] Additionally, three Mexican banks were indicted for participating in the money-laundering scheme.

What Efforts Are Underway to Counter the Drug Threat?

The United States and Mexico have attempted to address drug-trafficking issues by (1) coordinating their efforts, particularly through periodic meetings of senior government officials and (2) developing a binational counternarcotics strategy. The United States has also increased its counternarcotics assistance to Mexico, and U.S. law enforcement organizations have received additional support along the southwest border in order to enhance drug interdiction capabilities.

The United States and Mexico have established a number of formal and informal mechanisms to increase cooperation and coordination between the two countries on law enforcement and narcotics-related issues. The two principal formal coordinating forums are the U.S.-Mexico High-Level Contact Group on Narcotics Control and the senior Law Enforcement Plenary. The contact group, led by the U.S. Director of the Office of National Drug Control Policy and the Mexican Foreign Secretary and the Attorney General, met twice in 1998. An ad hoc meeting between the Mexican and the U.S. Attorneys General occurred in July 1998 and resulted in the creation of a process for enhanced consultations and cooperation in sensitive cross-border operations. Additionally, Mexico created the Bilateral Task Force, a special unit within the Mexican Attorney General's office responsible for investigating and dismantling the most significant drug-trafficking organizations along the U.S.-Mexican border.

The United States and Mexico have also developed the Binational Drug Strategy, released in February 1998, which contained 16 general objectives. Among them were the goals of reducing the production and distribution of illegal drugs in both countries, increasing the security of the border, and focusing law enforcement efforts against criminal organizations. Since the issuance of the binational strategy, a number of joint working groups, made up of U.S. and Mexican officials, have been formed. One result of these meetings was the development of joint performance measures and

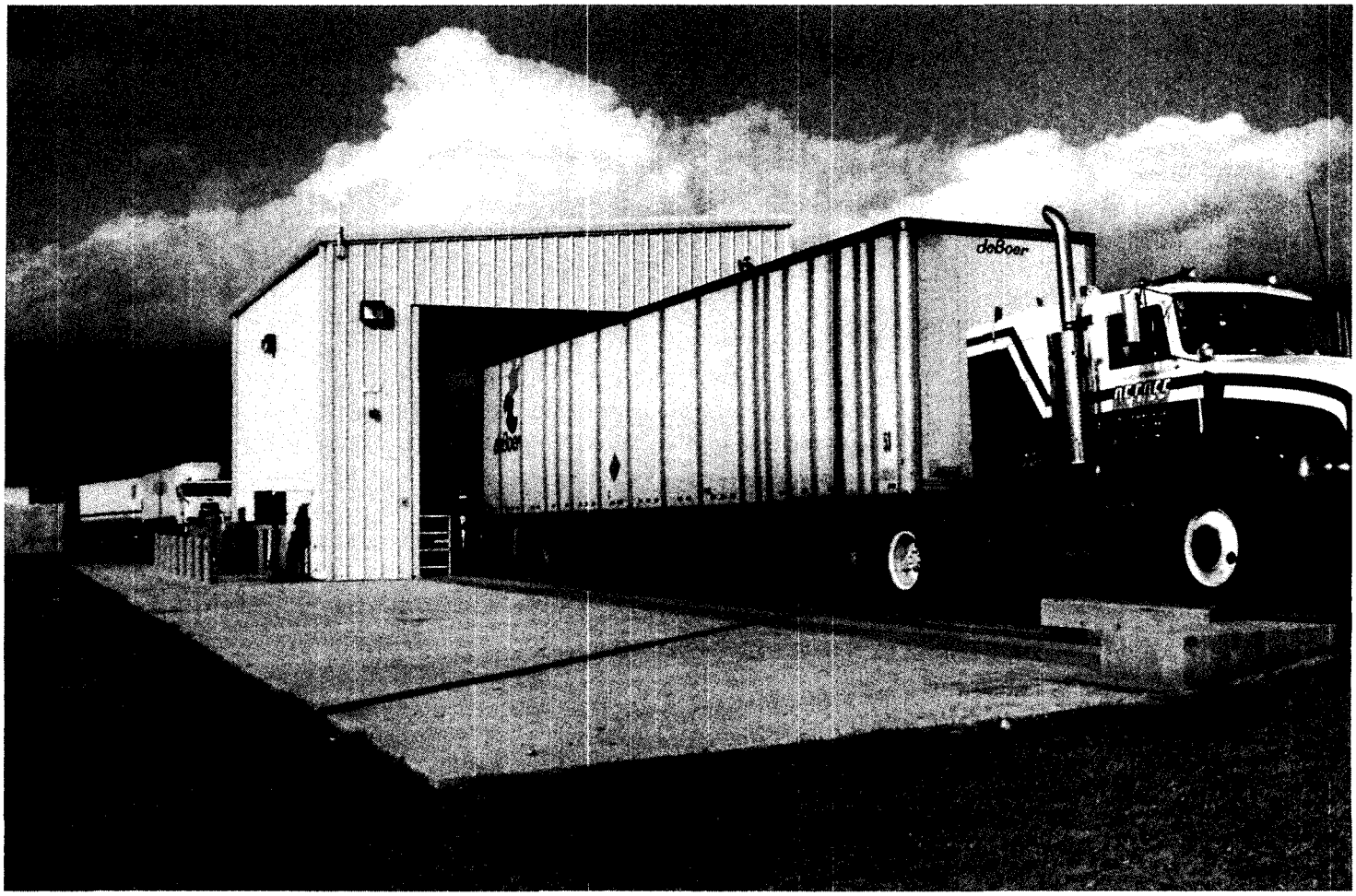
[3]See Drug Control: Update on U.S.-Mexican Counternarcotics Efforts (GAO/T-NSIAD-99-86, Feb. 24, 1999).

milestones for assessing progress toward achieving the objectives of the binational counternarcotics strategy.

At the border crossings, the U.S. Customs Service is the primary agency, assisted by INS Inspections, responsible for stopping the flow of illegal drugs through U.S. ports of entry. In addition to conducting routine inspections to search passengers, cargo, and conveyances[4] for illegal drugs, Customs' drug interdiction program includes investigations and other activities unique to specific ports. In conducting its drug interdiction role, Customs' major challenge is to effectively carry out its interdiction and trade enforcement missions while at the same time facilitating the flow of persons and cargo across the border. In fiscal year 1998, Customs seized 31,769 pounds of cocaine, 830,891 pounds of marijuana, and 407 pounds of heroin along the U.S.-Mexico border. To help deal with the drug problem at the border, Customs is installing various state-of-the-art X-ray systems to inspect cargo and vehicles and is evaluating other forms of new technology in high-risk areas. Many of these efforts are being supported by the Department of Defense and involve support of and coordination with other law enforcement agencies. Figure II.1 illustrates a truck exiting the truck X-ray at the Pharr, Texas crossing.

[4]Conveyances include cars, buses, trucks, aircraft, and vessels.

