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**NAFTA Plus 5, On the Right Track?
An Assessment of the BECC/NADBank Institutions
2nd Edition**

by
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January 1999

Executive Summary

In January 1994 two new US/Mexico border institutions were created to clean up the border environment. They received initial funding in early 1995 and hired staff and set policy during that same year. Thus, they began to function in 1996 and have been fully operational for about 3 years. The predominant public perception is that these institutions have failed to meet their mandates to improve the environment. A more objective analysis, however, concludes that the creation and operation of the Border Environment Cooperation Commission (BECC) and the North American Development Bank (NADBank) have resulted in fundamental and positive changes in how environmental issues are addressed in the border region, and as environmental infrastructure projects are constructed over the next 3 to 5 years, there should be measurable environmental benefits.

- The BECC has certified twenty-six environmental infrastructure projects with a total value of \$615 million and benefiting over 7 million border residents.
- The BECC has provided \$6.5 million in technical assistance to 39 projects.
- The NADBank has participated in the financing of fourteen of the twenty-six projects.
- The NADBank has provided \$4 million in technical assistance to 71 projects
- Fourteen of the twenty-six projects are currently under construction, and one has been completed.
- The BECC and NADBank represent a practical attempt to implement the principles of sustainable development into environmental infrastructure development and management.
- The BECC and NADBank have begun the arduous process of community institution capacity building
- The BECC certification process has facilitated democratization of decision-making, which may have a lasting impact on the quality of life in local communities along the border.
- With strong procedures for public participation in place, and continued progress toward capacity building, it is now reasonable to expect a more rapid and effective effort to address the border's environmental and health problems.
- The BECC and NADBank have the potential to serve as a new model for international development that legitimately promotes transparency, public participation, democratization and sustainable development.

There is room for improvement, however. To continue on the path toward fulfilling their mandate, we recommend that the BECC and NADBank take the following steps:

- The BECC should resist calls to relax its certification criteria and process, but must apply them in a consistent and fair manner.
- The NADBank should exert more efforts toward interactive relations with the border public and ensure its decision-making is more transparent
- The BECC and the NADBank should get more individuals and organizations involved in the process of development of border environmental infrastructure.
- The BECC and the NADBank should consistently and predictably follow their own procedures for public comment and participation.
- The BECC and the NADBank should increase its outreach to the private sector, especially engineering, planning and development firms, and ensure their involvement in project development.
- The BECC and the NADBank must attract borrowers other than communities, including non-governmental organizations (NGOs), universities and most importantly the private industrial sector.
- The BECC should seek more funds and support for project development to identify and design solutions to community needs.

- The BECC and NADBank must secure more grant funds to develop and finance more projects for small and poor communities.
- The BECC and NADBank should continue their efforts to coordinate with each other in their individual activities to help facilitate project development and implementation.

As Congress and the Administration consider the continued pursuit of trade liberalization, the BECC/NADBank experience offers some lessons in mitigating environmental problems through the creation of development lending institutions. From these lessons, we can make the following recommendations for the future.

- Parallel institutions such as the BECC and NADBank can address the broader implications, consequences and benefits of economic integration through improvements in infrastructure, public health, environment, democratic and social reforms, as well as practical implementation of sustainable development goals and criteria.
- Future efforts at institution building need to be more sensitive to the structure of and relationships between existing institutions.
- The World Bank and the Inter-American Development Bank (IDB) should be reformed to reflect the lessons learned in the creation and implementation of the BECC and the NADBank. Special attention should be paid to the BECC project certification criteria.
- A “BECC-like institution” might be appended to the existing World Bank and the IDB to facilitate citizen participation and sustainability in the development decisions of national government and local communities.
- Policymakers should not create unreasonable expectations of overnight improvement of environmental and health conditions that took decades to create.

This is the revised edition of our assessment of the BECC/NADBank institutions. Much of this edition is taken from our first edition: “Promising Potential for the U.S.-Mexico Border and for the Future: An Assessment of the BECC/NADBank Institutions” November 1997, by Mark Spalding and John Audley, however it has been updated and expanded. The author thanks the National Wildlife Federation for funding this research and Laura Durazo of Proyecto Fronterizo de Educación Ambiental, Tijuana, BC, Mexico, for translating the paper to Spanish. In addition, Laura Durazo provided important binational perspective suggestions to strengthen the analysis.

This paper is the product of meetings between Mark Spalding and John Audley and numerous people involved in BECC and NADBank activities. Special thanks go to Mary Kelly and Cyrus Reed of the Texas Center for Policy Studies; Dr. Rene Franco Barreno of Franco y Asociados; Professor Roland Simon Arriola of the University of Texas Pan American; Francisco J. Nunez Sanchez, Director de Saneamiento, Ciudad Juarez; Peter S. Silva, Deputy General Administrator, Border Environment Cooperation Commission; Victor Miramontes, General Manager, North American Development Bank; Dr. Carlos Rincon and Pete Emerson, the Environmental Defense Fund; and Lynda Taylor of the Southwest Research and Information Center. Special thanks go to Michael Gregory whose knowledge and expertise on border issues are reflected in this document.

The following individuals provided invaluable comments and direction on this 2nd edition: Andrea Abel, John Audley, Victor Miramontes, Raul Rodriguez, Pete Silva and Lynda Taylor.

All errors are the responsibility of the author.

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La Frontera: **A Contrast in Wealth and Poverty**

Anyone who has visited or lived in the Mexico-U.S. border region over the past twenty-five years cannot help but be struck by the irony created by the juxtaposition of so diverse an ecosystem and wildlife habitat, incredible industrial and agricultural wealth, yet unimaginable human poverty and environmental degradation. To outsiders it is a harsh region divided by national boundaries, as well as economic and political stratification. But for regional natives, the roughly 100 km wide area along both sides of the international boundary is the synthesis of these contrasts. Woven together by its unique political and cultural history, *La Frontera* is a place like nowhere else on earth.

The border region encompasses freshwater lakes and streams, delicate marine, estuarine and coastal strand systems; deserts, grasslands and savannas; and several forest and woodland areas. The western border region consists of the deserts of southwest U.S. and northwest Mexico. Here the varied terrain zones jump from sea level to 10,000 feet in a matter of miles, aided by virtue of island mountains that emerged from an ancient seabed that stretches as far north as southern Colorado. The Rio Grande River lines the eastern region. From El Paso/Juarez, it wanders through the eerie canyons of the Big Bend National Park, then heads east into the fertile land of the Rio Grande Valley, and finally empties into the Gulf of Mexico. Other biologically significant preserves, including some world famous areas, blanket much of the region, providing all forms of plant and animal life a safe, secure living environment. Among these are Organ Pipe Cactus National Monument, Cabeza Prieta National Wildlife Refuge, El Piñacate y Gran Desierto de Altar Reserva de la Biósfera, Alto Golfo de California y Delta del Rio Colorado Reserva de la Biosfera, Maderas Del Carmen Área de Protección de Flora y Fauna, and Cañon de Santa Elena Área de Protección de Flora y Fauna.

- The borderlands have the highest rate of species endangerment in the United States.
- Thirty-one percent of the species listed as threatened or endangered by the DOI are found in the borderlands.
- In those states within the borderlands with the greatest natural diversity the rates of endangerment are the highest for those species found along the boundary. Forty percent of California's endangered species, 60% of Arizona's, 72% of New Mexico's, and 76% of Texas' are borderland species.
- On the Mexican side of the border there are 85 species of plants and animals in danger of extinction. There are also 450 endemic species and 700 migratory species found in the border area.
- Unfortunately, the border's many parks may need protection from encroachment by urban sprawl.¹

In the last forty years, the border region has become a center for North American economic activity. Along with rapid industrialization and accompanying population growth came additional pollution and waste burdens on this fragile ecosystem, burdens requiring responses from local, state, and national governments. Now, focused around twelve communities where residents, economies, and cultures are divided by an international boundary, these "sister cities" are home to more than 11 million people and over 1,700 national and international companies. These development pressures threaten this region with overuse and abuse of water and other natural resources and pose risks to the health and welfare of its people.

¹ Spalding, Mark and Joanna Salazar "Adjacent US- Mexico Border Natural Protected Areas: Protection, Management And Cooperation" (Center for US-Mexican Studies forthcoming).

The Political Response: The BECC and NADBank

In 1994, the governments of Mexico and the United States initiated two new border-focused, binational institutions, the Border Environment Cooperation Commission (BECC) and its sister financial institution the North American Development Bank (NADBank), both products of the politics of the North American Free Trade Agreement (NAFTA) negotiations. In the latter stages of the NAFTA negotiations, President Clinton had not yet secured support from southwest legislators who believed that the negative aspects of North American economic integration would be unfairly imposed on their constituents. Led by Representative Esteban Torres (D-CA), they argued that the NAFTA must also help correct the long-standing environmental and human health problems facing border communities. For its part, the Clinton Administration called upon a small number of local and national environmental groups to help it design a way to pay for the environmental clean up along the border. With support from the Mexican government, the Clinton Administration offered to negotiate a bilateral agreement to provide planning and financial support to address these regional problems. This second major NAFTA supplemental agreement -- *the Agreement between the Government of the United States of America and the Government of the United Mexican States Concerning the Establishment of a Border Environment Cooperation Commission and a North American Development Bank* (The BECC/NADBank Agreement) -- was born when the NAFTA was approved by Congress in 1993 and took affect together with the NAFTA on January 1, 1994.

The goals of and relationship between the two organizations are straightforward: using a citizen-based, binational process, BECC officials assist in the development of border environmental infrastructure projects capable of securing private sector financing.² BECC-certified projects are then eligible for funding assistance from the NADBank, whose job is to utilize its own capital, as well as funds it raises in financial markets and other available resources, to help make these projects a reality.³ The NADBank's financial assistance (loans, guaranties and grants) is exclusively for BECC-certified projects. The BECC and the NADBank must work with states and local communities, private investors and non-governmental organizations in developing effective solutions to environmental problems in the border region, giving preference to projects involving water supply, wastewater treatment, municipal solid waste management and related matters. In short, using regional expertise and access to national and international funds, the BECC and NADBank are charged with repairing decades of environmental degradation by developing and financing badly needed environmental infrastructure, all under the political spotlight created by the passage of the North American Free Trade Agreement.

From their inception, both the BECC and the NADBank focused on a very narrow mandate. First, the more public-oriented BECC was made separate from its financial institution cousin to avoid it being driven by finance considerations only. Second, the NADBank was limited to only financing projects certified by the BECC to assure that only sustainable development projects were financed. Sustainable development concepts require that "[d]evelopment today must not undermine the development of present and future generations."⁴ This means that BECC/NADBank projects must not adversely harm the environment or local culture. At the same time, the projects must improve the quality of life for those living on the border. In contrast, at the World Bank and the Inter-American Development Bank, a project's financial viability is determined and then it is given an

² BECC/NADBank Agreement, Preamble, Chapter I, Articles I, II.

³ BECC/NADBank Agreement, Chapter II, Article I, Section 2.

⁴ This definition of sustainable development is from the World Conference on Environment and Development of 1987 (see the Brundtland Report: World Commission on Environment and Development, *Our Common Future*, Oxford University Press, (1987)) and was reaffirmed and made part of the Rio Declaration on Environment and Development. It has been incorporated into the NAFTA regime by inclusion in the preamble of the environmental side agreement and by inclusion in the sustainable development criteria for certification of BECC/NADBank projects.

environmental review. This focus makes the BECC/NADBank structures unique in the world of development-banks by reversing the priorities.

The *Border Environmental Cooperation Commission* (BECC) with headquarters in Ciudad Juarez, Chihuahua, Mexico, was created to assist local communities and other sponsors in developing and implementing environmental infrastructure projects, and to certify projects for *North American Development Bank* financing. BECC is augmented by \$10 million in grant funds from U.S. Environmental Protection Agency (EPA) for its Project Development Assistance Program (PDAP). The BECC has a binational Board of Directors with 10 members, five from each country, and decision-making procedures structured to ensure that the views of states, local communities, and members of the public are taken into account. The Commission is required to consult with an Advisory Council of 18 members, nine from each country. A General Manager, a Deputy General Manager and a small staff operate the BECC. Each country contributes an equal share of the operating budget of the Commission.