Figure II.1: Truck X-Ray



The Border Patrol is the principal agency within INS responsible for detecting and apprehending drug smugglers along the border between the ports of entry. According to the Office of National Drug Control Policy, the Border Patrol seized 22,675 pounds of cocaine and more than 871,000 pounds of marijuana during fiscal year 1998. The INS also reports that it was responsible for the arrest of more than 8,600 persons for narcotics-related violations along the southwest border during this period.

Illegal Immigration

Each year, hundreds of thousands of illegal aliens enter the United States across the U.S.-Mexico border. As a result, Congress has mandated increased efforts to facilitate border processing of legal entries and prevent or deter illegal crossings. Jobs in the United States have been the major draw for Mexican migrants.

What Is the Nature and Extent of Increasing Immigration on the Border?

Mexican citizens and others who want to be admitted to the United States must present documents to INS inspectors at ports of entry along the border. Of the 915,900 persons who were granted legal permanent resident status in fiscal year 1996, 163,572, or 15 percent, were from Mexico—an increase of about 82 percent from fiscal year 1995. In addition, an unknown number of Mexicans, likely to exceed 1 million, come and work in the United States for short periods of time and then return home, according to a Brookings Institution study.[1]

INS has the dual role of facilitating legal entry into the United States and stopping illegal entry. Last year, for example, an average of 960,000 entries were processed daily along the border. In 1996, INS estimated that the Mexican undocumented entrant population had grown by an average of 150,000 annually since 1988 and that 2.7 million undocumented entrants had established residence in the United States. In fiscal year 1998, INS made 1.5 million apprehensions on the southwest border.

What Is Being Done to Address Border Immigration Issues?

INS' Inspections and the U.S. Border Patrol, also part of INS, are the two components chiefly responsible for deterring illegal entry along the southwest border. In attempting to inhibit unlawful entrants, the Attorney General announced a five-part strategy in 1994 to strengthen enforcement of the nation's immigration laws, including enhancing border monitoring. The primary focus of enforcement efforts shifted from apprehending illegal aliens in the United States to deterring their entry. Moreover, Congress increased the U.S. Border Patrol's budget from $362 million in fiscal year 1993 to $727 million in 1997. As a result, existing resources have been reallocated along the border, and border control personnel have been increased. For example, the number of Border Patrol agents on the border rose from 3,389 to 7,357 between fiscal year 1993 and 1998. This growth

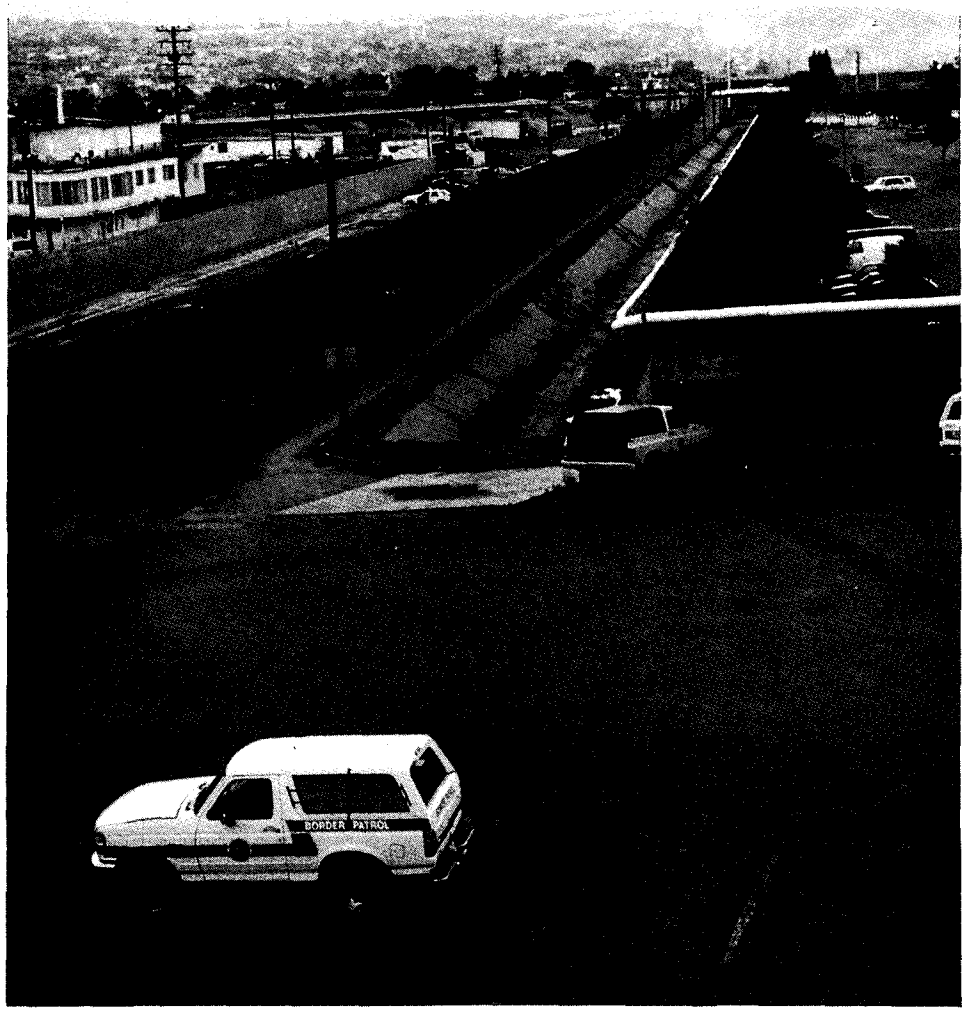
[1]The Brookings Institution, Immigration in U.S.-Mexican Relations: A Report of the U.S.-Mexican Relations Forum (Washington, D.C.: Jan. 1998).

was due largely to the 1996 Illegal Immigration Reform and Immigrant Responsibility Act's requirement that the U.S. Border Patrol hire 1,000 agents annually through 2001. However, a study commissioned by the Office of National Drug Control Policy estimated that the U.S. Border Patrol would need over 16,000 agents to deter unauthorized crossings along the southwest border.[2] This number is more than twice the 7,357 agents working the border as of September 1998. We recently reported that INS is unlikely to meet the 1,000-agent annual hiring quota mandated by Congress, and the executive branch has not requested additional positions in its fiscal year 2000 budget.[3] Figure III.1 illustrates U.S. Border Patrol agents monitoring the double wall dividing San Ysidro and Tijuana to deter illegal crossings, among other things.

[2]F. Bean, R. Capps, and C. W. Haynes, An Estimate of the Number of Border Patrol Personnel Necessary to Control the Southwest Border (Austin, TX: Center for U.S.-Mexico Border and Migration Research, University of Texas, July 1998). We have not reviewed the methodology used to arrive at this figure.

[3]In March 1999, the INS Commissioner testified that nearly 48 percent of the Border Patrol agents had less than 3 years of experience, and law enforcement experts had indicated that it is risky to allow an agency's overall ratio of inexperienced officers to exceed 30 percent. Also, according to an INS official, INS lacks adequate facilities to support the increased numbers of agents along the southwest border. Therefore, according to INS, maintaining staffing at the fiscal year 1999 level will give INS time to develop more experienced agents and allow INS to allocate the funds it needs to improve facilities. Illegal Immigration: Status of Southwest Border Strategy Implementation (GAO/GGD-99-44, May 19,1999).

Figure III.1: U.S.-Mexico Border at San Ysidro, California, and Tijuana, Mexico



One method the United States is using to enhance and expedite enforcement efforts at border crossings is increasing the use of biometric technology, whereby biometric identifiers, such as photos and fingerprints, can be digitally scanned and read by a computer. INS has developed IDENT, an automated system that catalogues apprehended illegal aliens' fingerprints, which can help identify the number of aliens apprehended while attempting to reenter the country. The State Department is also currently phasing in another identification system to speed processing

times for legal entry of Mexicans who frequently cross the border into the United States. The border crossing cards that had previously been used are now being replaced with laser visas, new high-tech biometric cards that include photos and fingerprints.

One area of current concern in U.S. border enforcement efforts is a U.S. Congress-mandated[4] automated entry/exit control system at land and seaport points of entry that will collect arrival and departure data on every non-U.S. citizen crossing the border. Critics of the mandate, fearing huge bottlenecks at the border, want a system that balances law enforcement and trade facilitation. The system was to be established by September 30, 1998, on both the Mexican and Canadian borders. However, Congress has extended the deadline to March 31, 2001.

While the United States and Mexico are willing to work together on some border issues, there are some differences in emphases: the United States wants to reduce the level of unauthorized migration, while Mexico wants to protect its citizens. The United States' present policy is to immediately deport illegal immigrants who are apprehended, unless they might have a legitimate claim to asylum or have committed a crime. Mexico's focus emphasizes actions the United States should take, particularly better protection of the human rights of migrants and avoidance of abrupt changes to immigration policy. In particular, the Mexican government is concerned that the 1996 Illegal Immigration Reform Act will (1) result in a concerted effort to identify and deport undocumented workers and some documented workers and (2) make it more difficult for Mexican nationals living illegally in the United States to acquire legal status.

In another effort to deal with border entry issues, the U.S. and Mexican governments established a Border Safety Initiative in June 1998 to prevent injuries, deaths, and violence along the border. With increased enforcement at border entry points, aliens have shifted their crossing patterns to more dangerous river and desert crossings. This initiative warns potential illegal aliens through various media of the dangers in crossing the border at particular routes and targets search and rescue operations in hazardous areas. At a February 1999 meeting in Merida, Mexico, the United States and Mexico agreed to a memorandum of understanding on combating border violence.

[4]Section 110 of the Illegal Immigration Reform and Immigrant Responsibility Act of 1996 (P.L.104-208, Div.C).

Cross-Border Transportation

As commercial and private vehicle traffic associated with growing economic integration has increased, it has put stress on the local infrastructure. Long lines at some crossings impede local traffic movement, contribute to air pollution, and can raise business costs if merchandise and parts are delayed. Traffic congestion is caused in part by inadequate infrastructure at some crossings, resource management issues, as well as how the ports of entry are managed. Another major factor affecting congestion is the need to facilitate commerce and the movement of people across the border while at the same time protecting the nation against illegal immigration and contraband goods.

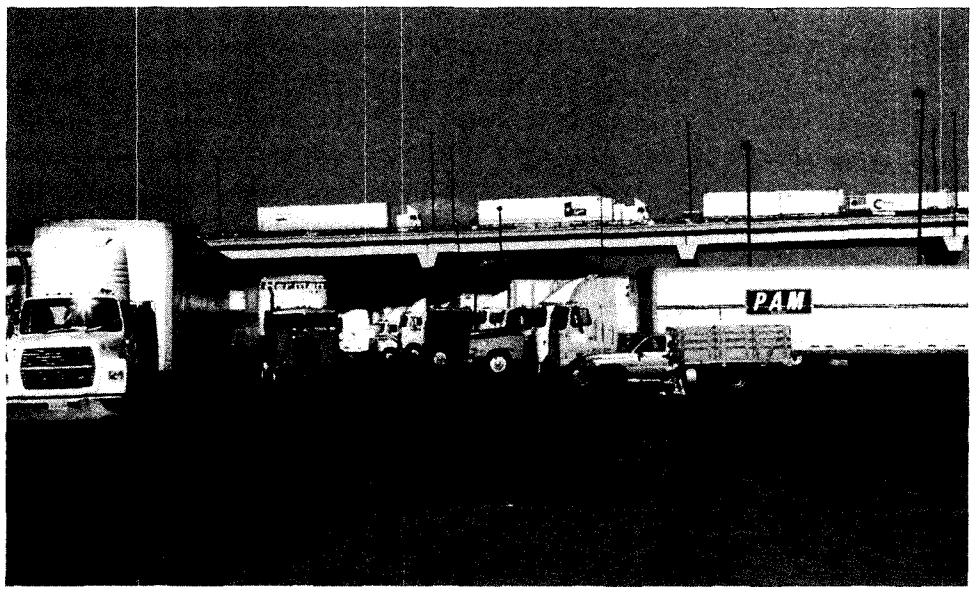
What Is the Nature and Extent of the Cross-Border Transportation Problem?

The growing volume of trade between the United States and Mexico has placed pressure on the local transportation infrastructure of border communities. Total trade between the United States and Mexico has increased from $75.8 billion in 1992 to $157.3 billion in 1997, and that year just under 10 percent of total U.S. imports entered the country from Mexico. Approximately 75 percent of U.S.-Mexico trade (measured by weight) crosses the southwest border by truck. According to the U.S. Customs Service, in fiscal year 1998 approximately 3.9 million trucks entered the United States from Mexico, a 30-percent increase from fiscal year 1996. At some ports of entry, such as Laredo, Texas, and Otay Mesa, California, as many as 2,500 commercial vehicles a day enter the United States. Commercial and passenger traffic volume can also be seasonal. For example, Nogales, Arizona, handles a high volume of fresh vegetables during the winter months. Cross-border passenger traffic generally increases around major holidays, particularly Christmas and Easter. The number of passenger vehicles entering the United States from Mexico also rose 12 percent during the 1996-98 period, from 76 million to 85.4 million. Currently, there are 45 ports of entry along the U.S.–Mexico border, according to the State Department;[1] however, the number is not static. A new port of entry recently opened in Brownsville, Texas, and new bridges are scheduled to open in Eagle Pass this year and Laredo, Texas, next year. The value of imports that crossed the U.S. border from Mexico in 1997 was $75.5 billion—Customs statistics show that SouthTexas district ports of entry processed $38.8 billion, the West Texas district handled $14.7 billion, the Arizona district processed $8.5 billion, and Southern California handled

[1]This includes two bridges currently under construction.

$13.5 billion.[2] These numbers illustrate the burden placed on the transportation infrastructure of the different communities along the border. Figure IV.1 illustrates trucks waiting for paperwork in the U.S. import lot in Laredo; the trucks on the bridge are heading into Mexico.