The *North American Development Bank* (NADBank) with headquarters in San Antonio, Texas, is capitalized in equal shares by the United States and Mexico to provide \$3 billion in new financing to supplement existing sources of funds and leverage the expanded participation of private capital.⁵ The NADBank was augmented in 1997 by the creation of the Border Environmental Infrastructure Fund (BEIF) which can provide grants for water and wastewater project construction. The BEIF started with approximately \$170 million available, much of which has now been allocated to projects. The NADBank has also established an Institutional Development Program (IDP) primarily for utility capacity building.⁶ IDP has \$4 million available to give as grants. NADBank made its first BEIF grant recommendations in March 1998, and IDP is currently active in 71 projects in 56 communities.⁷ The NADBank has a binational Board of Directors with 6 members, three federal agency representatives from each country. A Managing Director, a Deputy Managing Director, and a small staff operate it. Each country contributes an equal share of the capitalization of the NADBank, and its operating budget comes from the investment of its unloaned capital.⁸ Unlike the BECC, the NADBank operates without a public advisory board.

Now just beginning their fourth year of active operation, these two institutions are occasionally forced back to center-stage of U.S. politics by Western Hemisphere trade negotiations and deeply rooted hostilities toward the NAFTA. National interest groups opposed to trade liberalization, in particular organized labor, and some consumer and environmental groups, argue that the performance of the BECC and NADBank is a record of “broken promises” made by the Bush and Clinton Administrations to gain political support for the NAFTA.⁹ Assertions against the BECC and NADBank made by these interest groups were bolstered by a 1996 General Accounting Office

⁵ Mexico and the U.S. have each contributed half of the \$450 million in paid-in capital and half of the \$2.55 billion in callable capital. Paid-in capital is used for direct loans, interest rate buy downs and to guarantee loans from the financial market. Callable capital can only be used for guarantees, but comes with the “full faith and credit” of the two nations. It has been estimated that leveraging these moneys could produce \$10 to \$20 billion for environmental and social adjustment projects.

⁶ In a parallel move, the EPA has also provided \$17 million in direct grants to tribes for this same purpose.

⁷ Per Victor Miramontes personal communication.

⁸ North American Development Bank, *Annual Report 1996*. (San Antonio: North American Development Bank), at pp. 6-8.

⁹ Public Citizen, *NAFTA's Broken Promises: The Border Betrayed*. (Washington, DC: Public Citizen Publications, 1996).

report that found little evidence of measurable environmental improvements since their creation.¹⁰ The Clinton Administration disagreed, and in July 1997 it released its own evaluation of NAFTA's implementation. Instead of finding evidence of a failed policy program, the Administration argues that the regional cooperation encouraged by the BECC and NADBank was responsible for the construction of numerous new infrastructure projects, and a new sense of commitment to improving the lives of regional citizens.¹¹

Whichever story is right, it appears that Congress was not yet satisfied with the BECC/NADBank structure's performance; during the FY1998 budget authorization process, BECC's funding was drastically cut. According to BECC officials, the House approved the BECC's full appropriation at \$1.6 million;¹² however, the Senate only approved a \$1 million appropriation. The difference was resolved by a House/Senate Conference Committee, which decided to fund the BECC at \$1.54 million. Mexico matched the cut the United States made for a total shortfall of \$120,000. The FY1999 appropriations remained at 1998 levels, far less than the authorization total of promised by each country and probably limiting the BECC's ability to adequately carry out its mandate.

This report seeks to better understand both the BECC and the NADBank's efforts to respond to environmental and human health problems facing border communities. Recognizing the unique circumstances in which these institutions were placed, this report seeks answers to the following questions:

- Are the NADBank and BECC on the right track toward realizing their mandate to improve the border environment? If not, why not?
- What recommendations can be made to improve future performance?
- What lessons can be learned (if any) from the BECC/NADBank experience for future trade negotiations, especially in the context of anticipated trade negotiations in the Western Hemisphere?

Evaluating NADBank and BECC

With so little time to achieve their missions, it is improper to offer any conclusive evaluation of the success of these two nascent institutions. The first year, 1994, was lost while awaiting budget appropriations to arrive. The second and third years focused on establishing the new institutions and on drafting the rules and procedures necessary to guide their operations. In the first edition of this report in November 1997, we suggested it was fair to ask the two institutions to be accountable for their actions to date, and to provide both citizens and governments with an honest appraisal of their performance. Now in this report we can move beyond actions only and begin to evaluate outcomes. What are the results? And, are we on the right track?

We believe that a fair evaluation of the steps taken to realize the obligations under the BECC/NADBank Agreement should focus on the following: the process used to produce operating rules and procedures; an evaluation of the rules and procedures themselves; and finally on the BECC and the NADBank's activities and work product to date. When taken in the context of the

¹⁰ United States General Accounting Office, "Environmental Infrastructure Needs in the US-Mexican Border Region Remain Unmet," Report to the Ranking Minority Member, Committee on Commerce, House of Representatives, GAO/RCED-96-179.

¹¹ USTR "Study on the Operation and Effect of the North American Free Trade Agreement" GPO - Jacket #42788 (July 1997).

¹² As was done in the three previous years.

situation facing them, we argue that both the BECC and the NADBank have taken positive steps toward realizing their organizational mandates.¹³

Structural Response: Border Institutions

Economically poor, far from the centers of political power in both countries, and culturally unique from the rest of both countries, the environment and human health of *la frontera* languished from inattention, while at the same time becoming an integral part of the economic well being of both countries. Over the past fifty years, the Mexican and U.S. governments crafted a series of binational responses to the environmental and human health challenges caused by border development. The institutions created by their efforts are an important backdrop to the formation of the BECC and NADBank.