Figure IV. 1: Commercial Traffic in Laredo, Texas



Traffic associated with southwest border ports of entry has led to congestion of both commercial and passenger vehicles at some crossings, particularly older crossings that were built in downtown areas. This traffic has taxed the local and regional transportation infrastructure, and the resulting lines of traffic, which can run up to several miles during peak periods, are associated with air pollution caused by idling vehicles. Federal and local officials have also expressed concerns about how congestion affects safety around the ports of entry. Congestion can also have a negative impact on businesses that operate on a just-in-time schedule and rely on regular cross-border shipments of parts, supplies, and finished products. Custom brokers and local trucking companies also have an effect on the flow of traffic because their work is part of the process of moving goods across the border. Custom brokers process paperwork for

[2]The U.S. Customs Management Centers on the southwest border are South Texas, West Texas, Arizona, and Southern California.

exporting and importing goods; and trucking companies ship goods across the border.

Processing the high volume of commercial and passenger traffic while interdicting illegal contraband and immigrants and ensuring commercial vehicle safety presents a challenge for the multiple agencies working on the border. Customs and INS are the main, frontline agencies at the ports of entry that have contact with the public. Customs is the lead agency that processes commercial traffic, and its inspectors are responsible for searching vehicles for illegal drugs, illegal imported goods, and illegal immigrants. INS primarily focuses on processing pedestrians and passenger vehicles while also looking for contraband and immigration violations. Other agencies that may be at the ports of entry, depending on the goods imported, are the federal and/or state departments of transportation, the Food and Drug Administration, the Agricultural Plant and Health Inspection Service of the Agriculture Department, and the U.S. Fish and Wildlife Service. Customs subjects commercial vehicles entering the United States to a mandatory primary inspection. Inspectors check shipping documentation, track the truck's and driver's recent crossing history, and review vehicle and driver permits. At some ports of entry, Customs staff, assisted by National Guard staff, examine vehicles using canines, tools, and scopes. Trucks may then be selected for additional secondary examinations, such as full truck X-rays. There are also other inspections that may take place, such as a hazardous materials check or inspections by the Departments of Transportation and Agriculture, or the Food and Drug Administration. The result is that inspection facilities can be crowded during peak periods as trucks are off-loaded and inspected, or drivers wait for paperwork to be approved. At some ports of entry, Customs officials said that insufficient staffing also impedes the crossing process and leads to backups because not all available primary entry lanes can be opened to let trucks into the inspection compound.

A recent binational study published by the Joint Working Committee quantified costs associated with trade-related traffic between the United States and Mexico. The study estimated that wear on the U.S. border state highway systems was $113 million in 1995, while wear on U.S. nonborder highway systems was estimated at $62 million.

What Is Being Done to Address the Cross-Border Traffic Problem?

The U.S. and Mexican governments have several binational mechanisms to coordinate port of entry activities. These mechanisms take place at the national, state, and local levels. The primary binational mechanism at the national level is the U.S.–Mexico Binational Group on Bridges and Border Crossings. This group works out agreements for existing and potential bridges and border crossings and is coordinated by the U.S. State Department and its Mexican counterpart. The Joint Working Committee is another group that works on transportation planning at the local and national levels, with representatives from U.S. and Mexican states and federal governments. The Border Governors' Conference, which represents the four U.S. and six Mexican border states, focuses on addressing issues and opportunities of the border region, and promoting initiatives to improve the region's quality of life. The Western Governors' Association works on issues that affect the four U.S. border states, such as border congestion and air pollution, among other issues. At the local level, the Border Liaison Mechanism is coordinated by U.S. and Mexican consulates, and we have learned of informal U.S. and Mexican counterpart port of entry committees.

Perspectives differ on cross-border traffic problems. Mexican and U.S. federal and state government officials have told us they believe existing ports of entry should be used to their full capacity throughout the day before new ones are built. However, in both the United States and Mexico there is local interest in building new ports. In Texas, for example, toll revenues from bridges that cross the Rio Grande River provide a key source of revenue for local communities, counties, and private owners. The potential for receiving crossing revenue has, according to some observers, led to interest in building new crossings. According to local officials, rural areas and small cities have fewer resources to cope with the effects of cross-border traffic flow problems but may derive economic benefits from a port of entry.

Within the federal agencies at ports of entry, there are programs to improve interdiction efforts as well as port of entry management and operations. A recent undertaking is the Border Coordination Initiative, which is designed to increase cooperative interdiction efforts between Customs and INS. Some ports of entry also have instituted Port Quality Improvement Committees that bring together all agencies responsible for facilities and operations. In addition, some ports of entry have tried extending hours and opening more lanes to improve the flow of traffic as staffing and operating budgets have permitted.

Federal and local funding have been earmarked for various border infrastructure projects. Congress established the Southwest Border Stations Capital Improvements program in 1988 and appropriated $361 million for it, nearly all of which has been spent. Recently, the Transportation Equity Act for the 21st Century (TEA-21) authorized funding for border infrastructure projects as well as for high priority corridors, which may include border projects, totaling $140 million for each of fiscal years 1999 through 2003.[3] In Texas, a position was created for an assistant executive director for border trade transportation, along with a new border transportation initiative.

While many groups have reported on these problems and potential ways to solve them, and mechanisms are in place to serve as tools for coordinating operations along the U.S.-Mexico border, problems that have existed at the border crossings continue. In 1991 and 1997, we reported that private sector groups and federal, state, and local government officials were concerned about the adequacy of inspection facilities to accommodate increased commercial traffic expected with NAFTA, as well as with the adequacy of border-related road and highway infrastructure.[4] In 1994, the Border Infrastructure and Facilitation Task Force made short- and long-term recommendations for changes to bring about operational, infrastructure, institutional, and regulatory/legislative improvements. In addition, the binational Joint Working Committee issued its report in 1998, covering a wide range of border infrastructure issues and including an inventory of capacity estimates for ports of entry and analysis of the economic impacts of U.S.-Mexico trade on border communities. The Border Trade Alliance, a public-private coalition of individuals conducting business across U.S. borders, has also compiled a Southwest Border Port Capital Improvements Report for Fiscal Year 2000 that identifies potential port of entry capital improvements. Finally, the Western Governors' Association recently released a study on border congestion. The study's potential solutions to border congestion problems include better monitoring and staffing of vehicle inspection lanes at border crossings, adding additional inspection lanes where deficient, establishing average maximum queue times as an official goal, establishing a unified port of entry management system to coordinate efficient and rule-compliant

[3]P.L. 105-178, secs. 1101, 1118-19.

[4]See U.S.-Mexico Trade: Survey of U.S. Border Infrastructure Needs (GAO/NSIAD-92-56, Nov. 27, 1991) and Commercial Trucking: Safety Concerns About Mexican Trucks Remain Even as Inspection Activity Increases (GAO/RCED-97-68, Apr. 9, 1997).

movement of goods and people across the border, and encouraging users to cross the border at off-peak times.