International Boundary and Water Commission (IBWC): Established by the 1944 Water Treaty, the IBWC (known as the *Comisión Internacional de Límites y Aguas* [CILA] in Mexico), is the principle binational agency with authority over territorial limits, water allocation, wastewater treatment, sanitation and water quality. One of its chief activities involves the planning, construction, and operation of several wastewater treatment plants on both sides of the border.¹⁴

The La Paz Agreement: *The Agreement Between the United States and Mexico for the Protection and Improvement of the Environment in the Border Area*, signed by Presidents Ronald Reagan and Miguel de la Madrid in 1983, established a framework for cooperation on specific environmental pollution problems. The U.S. EPA and Mexico's Secretary of the Environment, Natural Resources and Fisheries (*Secretaría de Medio Ambiente, Recursos Naturales y Pesca* or SEMARNAP) act as the national coordinators of efforts to find and implement solutions to border environmental problems, in particular to prevent, reduce, and eliminate sources of air, water, and land pollution. Formal workgroups, comprised of federally appointed governmental and academic experts, target their policy recommendations toward water, air, contingency planning and emergency response, hazardous waste, enforcement cooperation, and pollution prevention.¹⁵

The Integrated Border Environmental Plan (IBEP): The IBEP was the first binational attempt by both federal governments to address environmental concerns in the border region. The plan, signed by EPA and SEDUE,¹⁶ was released in February 1992, amid the environmental politics of the NAFTA negotiations.¹⁷ It proposed strengthening enforcement of environmental laws, increased cooperative planning, completion of expansion of wastewater treatment facilities, and the development of a computer tracking system on the transboundary movement of hazardous wastes. It was thus an initiative created under the assumption that increased trade liberalization would create additional stress for the environment and human health along the border.

¹³ For a detailed discussion of this context, please see Annex 1 of this report.

¹⁴ The IBWC is the responsibility of United States Department of State; in Mexico, CILA reports to the Secretariat of External Relations.

¹⁵ The workgroups produced five annexes of cooperation on the following areas of environmental pollution: 1) sanitation problems in the San Diego/Tijuana area, 2) hazardous materials spills, 3) transboundary shipments of hazardous substances, 4) air pollution by copper smelters on the Arizona/Sonora border, and 5) air pollution in urban centers on the border.

¹⁶ SEDUE stands for the Secretaría de Desarrollo Urbano y Ecología (Mexican Secretary for Urban Development and Ecology) and was the predecessor to SEMARNAP.

¹⁷ Audley, John, *Green Politics and Global Trade*, (Washington, DC: Georgetown University Press, 1997). SEDUE, or the Secretary of Urban Development and Ecology (Secretaría de Desarrollo Urbano y Ecología) was the predecessor to SEMARNAP.

NAFTA environmental clauses: The North American Free Trade Agreement was the first trade agreement to incorporate direct environmental clauses that relate to the bilateral relations between the U.S. and Mexico. As stated in *Latin American Environmental Policy in International Perspective*:

“The text of the agreement includes explicit references to environmental and health standards and goals. The preamble contains a commitment to sustainable development and to the preservation and protection of the environment, and specific provisions appear in four chapters: sanitary and phytosanitary measures (Chapter 7b), measures related to standards (Chapter 9), investments (Chapter 11), and settlement of disputes (Chapter 20). In brief, the purpose of these provisions is to ensure (a) the integrity of the signatories’ internal systems of environmental regulations, (b) the implementation of efforts tending to improve standards, (c) the ecologically sensitive settlement of disputes related to environmental measures, (d) the protection of the trade provisions of international agreements, and (e) the avoidance of external investments that could allow the creation of pollution havens.”¹⁸

Border XXI: The most recent agreement between the U.S. and Mexico regarding the governance of border environmental problems is the October 1996 Framework Document for the Border XXI Plan (the follow-on to the IBEP). Border XXI is fundamentally different from IBEP in that it is designed to be community-based, rather than a top-down program. Border XXI explicitly seeks to ensure public involvement in the design and implementation of environment-related policies, as well as to decentralize environmental management on both sides of the U.S.-Mexican border by increasing the participation of municipal and state government agencies in environmental programs. However it has met with mixed success in this pursuit. The goal is to create regional, community-based or ecosystem-based approaches to environmental management, new mechanisms for problem-solving and environmental decision-making, and more effective targeting of limited resources aimed at improving human health and environmental conditions in the border area.¹⁹ Ultimately it is only a planning document for use by the La Paz Agreement workgroups and is responsible for the addition of three new workgroups: Environmental Information, Environmental Health, and Natural Resources.

One of the most important accomplishments of Border XXI is to recognize the strides that it has made in coordinating border environmental activities between, among, and within the U.S. and Mexican federal agencies. While each of the earlier attempts to address environmental problems was well intentioned, and in many instances produced some positive, tangible results, the problems of such an institutional arrangement are easy to identify. The importance of water and water quality in this region of the country resulted in numerous overlaps in scope. To take action to implement their recommendations, each of the institutions listed above require support from at least one national government agency. Coordinating numerous environmental and health agencies, two state departments, and the activities and interests of state, local, and Tribal governments on each side of the border is a difficult, almost impossible job. Limited avenues of formal and informal interaction exist, a problem that results in poor and often inaccurate communication.

BECC and the IBWC

It was, in part, in response to the IBWC history, that the BECC was created. Clearly a new institution was needed to address the crisis on the border, a new institution with a broad mandate to take a fresh approach at solving the border’s environmental problems in the context of sustainable development. This new institution had to be open, transparent and focused on rural and urban needs – an institution that would welcome alternative and appropriate technologies. The hope that

¹⁸ MacDonald, Gordon J., Daniel Nielson, and Marc A. Stern (Eds.) *Latin American Environmental Policy in International Perspective*, WestviewPress (1997) at p. 122.

¹⁹ U.S.-Mexico Border XXI: Program Framework Document, 10/96 EPA 160-R-96-003.

new approaches would promote new solutions as well as public input is apparent from the published record of the debate over the creation of the BECC.

Language was added to the preamble of the BECC/NADBank agreement to encourage the BECC to note the role of the IBWC “in efforts to preserve the health and vitality of the river waters of the border region”. In addition, the two IBWC Commissioners were made ex-officio BECC Board members to ensure they could coordinate their institution’s operations with those of the BECC.

Ultimately, both organizations have limited mandates, which are set forth in the agreements that created them. For example, the IBWC is empowered to recommend decisions to the U.S. and Mexico on the allocation of border waters. The BECC’s purpose is “to help preserve, protect, and enhance the environment of the border region” which it accomplishes by certifying projects to the new North American Development Bank or other sources for funding. While determination of water rights is not a BECC function, it need not be a passive partner, and could take such steps as instigating studies of water availability that may relate to a project presented to it for certification. According to the University of Houston Law Center’s Sanford Gaines, “the only way to get access to NADBank financing is to get certification from the BECC. This puts the BECC in a strong position to become the dominant institution in planning, coordinating, and implementing environmental projects, including water quality related projects, in the border region, surpassing the traditional pre-eminence of the IBWC.”²⁰

Each of the agreements or institutions described above play an important evolutionary role in defining the agenda for environmental protection, then communicating that agenda to federal decision-makers in each country. Even when they were able to coordinate interests, however, what they often could not provide without national support was the necessary financial resources to fund projects for environmental remediation or infrastructure development.

The BECC and NADBank were charged with working themselves into this complex patchwork of existing institutions and agreements and collaborating to correct long-standing, deeply rooted environmental problems. To work toward long-term solutions, both the BECC and the NADBank would have to establish working relationships with each other and existing organizations.

Institutional Mandates

The Agreement between the Government of the United States of America and the Government of the United Mexican States Concerning the Establishment of a Border Environment Cooperation Commission and a North American Development Bank (the BECC/NADBank Agreement) established the formal structure of both the NADBank and BECC, but plan implementation, office location selection, staffing, securing board members and formal advisors, and negotiating and adopting procedural rules and project criteria took almost a year.

According to the BECC/NADBank Agreement, environmental sustainability must be integral to projects designed to ensure self-sufficiency in the border region. Three principles guide the union of these two goals:

- **Public Participation:** Negotiators emphasized binational collaboration with states and localities, non-governmental organizations and other members of the public in the effort to address the well-established environmental problems in the border region.

²⁰ Spalding, Mark J. and Richard Opper “US-Mexico Border Water Law: the BECC and the IBWC” Western Environmental Law Update University of Oregon (1996).

- **Ecology:** Both BECC and NADBank must recognize the need to conserve, protect and enhance the environment in the achievement of sustainable development.
- **Economic Viability:** Approved and financed infrastructure projects were encouraged to be operated and maintained through user fees paid by those benefiting from the projects, and financial resources used to build these projects come from private and public sector sources.

More practically, the BECC and the NADBank foster public participation and local input in decision-making regarding border environmental infrastructure projects to achieve six goals:

- To carry out comprehensive assessments of environmental, economic and health conditions
- To ensure the long term viability and sustainability of projects
- To enhance regional and binational cooperation on projects
- To promote community ownership of, and responsibility for solutions to environment and health problems
- To ensure governmental accountability to communities affected by projects
- To examine economic and technical feasibility of projects²¹

These three principles and six goals will guide this analysis of BECC and NADBank's short history. The analysis begins with an examination of the process responsible for establishing the organization's operating procedures and project certification and loan criteria. It will then examine the criteria themselves, and compare them to the goals set forth in the BECC/NADBank Agreement. Finally, it will examine the outcome of its procedures--namely, the projects certified, funded and under construction--to determine whether environmental conditions have a better prospect of improvement with the NAFTA and its associated environmental institutions in operation than without them.

Public Participation: a Hallmark of Procedural and Project Criteria Development

Perhaps more than any other characteristic, BECC's operating procedures and project certification criteria demonstrate its outstanding public and community participation elements. All public business is conducted in both Spanish and English, breaking down the language barrier that often prevented Spanish-speaking citizens from understanding rules and procedures written only in English. Of the 10 board members, six must be from the border region; the other four formalize BECC's relationship with the Administrators of the EPA and Mexico's SEMARNAP, and the IBWC/CILA. The first six are appointed and serve at the pleasure of the presidents of the two nations, while the other four are ex-officio appointments. Observers note that the BECC has established a relatively cooperative and congenial working relationship during the past four and a half years with federal agencies dealing with border issues, state agencies and localities. In some ways, the creation of the BECC and the NADBank has fostered an atmosphere for border relationships to become more productive and integrated in ways that did not exist before. The 18 members of the Advisory Council are mandated to represent a cross-section of business, government, and communities from each border state. This emphasis on border residents is designed to enhance collaboration with BECC's constituents, and to help citizens better understand the role played by BECC in developing environmental infrastructure projects. However, there are continuing concerns that the full membership of the Advisory Council has not been appointed after the first term, thus limiting the full diversity of representation that could further strengthen BECC and local project activities. This may indicate a lack of priority given by the Clinton Administration to this Council.

²¹ Spalding, Mark "Balancing the Border: How BECC and NADBank Can Help Small Communities" published in *BorderLines*. (March 1997)

The BECC Board

Ygnacio, Garza, USA	State Representative, current Board Chair
Lynda Taylor, USA	Public Representative
Thomas L. Soto, USA	Local Representative
John M. Bernal, USA	Ex-Officio Member, IBWC Commissioner
Carol Browner, USA	Ex-Officio Member, EPA Administrator
Rogelio Ramos Oranday, Mexico	State Representative
Dr. Jorge A. Bustamante, Mexico	Public Representative
Guadalupe Osuna Millan, Mexico	Local Representative
Arturo Herrera Solis, Mexico	Ex-Officio Member, CILA Commissioner
Julia Carabias, Mexico	Ex-Officio Member, SEMARNAP Minister

The BECC's public focus played an important role in the development and implementation of its project certification criteria. The current project certification criteria, released in November 1996, are the product of extensive public dialogue and critical analysis of the use of the first certification criteria released in August 1995.

While it should be noted that the BECC has occasionally missed some of its posting deadlines, the BECC has also taken steps to routinize information dissemination. It has its own website where detailed information on projects, procedures, and documents are available in electronic form. This information in the respective language on the projects is also made available locally in affected communities. It publishes a quarterly newsletter and status report, as well as an annual report. BECC also actively disseminates information as part of the electronic listserv *BECCnet*, established and maintained by the University of Arizona's Udall Center for Studies in Public Policy. Notice of projects to be considered for certification at the BECC's quarterly public meetings is required 45 days in advance.