Environmental Infrastructure and Public Health

Environmental problems and their impact on public health have been a long-standing concern in the border region. The United States and Mexico have not been able to keep pace with the growing environmental infrastructure[1] needs associated with the expansion of the border region's economy and population. While most incorporated border communities on the U.S. side have an environmental infrastructure, in places it is in need of repairs, upgrading, and/or expansion. The need for an environmental infrastructure is far greater on the Mexican side of the border, where many communities lack a clean and safe drinking water supply and proper sanitation facilities. Inadequate infrastructure on either side, however, creates health concerns on both sides of the border. Unsanitary living conditions are a leading cause of gastrointestinal and other diseases that are prevalent on the border. Moreover, there is a serious shortage of water in some locations. Many communities lack the resources and human capital to deal with these problems.

What Is the Nature and Extent of the Environmental Infrastructure and Public Health Problem?

Communities on both sides of the border face environmental problems associated with water and wastewater treatment, solid and hazardous waste disposal, and air pollution. During the 1993 debates over NAFTA, it was estimated that as much as $8 billion would be needed to meet the border region's environmental infrastructure needs during the next 10-year period.

Water and Wastewater Treatment

A diminishing supply of clean and safe drinking water supply and inadequate water distribution systems, as well as untreated wastewater, pose serious health risks for communities on both sides of the border. In Mexican border cities, about 12 percent of the population does not have access to drinking water, according to Mexico's National Water Commission. In addition, while 69 percent of the population live in residences connected to sewage collection systems, some of which are very old and have exceeded their useful life, the wastewater treatment plants in Mexican border cities treat only 34 percent of wastewater in the aggregate. In some areas, raw or insufficiently treated wastewater

[1]Environmental infrastructure refers to the infrastructure designed to protect human health and the environment along the U.S.-Mexico border by preventing and/or reducing the pollution of air, water, and soil.

eventually flows into surface and drinking water sources that are shared by both countries. Sewage disposal has been a particularly severe problem at Ciudad Juarez and Matamoros, cities with combined populations of well over 1 million residents, where no wastewater treatment capability currently exists. However, Ciudad Juarez is currently building wastewater treatment facilities.

On the U.S. side of the border, the vast majority of U.S. municipalities have EPA-approved, publicly owned wastewater treatment plants. In some communities, however, water and wastewater systems are at or near capacity and will need to be upgraded or expanded in the future. The colonias, however, face significant environmental infrastructure problems. These colonias, located mainly in Texas and New Mexico, typically have substandard housing and inadequate roads and lack access to clean drinking water and wastewater disposal systems. These problems are particularly severe in Texas, which has an estimated 1,200 colonias.

Agricultural runoff and irrigation return flows are a source of pollution in some U.S. border communities. The New River, which flows through Mexicali, Baja California, and the Imperial Valley of California before emptying into the Salton Sea, is one of the most polluted rivers in the United States. The pollution is caused in large part by runoff from farms in the Imperial Valley. Figure V.1 illustrates an irrigation canal polluted from agricultural runoff.

Figure V. 1: Agricultural Runoff Near Where the New River Enters the Salton Sea

Population and industrial growth also threaten the water supplies in arid regions along the border. For example, San Diego/Tijuana, according to some studies, will face serious drinking water shortages early in the next century. Authorities from the two cities hope to meet future needs with transfers of Colorado River water from agricultural areas in California's Imperial Valley and Mexico's Mexicali Valley. They are tentatively discussing the joint construction of an aqueduct for this purpose. In El Paso/Ciudad Juarez, the anticipated water shortages are related to the inadequate source of water. El Paso and Ciudad Juarez depend on the same aquifers for water, and these aquifers are rapidly being depleted. A binational study of the depletion of the aquifer is now underway, with a view toward taking corrective action.

Solid and Hazardous Waste Disposal

Many communities in the border region, particularly in Mexico, lack the infrastructure for collecting and properly disposing of solid waste. Mexican border cities often have waste management institutions that are beset with administrative deficiencies and lack adequate legal authority to regulate and collect user fees for services. These institutions often have too few reliable trucks to collect all the garbage. As a result, only 86 percent of household waste is collected, and only 53 percent of what is collected is deposited in sanitary landfills. In some Mexican communities,

waste is incinerated in the open, impairing visibility and diminishing air quality. In Nogales, Sonora, the burning of manure in the stockyards has posed a serious health risk to residents on both sides of the border.

In the U.S. border region, solid waste disposal problems are mainly restricted to the colonias, where solid waste collection is often inconsistent and inadequate. While officials of some U.S. border communities recognize the significance of the problem, they are concerned that extending solid waste collection to colonias may strain the capacities of current landfills.

Hazardous waste disposal is a growing problem in the border region. In Mexico, maquiladora plants generate the most hazardous waste in the border region. The Mexican government has required that this waste be returned for proper disposal to the country of origin of the raw materials, which is usually the United States. However, there are concerns about the proper disposal of hazardous waste generated by Mexican businesses. Mexico currently has only one hazardous waste disposal facility. The Mexican Secretariat for Environment, Natural Resources and Fisheries has identified several hazardous waste disposal problems in Baja California, including a lack of treatment, neutralization, or incineration systems for hazardous and toxic waste. The Secretariat has made the development of a hazardous waste infrastructure throughout Mexico a priority.

Air Pollution

Air quality is also a major concern in the border region because many residents of border cities are exposed to health-threatening levels of air pollution from a variety of sources. According to a 1996 Border XXI report,[2] 13 border cities exceeded or are expected to exceed at least one of the ambient air quality standards set by their respective federal governments. Rapid urbanization and industrialization are responsible for most of the air pollution problems in the border region. The citizens of El Paso, Texas, nearby Sunland Park, New Mexico, and Ciudad Juarez have long been exposed to high levels of air pollution. According to a local binational task force for improving air quality,[3] the sources of this pollution are emissions from the increasing vehicular traffic in the area, dust from unpaved roads and the surrounding desert, open burning, fireplaces and

[2]See p. 43 for a description of Border XXI.

[3]The Paso del Norte Air Quality Task Force was established in 1993 as Appendix I to the 1983 La Paz Agreement, with a mission to implement projects and promote policies to improve air quality in the area.

wood-burning stoves, and industrial activity. The region's arid climate and high elevation also contribute to the problem. In addition, the cities occupy a mountain pass known as the Paso del Norte, which is surrounded by mountains on three sides, forming a natural amphitheater that traps the pollution.

Obstacles Communities Face in Addressing Environmental Needs

Initiating and sustaining needed environmental infrastructure projects have long been problems for Mexican border communities as they face financial, administrative, and institutional obstacles. Local communities on the Mexican side of the border are dependent on a revenue-sharing system from the federal and state governments to finance infrastructure projects. However, the revenue available to most communities is uncertain because it is dependent on allocations made annually by legislative decree. Communities can turn to Mexico's National Bank of Public Works and Services as a source of credit for environmental infrastructure projects; however, the interest rates are too high for most communities. Municipalities do not have the option of raising capital outside of Mexico's domestic market, as the Mexican Constitution prohibits states and municipalities from incurring financial obligations in foreign currencies and/or with foreign creditors. This status is changing; for example, the Mexican Ministry of Finance assisted the North American Development Bank (NADBank) in establishing a nonbank financial subsidiary through which the NADBank is able to lend directly to municipalities in dollars.[4] Mexican border communities' strong dependence on the federal government has also limited their ability to gain the experience necessary to plan, develop, and manage public works projects. Further, when the local administration changes every 3 years, personnel in key management positions are removed and the institutional capacity that is developed is lost as well. As part of a federal effort to decentralize governmental decision-making, communities are now expected to assume more responsibility for planning and providing public services to their residents.