Two local community meetings are held in advance of BECC's quarterly meetings for local involvement and comment on the projects, including any rate increase being proposed. Specifically, every project sponsor must establish a citizen steering committee with diverse representation (environmental, health, business, academic, etc.) to review and comment on project development and help establish a community participation plan. BECC requires documentation after these local public meetings, demonstrating community support for the project prior to certification.

The BECC's quarterly public meeting agenda is then published 30 days in advance in local and regional newspapers in the Federal Register of both countries and via *BECCnet*.²² The BECC's quarterly meetings are open to the public and always include reasonable opportunities for public comment on policies and projects before any vote by the BECC Board. The meetings are often very interactive demonstrating a level of communication that is unusual for this type of body. It is at these meetings that more local organizations have the opportunity to speak directly to the board about their support for projects, but also for border-wide organizations to speak to broader policy implications of decisions to be taken. This set of processes is very unique; and is helping to speed up the development of democratic processes in the border region.

The BECC has conducted most of its business in an open, transparent fashion. The entire development of project certification criteria, the BECC's most important achievement, was almost entirely open and public. On average, 200 to 400 border residents attend BECC's quarterly meetings. Its public meeting is usually preceded by a one day closed door meeting of the board and advisory council, and a number of closed door meetings of an executive committee formed

²² After the completion of this report, BECC began to discuss new notice procedures that eliminate the use of the Federal Register in favor of greater use of local media, and provide for 45 day rather than 30 day notices.

from a small group of board members and advisory council representatives. The minutes of the private and public meetings are published on BECC's Internet Website, and on *BECCnet*, and in its newsletter *BECC News*, and are generally available to the public upon request.

While the BECC can be broadly described as public in nature, there are numerous instances where decisions were not made in full public view. Two examples underscore this tendency. The first took place on Thursday, August 31, 1995; the Border Environment Cooperation Commission (BECC) held a public meeting in El Paso, Texas, to adopt guidelines and criteria for its certification of U.S.-Mexico border environmental infrastructure projects. The BECC had issued draft guidelines and criteria in early June, and the draft was ultimately sent to nearly 1,200 individuals and organizations. During the following month the BECC received over 150 written and oral comments on the guidelines and criteria. The guidelines and criteria include significant new ideas for public participation from both Mexico and the U.S., and for the incorporation of sustainable development elements as requirements for BECC-certified projects. The adoption of the criteria as supported by the public was almost scuttled by non-public input from some Board members.

The second example occurred at the BECC Board meeting in Juarez on April 30, 1996. Then BECC Board Chair Jorge Bustamante closed the meeting before a scheduled public comment opportunity. In response to strong public criticism, the BECC collected comments from those who signed up to speak, and then published them in English and Spanish on *BECCnet* and in the *BECC News*.

One explanation for this tendency to lapse into a more private decision-making process is an apparent imbalance between the two countries in public access to decision-makers. For example, the public's access is not always perceived as equitable. Some board members designated to represent the public have been very open and accessible, however, others have not. Second, there is a now diminishing cultural tendency in which border residents passively trusted that they would be well represented by public leaders.²³ Third, there is a tendency by those in the BECC/NADBank process to rely on electronic forms of communications, most especially e-mail. This method of communication favors wealthier U.S. and Mexican organizations that own or have access to adequate computer technology.

The NADBank adopted a different approach to regional representation. Like the BECC, all business is conducted in Spanish and English, and staff members are most often natives of either Mexico or the United States with substantial border experience. The NADBank has a binational Board of Directors with 6 members, three from each country. Unlike the BECC's broad-based and border focused Board, the NADBank's Board is composed of national representatives. NADBank officials believe this national focus serves the purpose of a regional financial institution better for three reasons.²⁴ First, federal agencies provide the majority of resources used by NADBank to fund projects. Board members from these agencies will hopefully better understand the nature and importance of the NADBank's funding activities. A board with national representation also provides lines of accountability to the NADBank as it uses agency funds for infrastructure projects. Second, such federal government level membership on the board may expand the level of interest in border environmental problems. For years the border region lacked any real political leverage among national legislators and administrators. Board membership might help them develop better appreciation for the national implications of these regional environmental problems, thereby increasing the level of support from national governments. Third, NADBank also must secure

²³ Which includes a flip side in which government leaders have brushed off comments of non-governmental organizations as unrepresentative of the public, because they, the government, were the true representatives of the people.

²⁴ These three arguments based upon conversations with NADBank Managing Director, Victor Miramontes, August 1997.

private funding for projects, funds that are more often available in national centers for politics and business. By establishing strong working relationships with national and international banks, Bank officials believe the NADBank can better secure private loans to include in the lending packages.²⁵

The NADBank Board

Robert Rubin	US Secretary of Treasury
Madeleine Albright	US Secretary of State
Carol Browner	Administrator of the US Environmental Protection Agency
José Angel Gurría Treviño	Mexico's Secretary of Finance and Public Credit
Herminio Blanco	Mexico's Secretary of Commerce and Industry
Carlos Rojas	Mexico's Secretary of Social Development

The NADBank's challenge is to establish credit for loans to finance small community projects. The NADBank must identify sources of funds, or subsidies, in addition to NADBank resources, in order to make projects more viable. While the NADBank may lend to anyone whose project has been BECC certified, it is not a tax-exempt institution, and its funding comes only from the market (i.e. no subsidized loans). It must borrow capital (guarantee loans) for relending at the market rate, never lower.²⁶ Many critics, particularly those in Mexico, assert that such a loan structure is not appropriate in Mexico because of its high cost to communities and the risk that loans will be renounced at the end of each political term. The NADBank together with the EPA have taken a significant step to address this challenge through the establishment of the BEIF. Through this EPA-funded grant program, administered by the NADBank, it can make projects more viable by reducing the effective cost to communities, particularly small communities. For example, BEIF money can be used to buy down the cost of a project and thus make the financing for the rest of an infrastructure development more affordable. According to NADBank officials, its IDP program also will establish the foundation necessary to make market rate loans viable in Mexico. Through the capacity building of the IDP, and the selective use of grant money, the NADBank hopes, over time, to reduce the border's dependency on federal money.