On the U.S. side, colonias also face financial and institutional obstacles to environmental infrastructure development. Since colonias are unincorporated settlements, they lack the basic financial and institutional mechanisms available to U.S. cities. Therefore, they do not have the tax bases and credit sources needed to borrow money. Further, jurisdictional

[4]NADBank is discussed on p. 41.

disputes about service areas among cities, counties, and rural water districts have left the colonias without basic services.

Linkage Between the Environment and Public Health

Contamination of air, water, and soil by solid waste, raw sewage, and untreated wastewater, which facilitates the growth of parasites, bacteria, and other pollutants, is suspected to be a key factor contributing to the presence of certain diseases in border populations. These include respiratory diseases, elevated blood lead levels in children, cancer, hepatitis A, and infectious gastrointestinal diseases. An outbreak of a disease on one side of the border poses a potential threat to both countries because of the daily flow of people back and forth between the United States and Mexico. The high level of poverty in the border region is also a likely factor in the high level of diseases found in the region.

According to the Interhemispheric Resource Center,[5] about one-third of the U.S. tuberculosis cases reported for the first 10 weeks of 1998 were from the four U.S. border states. During that same period, Mexico's border states, representing about one-sixth of Mexico's population, accounted for about 61 percent of the country's new tuberculosis cases. Health officials of both countries have been particularly concerned about the increased number of multi-drug-resistant tuberculosis cases in the border region.

Further, according to Texas officials, neural tube birth defects, which affect the brain and spinal column, occur more frequently in the Texas border region than in the rest of the United States. Examples of these birth defects include anencephaly, or babies born with partial or missing brains; and spina bifida, a severe deformation of the spinal cord. Also, between 1994 and 1997, cases of hepatitis A, a gastrointestinal virus borne by contaminated food and water, occurred on the U.S. side of the border at rates from 2 to 5 times the national average.

In addition, on the Mexican side of the border, communities have been confronted with a disproportionately high level of intestinal infectious diseases which are extremely rare in the United States.

[5]The Interhemispheric Resource Center is a nonprofit organization in New Mexico that was founded in 1979. This information on tuberculosis was reported in the May 1998 issue of its monthly bulletin, titled Borderlines.

Many people who live on the U.S. side of the border also lack access to affordable healthcare. This situation contributes to the lower rates of immunizations of children on the U.S. side of the border. The rate for measles is 50 cases per 100,000, versus a U.S. national average of 11 per 100,000. The rate for mumps has been documented as high as 41 per 100,000, versus a U.S. national average of 2 per 100,000. The U.S. side of the border also has a shortage of healthcare providers. In 1998, 27 of Texas' 43 border counties were designated as Health Professional Shortage Areas for primary medical care.[6]

What Is Being Done to Address Environmental and Public Health Problems?

The United States and Mexico have created institutions to deal with environment and health issues. The oldest of these key institutions is the International Boundary and Water Commission, created in 1889, which is responsible for maintaining the boundary between the United States and Mexico and managing issues involving the waters of the Rio Grande and Colorado rivers.[7] The Commission's responsibilities also include designing, constructing, operating, and maintaining certain wastewater treatment facilities along the border. In recent years, the Commission has participated in the development or expansion of three treatment plants, one serving Tijuana, Baja California; one serving Nogales, Arizona, and Nogales, Sonora; and one serving Nuevo Laredo, Tamaulipas.

Concern about the environmental impact of increased industrial production and transportation led to a NAFTA environmental side agreement. This agreement established two binational organizations--the Border Environment Cooperation Commission (BECC) and NADBank--to promote the planning and financing of environmental infrastructure projects in the border region. These organizations were created to help border communities develop and finance environmental infrastructure projects that will address hazardous human health and environmental conditions.

[6]The U.S. Department of Health and Human Services defines an area with fewer than one primary care provider for every 3,500 residents as a federal Health Professional Shortage Area if physicians are not within a reasonable distance. The designations may apply to primary medical care, dental services, or mental health services.

[7]This organization was known as the "International Boundary Commission" until it was reconstituted as the International Boundary and Water Commission on February 3, 1944.

BECC's primary purpose is to certify that project proposals meet criteria for technical and financial feasibility and sustainability. In establishing the scope of projects to be considered, the board of directors limited the types of projects to water, wastewater, and solid waste based on guidance in BECC's charter. BECC emphasizes the importance of sustainability because, in the past, projects have been built in poor border communities with grants and other assistance but then could not be properly maintained due to the communities' limited financial resources. BECC also provides technical assistance to border communities with project development activities, including devising plans, creating project designs, and performing environmental assessments. As of May 1999, BECC had approved over $11 million in technical assistance grants to border communities. BECC also works to ensure public support for projects.

The Border Utility Management Institute, a new program of NADBank, is directed at addressing the problem of the municipalities' limited experience in undertaking public works projects by providing funding for the development of the financial and administrative capacities of utility managers and their staffs. NADBank is also directing its technical assistance grant monies to address the problem of turnover in local administration management, with over 90 Institutional Development Program projects in the region.

Projects certified by BECC qualify to be considered for financial assistance through NADBank and/or other funding sources. NADBank's primary role is to facilitate financing for the development, execution, and operation of environmental infrastructure projects that have been certified by BECC. The United States and Mexico have agreed to provide $225 million each to capitalize NADBank, which can be used to make loans and loan guarantees to border communities for border infrastructure projects. NADBank also administers EPA's funds through its Border Environment Infrastructure Fund, which provides grant money for water and wastewater environmental infrastructure projects. The EPA grant funds may be used for projects on the Mexican side, within 62 miles of the border, if there is a transboundary impact of the infrastructure deficiency.

As of June 1999, BECC had certified 27 projects. NADBank has been involved in providing construction funding for 14 of these projects. NADBank's participation has been mainly in the form of loans and Border Environment Infrastructure Fund grants. According to NADBank, it has provided loans to 7 projects, for a total of $11.1 million, while providing a total of $119.3 million in Border Environment Infrastructure Fund

construction grants. For example, NADBank provided a $4.6 million loan and $11.1 million in a Border Environment Infrastructure Fund construction grant for a $31.2 million wastewater treatment plant in Ciudad Juarez, Chihuahua. The loan for this project accounts for 41 percent of the total NADBank funds used for loans. These amounts represent a small percentage of the billions needed to meet the border area's environmental infrastructure needs.