The NADBank has no public Advisory Counsel. A Managing Director, a Deputy Managing Director, other officers and a small staff manage the NADBank. The total number of employees is about 31. NADBank financing activities are not conducted in as public an environment as BECC project certification. Instead, NADBank relies upon procurement competition and public access to NADBank audits as its principal means of openness to the public. NADBank officials held their first Annual Public Meeting of the Board of Directors in December 1995, where a number of significant program initiatives were discussed and adopted. The meeting was characterized by a limitation on public comment to one hour, and by inadequate public notice. The normal vehicle for interaction between NADBank officials and the public is BECC public sessions. In addition to these sessions, NADBank officials take part in public fora for information exchange hosted by state and local governments.²⁷

While the effectiveness of a national-focused Board of Directors for the NADBank may not yet be clear, activists involved in BECC and NADBank activities have criticized the absence of

²⁵ While keeping the federal agency members on the NADBank's board may provide greater avenues for support from those agencies' budgets, it is doubtful that private funding is more available in national centers, at least in the U.S.

²⁶ Spalding, Mark "Balancing the Border: How BECC and NADBank Can Help Small Communities" published in *BorderLines*. (March 1997)

²⁷ North American Development Bank, *Annual Report 1996*, (San Antonio: North American Development Bank), at p 12.

transparency and public input into the decision-making process.²⁸ In addition, while the NADBank likes to assert that it is a bank, and thus not meant to be a public forum like BECC this is far from the truth when one reads the many criticisms of other development banks. Because development banks are facilitating the funding of primarily public projects with public funds, there is a reasonable expectation they will be responsive to the public and allow for public access to information. A regular bank in contrast must constantly ensure privacy and confidentiality of its clients' business. NADBank instead owes its fiduciary responsibility to the public.

NADBank officials claim that creating funding packages is a process that often requires examination of confidential financial information; as such, funding decisions are made during private meetings between NADBank staff and Board members. However, with the exception of the FINSA project, all of the loans and loan applicants have been related to publicly owned institutions. As public institutions, each must make all auditing information publicly available. Any monies used to fund NADBank participation in project loans are public taxpayer dollars, as are the grant funds now available to the NADBank from the EPA to help pay for some construction costs. Therefore, there seems little justification for this lack of transparency.

At present, it is NADBank's practice to follow the guidelines for confidentiality outlined in the BECC/NADBank Agreement. That is, the Bank maintains confidential information on three grounds: law enforcement, business confidentiality and personal privacy. However, that Agreement does not sufficiently define these grounds, and the NADBank has not adopted its own definitions through a confidentiality or document disclosure policy.

Unfortunately, NADBank seems to prefer the "one-on-one" information sharing **after** decisions are made, as opposed to allowing the public to comment on its policies and funding decisions in advance. The NADBank needs to think more in terms of transparency of decision-making to improve and maintain credibility. In addition, public consultation is important to the NADBank's role in regard to **its** programs and policies. The NADBank should consult the public as it develops any new policies and programs or makes any key decisions in which the public has a vital interest. This is especially true of any distribution decisions regarding grant funds administered by the NADBank such as its IDP and BEIF funds. However, public consultation may also come into play in post-BECC certification communications with the public. For example, the public should be consulted when a project has to be changed if financing viability depends upon it (the NADBank would probably need to take responsibility for this if the change falls short of a redesign that would trigger a new BECC certification review).

Fortunately, NADBank is very slowly taking steps to rectify its public access limitations. It has established a website, an electronic mail bulletin service and soon a newsletter. Nonetheless, the perception (and history) of distance and nonresponsiveness may be attributed to its relative isolation from public pressure (unlike BECC), and may persist for some time.

As a final point in this section, we note that the separation of the functions of the BECC and the NADBank was intended to create a positive tension between the two organizations. While this innovative design feature has worked well, it has at times worked too well. There have been instances of tension which approach destructive competition. To begin to resolve the negative aspects of this tension the BECC, the NADBank and other border environmental institutions have created a coordination work group that meets regularly to help avoid wasteful overlap of effort and unnecessary competition.

²⁸ After the completion of this report, NADBank has made some strides toward improvement through expanding its website information and by broadcasting its annual meeting on the Internet.

Project Certification and Lending Criteria Reflect BECC/NADBank Agreement Limits, and Commitment to Overcoming Institutional Constraints

BECC's guidelines for project approval and funding represent a real world attempt to implement the principals of sustainable development. In its criteria for all project certifications, the BECC adopted groundbreaking rules for citizen participation, transparency, and capacity building. As such, the BECC certification criteria are on the cutting edge in the field of sustainable development. The criteria are still in need of strict, responsible application. However, the BECC's emphasis on process and the problems associated with project funding reflect the problems confronting efforts to respond to immediate environmental and human health problems in an economically viable manner. Until these important concerns stop drawing away the emphasis of BECC efforts, it will remain difficult to demand absolute compliance with the certification criteria. Nonetheless, the criteria should not be treated in a lax manner.

The BECC developed a second version of its criteria for projects wishing to receive BECC certification through two rounds of comments on the original criteria document. The new criteria places a high degree of emphasis on human well being, environmental protection, financial and technical feasibility, sustainable development and guaranteeing a decision-making process that incorporates unprecedented citizen input and opinion. Water conservation, reuse and efficiency, solid waste recycling and reduction for landfills, and community development were added to the sustainable development requirements. The voluntary section in the criteria called High Sustainability Recognition Criteria (HSR) also was strengthened and a BECC sustainable development working group was authorized. The BECC has formed this new voluntary sustainable development work group made up of one Board member, two staff persons, and two Advisory Council members. This work group's annual work plan of June 1998 includes setting up a BECC sustainable development web site, identifying resources, individuals and institutions who can assist project sponsors wishing to go beyond BECC's mandatory sustainable criteria, in-house and public forums on BECC's sustainable development program and future goals, soliciting funds from public and private sources to provide grant awards to projects achieving high sustainability, developing an international, user friendly bibliography, and more.²⁹ HSR criteria are similar to those used to evaluate BECC's sustainable requirements; however, they include more stringent ecological and quality of life standards. For example, constructed wetlands as part of the treatment program which attract wildlife, major water conservation efforts, energy efficiency, or high percentage of recycling in the event of a solid waste facility, or providing good paying jobs, would be good candidates for HSR designation. To date, the HSR criteria have not been applied to any BECC Certified Criteria.