Border environmental infrastructure development involves many federal, state, and local agencies. EPA has played a central role as a source of grant funds for environmental infrastructure projects on both sides of the border. Other federal agencies, including the Department of Housing and Urban Development and the Department of Agriculture, provide grants for environmental projects in poor and rural areas such as colonias. Border State governments also provide loans and grants for environmental infrastructure development through state revolving funds and tax-exempt municipal bonds for environmental infrastructure financing.[8]

Coordination efforts between the United States and Mexico under the La Paz Agreement have involved EPA and the Mexican Secretariat for Environment, Natural Resources and Fisheries. In 1992, the two governments issued the Integrated Environmental Plan for the Mexican Border Area, which linked long-term economic growth and environmental protection. The United States and Mexico subsequently developed an expanded planning and coordination mechanism known as Border XXI. Border XXI is intended to be a comprehensive program designed to achieve a clean environment, protect public health and natural resources, and encourage sustainable development. It emphasizes three strategies: (1) public participation in project development; (2) decentralized environmental management and building the capacity of local and state institutions to deal with environmental problems; and (3) interagency cooperation to maximize available resources, avoid duplicative efforts on the part of government and other organizations, and reduce the burden that coordination with multiple entities places on border communities. The U.S.-Mexico Binational Commission also has a Working Group on the Environment and Natural Resources.

[8]State revolving funds were established by the Water Quality Act of 1987 as a primary source of financing for wastewater treatment facilities and related purposes at the state level. They provide states with federal seed money in the form of grants to capitalize their revolving funds. The states use their revolving funds to make loans at or below market interest rates to local governments, and, as loans are repaid, the funds are replenished.

Border public health issues are being addressed by a number of organizations. For example, the U.S.–Mexico Binational Commission's Health Working Group provides an annual forum for reviewing progress on priority health issues. The Pan American Health Organization, an arm of the World Health Organization, convenes and oversees the U.S.–Mexico Border Health Association, which was created in 1943. The Association is a mechanism for health professionals along the border to foster communication on both sides of the border, identify local health needs, and recommend ways to meet those needs.

In addition, Congress authorized the establishment of the U.S.-Mexico Border Health Commission in 1994 (P.L. 103-400). The Commission's goals are to (1) institutionalize a domestic focus on border health and (2) create a venue for binational discussion to address public health issues and problems that affect U.S.-Mexico border populations. Congress appropriated $800,000 in fiscal year 1998 to assist in the creation of the U.S. Section of the Border Health Commission. The 13 U.S. Commissioners have been selected, but 8 remain to be appointed by the President.[9] Efforts are underway to explore the potential for Mexico's eventual participation, with the goal of making the Commission a binational forum.

Another binational effort is the Ten Against TB [tuberculosis] Campaign, led by the 10 border state health officers in the U.S. and Mexico. It is addressing the problem of tuberculosis on the border, working with federal and nongovernmental partners. The Ten Against TB Campaign has developed a four-part strategy to improve surveillance and epidemiology, laboratory analysis, health promotion, and case management. In addition, at a meeting on February 15, 1999, in Merida, Mexico, Presidents Clinton and Zedillo signed a Memorandum of Understanding on Cooperation in Prevention and Control of Tuberculosis, recognizing that the reemergence of tuberculosis is a major threat to global health.

Finally, the U.S.-Mexico Binational Surveillance Project has been implemented to develop a more comprehensive binational surveillance system for public health problems. Funded by the National Center for Infectious Diseases and the Centers for Disease Control and Prevention, the project targets three partner city units: San Diego-Tijuana, El Paso/Las Cruces-Ciudad Juarez, and McAllen-Reynosa.

[9]Five of the commissioners are mandated by statute: the Secretary of Health and Human Services as chair, plus the four border states' Border Health Officers.

Current and Emerging Challenges to Economic Development in the Border Region

In addition to the existing problems of relatively high unemployment and poverty on the U.S. side of the border, large projected population growth, internal migration within Mexico, and a change in the rules governing the Mexican maquiladora industry could potentially affect economic development challenges already existing on the border. Efforts to address job dislocations due to NAFTA trade shifts and to alleviate the high level of poverty in the border region are already underway, including regional economic development initiatives. To what extent they address border development is not yet clear. In addition, the changes in the maquiladora industry rules in 2001 could potentially change business incentives to locate in the border region.

Initiatives to Address Unemployment and Economic Development

Although the United States as a whole has made great economic progress in the past few years, some communities in the border region have not shared in this prosperity. For example, unemployment in the U.S. border region between November 1997 and November 1998 was 7.4 percent, compared with 4.8 percent for the United States as a whole. Approximately 24 percent of the population living in U.S. border counties lived in poverty in 1996,[1] and only about 61 percent of the population 25 years and over held a high school diploma.[2] Moreover, the population of the U.S.-Mexico border region, which in 1997 was 10.5 million, is expected to double in the next 20 years.

The U.S. government is addressing worker and job dislocations in the border through programs such as the NAFTA Transitional Adjustment Assistance Program and the U.S. Community Adjustment and Investment Program administered by NADBank. The NAFTA Transitional Adjustment Assistance program was designed to assist workers in companies affected by U.S. imports from Mexico or Canada or by shifts in U.S. production to either of those countries. The program provides cash payments, job training, or allowances for job search and relocation expenses.

Another program designed to deal with the job dislocation effects from NAFTA trade is the U.S. Community Adjustment and Investment Program. This program helps stimulate financing by providing loans, loan guarantee fees, and grants to create or retain private sector jobs in communities

[1]Poverty rate estimates are our calculations based on Census data. The Census data has a 90-percent confidence interval.

[2]As reported by the Southwest Border Region Partnership, January 20, 1999.

evidencing significant job losses due to changes in trade patterns with Canada or Mexico after the passage of NAFTA. Authorizing legislation and a fiscal year 1999 appropriation provide up to $32.5 million to fund the program. There is a similar program in Mexico. While the Community Adjustment and Investment Program is not directed at the border alone, program officials report that all U.S. NADBank border counties are now eligible for the program (a total of 43 eligible border counties). As of May 1999, the Community Adjustment and Investment Program, including its agency program with the Small Business Administration, had facilitated 88 loans or guarantees for border communities, totaling $20.1 million. In addition, the program had approved one direct loan in El Paso, Texas, amounting to $1 million. The program's pilot grant project was located in Dona Ana, New Mexico, and granted $600,000 to the New Mexico Border Authority to aid in the reemployment of displaced workers in the region.

The U.S. Department of Housing and Urban Development and the U.S. Department of Agriculture also have efforts underway to deal with border poverty: the Empowerment Zone and the Enterprise Community program. This program provides tax and regulatory relief to attract businesses to distressed urban and rural communities. Several border communities in all four states have been designated Empowerment Zones or Enterprise Communities. For example, the Arizona Border Region Enterprise Community developed a plan that addressed economic, environmental, and education/training improvements for its community.[3] In Texas, the Rio Grande Valley Empowerment Zone reports that it has already achieved several objectives, including business development activities such as providing loans, a high-skills training program serving over 866 individuals, and eight waste/wastewater projects.[4]

Organizations such as the Border Trade Alliance, and the Texas Comptroller, have called for a unified approach to solving the region's problems. Specifically, the Border Trade Alliance supports the Southwest

[3]The Arizona Border Region Enterprise Community includes the counties of Cochise, Yuma, and Santa Cruz.

[4]The Rio Grande Valley Empowerment Zone includes the counties of Cameron, Hidalgo, Starr, and Willacy. In a review of the progress of six Empowerment Zones, including the Rio Grande Valley Empowerment Zone, we reported that the Rio Grande Valley Empowerment Zone had initiated action on all 10 of the economic development activities planned. See Community Development: Progress on Economic Development Activities Varies Among the Empowerment Zones (GAO/RCED-99-29, Nov. 25, 1998). For more information on other border region rural and urban Empowerment Zones and Enterprise Communities, see the Departments of Agriculture and Housing and Urban Development websites, respectively, at http://www.ezec.gov and http://www.hud.gov/cpd/ezec/ezeclist.html.

Border Region Partnership, a grassroots organization proposing to resolve regional problems through economic and community development strategies. The recommended objectives of the Partnership are to (1) develop a strategic plan, including benchmarks, that addresses the five major development issues: infrastructure, economic development, education, health, and the environment; (2) create a community development bank and community development fund for revolving loans and grants for business and infrastructure; (3) increase job creation and retention opportunities; (4) provide technical assistance, capacity building, and leadership training to communities; (5) actively seek partnerships and investment; and (6) become sustainable within 5 years.

On May 25, 1999, the White House announced the launching of the Southwest Border Economic Development Initiative, which includes the formation of an Interagency Task Force on the Economic Development of the Southwest Border. The mission and goal of the Task Force reflect the need to coordinate the federal and local economic development efforts to raise the living standards and overall economic profile of the southwest border region on a sustained basis.

The Interagency Task Force will include members from numerous relevant federal agencies, such as the Departments of the Treasury, Agriculture, State, Labor, and Housing and Urban Development. It will seek to mobilize a more integrated, rapid response by federal agencies to community economic development strategies by (1) analyzing existing programs and policies of member agencies; (2) consulting and coordinating activities with state and local authorities, community leaders, Members of Congress, and other stakeholders; (3) developing short- and long-term options for promoting sustainable economic development; and (4) integrating executive branch initiatives and programs into concrete, effective actions. According to the announcement, the first step in implementing these efforts will be to establish demonstration projects in pilot communities.

Pending Changes in Maquiladora Rules

The Maquiladora Decree that governs the maquiladora program was revised by the Mexican government to accommodate new rules established by NAFTA in 1994. The maquiladora rule changes, which will be fully implemented by 2001, may affect business incentives to locate in the border region. NAFTA provides for the gradual elimination of restrictions limiting maquiladora production sales into the domestic Mexican market

by 2001.[5] NAFTA also provides for the phased elimination of U.S. import duties on maquiladora products, provided those products meet the NAFTA rules of origin. In the year 2001, Mexico will restrict the duty preferences available to maquiladoras for raw materials originating outside NAFTA countries used in the manufacture or assembly of finished products.[6] Changes brought about by NAFTA and Mexican law, which together eliminate virtually all restrictions on foreign investment in the manufacturing sector, will make it unnecessary to establish a maquiladora facility to assemble goods in Mexico.[7]

Observers of the border economy, such as the Federal Reserve Bank of Dallas, the Texas Comptroller's Office, and the U.S. Department of Commerce, agree that several scenarios involving the maquiladora industry are possible as a result of the changes brought about by NAFTA. These changes range from a virtual elimination of the maquiladora program to modifications to business practices. For example, expected elimination of duty preferences for non-NAFTA suppliers to the maquiladora industry could make U.S. and Canadian suppliers more competitive with the existing non-NAFTA suppliers, possibly leading to a shift in trade. In anticipation of Mexico's policy change on duty relief, maquiladora producers have encouraged non-NAFTA suppliers, such as Asian suppliers, to relocate to North America in order to guarantee that duty-free treatment would remain unchanged. However, it is too early to predict what the effects of the changes in the maquiladora law will be for the border region.

[5]Provided that certain Mexican customs and other requirements are met. For example, products sold into the Mexican domestic market must also satisfy nontariff requirements, such as Mexican official standards, and must be of the same quality as the finished products produced for export.

[6]Currently, maquiladora companies may obtain duty-preferences on inputs obtained from any supplier country. After 2001, maquiladora companies will only be able to receive duty-preferences on inputs from NAFTA countries.

[7]Although maquiladoras will no longer exist under NAFTA as a separate sector, production-sharing will likely continue due to Mexico's comparative advantage in low-wage labor.

Objectives, Scope, and Methodology

Concerned about the U.S.-Mexico border area's ability to deal with a variety of issues associated with the increased economic integration with Mexico and the ability of the area to access federal funding, members of the House Congressional Border Caucus asked us to undertake a broad review of border issues. As agreed with the requesters' offices, the objective of this interim report is to present an overview of major border issues. Specifically, we identified (1) the nature of major issues faced at the border, and (2) the U.S. and Mexican efforts underway to address them.

To obtain information on the nature of major issues faced at the border, and the U.S. and Mexican efforts underway to address them, we conducted an extensive literature search and reviewed a variety of government studies and documents, including State Department information on U.S.-Mexico relations. Based on this preliminary review, we selected the following five major issues as a focus for this work: (1) drug enforcement, (2) illegal immigration, (3) cross-border transportation, (4) environmental infrastructure and public health, and (5) economic development. To establish the nature of the issues and the efforts being made to address them, we relied heavily on the results of related past GAO studies that addressed specific U.S. programs and activities. We also interviewed agency officials and/or reviewed documents from the Departments of State, Agriculture, Commerce, Defense, Health and Human Services, and Housing and Urban Development; and Drug Enforcement Administration, INS, and the Office of National Drug Control Policy, as well as numerous state and local agencies and private sector organizations. The information on foreign laws in this report does not reflect our independent legal analysis, but is based on interviews and secondary sources.

Our ongoing detailed evaluation of the transportation and environmental infrastructure issues also included interviews with officials and review of documents from the Departments of Agriculture, State, and Transportation; EPA; INS; U.S. Customs Service; Food and Drug Administration; General Services Administration; and state, local, and private sector officials. We also attended various conferences on border environment and transportation infrastructure issues and visited Mexico City, where we interviewed U.S. embassy and key Mexican government officials, including officials in Mexico's Secretariat for Foreign Relations. In addition, we obtained and analyzed data on activities at major border crossings and environmental infrastructure projects during case studies at key sister cities along the border, including San Diego-Tijuana, El Paso-Ciudad Juarez, Laredo-Nuevo Laredo, Nogales-Nogales, Brownsville-Matamoros, Calexico-Mexicali, and Douglas-Agua Prieta. At these locations, we met

with U.S. and Mexican federal, state, and local governmental officials; a variety of officials representing the private sector and nongovernmental organizations; and representatives from various U.S.-Mexico coordinating mechanisms. The meetings with U.S. and Mexican consuls general and consuls at the key sister cities provided excellent perspective on the wide range of border issues. As we continue our in-depth case study analyses of transportation and environment issues, we plan to identify potential strategies to overcome the institutional and programmatic challenges that impede improved conditions on the border.

We performed our review from February through June 1999 in accordance with generally accepted government auditing standards.

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