The Certification Criteria

Regular Criteria	Brief Description of Requirements
Human Health and Environment	<ul style="list-style-type: none">• human health and environmental need• environmental assessment• compliance with applicable environmental and cultural resource laws
Technical	<ul style="list-style-type: none">• appropriate technology• operation and maintenance plan• compliance with applicable design regulations and standards
Financial and Project Management	<ul style="list-style-type: none">• financial feasibility

²⁹ Border Environment Cooperation Commission Voluntary High Sustainable Development (HSD) Program Work Plan for 1998 as Adopted by the BECC Board of Directors on June 24, 1998.

	<ul style="list-style-type: none"> • fee/rate models • sound project management
Community Participation	<ul style="list-style-type: none"> • comprehensive community participation plan, including steering committee and public meetings to guarantee local community support
Sustainable Development	<ul style="list-style-type: none"> • compliance with principles of sustainable development • institutional and human capacity building • natural resource conservation • community development
Voluntary HSR Criteria	<ul style="list-style-type: none"> • pollution prevention by meeting higher standards than required • energy efficiency • biodiversity and open space protection • greater waste reduction, reuse and recycling • greater education and training programs • creation of higher wage jobs

The NADBank approach to sustainable development emphasizes *economic viability*. According to the NADBank, the first criterion for project “sustainability” is the project’s ability to generate a stream of revenue capable of paying for the project. The NADBank is not a grant making organization, nor is it designed to provide fully subsidized loans or grants to fund projects. This said, it does have the capability to administer EPA grant funds for some public sector construction projects in conjunction with its loan and guaranty program. The NADBank analyzes factors that may affect a BECC-certified project’s costs and revenues to determine whether a project is financially feasible. To receive funding from the NADBank, the project must be capable of demonstrating its ability to generate a revenue stream adequate to pay for the loans. As is often the case, when a proposed project cannot meet this test, the NADBank must develop a more creative bundle of loans and grants to make it economically viable. It has also worked to find ways to reduce project costs. The NADBank attempts to bundle the goods available to it – cost reduction, increasing the grant portion, decreasing the risk by guaranteeing a larger portion of the loan with its own capital stock -- in an attempt to create an investment package attractive enough for private lenders.

Applying the Project Certification and Lending Criteria

The first two years’ efforts to certify and fund projects revealed a number of important strengths and weaknesses associated with both the BECC and the NADBank. One observed weakness involved the preparation of project proposals. It was soon discovered that some communities and private individuals lacked both the technical and management expertise to present to officials of the BECC and NADBank adequate evidence of project ecological and economic viability. This is especially true in “. . . small, low-income communities, which have neither the solid institutional structure nor the financial capacity to undertake studies and implement reforms that would enable them to develop, finance, and maintain their projects successfully.”³⁰

In response to this obstacle, the BECC and NADBank created two new, inter-linked programs. Through its Project Development Assistance Program (PDAP), BECC provides border communities direct assistance to help develop projects.³¹ Assistance is available to border

³⁰ NADBank, Annual Report 1996, at p. 13.

³¹ BECC, *Project Certification Criteria*, Request for Technical Assistance; BECC, *1996 Annual Report*, at p. 13.

communities to produce proposals for water and wastewater projects, and municipal solid waste projects. The EPA awarded a \$10 million grant to support the development of water and wastewater project proposals in either nation, and BECC officials intend to fund solid waste project development “to the extent possible from BECC’s annual technical assistance budget and possibly other funding sources.”³² Probably one of the most important areas of work the BECC undertakes is through the technical assistance it provides, either directly through its engineering staff or through the hiring, with the local sponsor, of contractors who can help with a master plan for the project, preliminary and final technical design, financial evaluations, environmental assessments, local institutional capacity building, operation and maintenance plans, community participation in project decision-making, and finally, the sustainability of the project, especially in the areas of water and natural resource conservation and social benefits from the project. Many border communities, large and small, have not had this type of assistance in planning before. BECC works to assure that the project sponsors have the assistance they need to plan design, build, and operate the project over the long term. These are skills that communities retain – which then can help benefit other needed projects and endeavors undertaken by the community. Every community that has sought BECC and NADBank assistance has been strengthened in these critical ways – the type of investment in communities the old-styled development banks such as the World Bank did not make.³³ NADBank coordinates with the BECC to provide financial management assistance for these projects through its Institutional Development Cooperation Program (IDP). NADBank budgeted \$4 million from its operating budget to “assist municipal public utilities achieve effective and efficient operation of their water, wastewater treatment, municipal solid waste, and related services by reinforcing their institutional capacities . . .”³⁴ As of January 1999, the NADBank has used the IDP to assist public utilities on 71 projects in 57 communities. The efforts focus on enhancing financial and administrative capabilities.³⁵ According to NADBank officials, the IDP program is the most critical for true project/system sustainability. The IDP focuses on all system issues that can have a positive impact on its proper long-term management including general management, personnel, audits, system inefficiencies (i.e. leaks), best alternatives to capital expenditures (i.e. applied conservation programs), rate surveys, and public bonding strategies.

The NADBank asserts that border communities are already experiencing an immediate benefit from the IDP through increased operating efficiencies of their local utility systems, as illustrated by the projects in Naco, Sonora, and Reynosa, Tamaulipas. In conjunction with a water and wastewater infrastructure project in Naco, Sonora, the Bank developed and installed a new user registry and management information system through the IDP, which have contributed to a 30% increase in the utility’s revenues within three months of implementation. In Reynosa, Tamaulipas, the preliminary findings of a water loss and repairs study developed through the IDP have already resulted in a 24.5% increase in the utility’s billing, while the leak repairs financed by the utility will save over one million cubic meters of water a year, resulting in higher system revenues and conservation of a valuable resource.

In the case of El Paso Lower Valley Water District, the Bank’s comprehensive management study (conducted by R.W. Beck) resulted in 87 specific improvement actions. The District’s board has accepted all of them. The Bank, through the IDP, will fund a professional manager to visit the District’s office every few weeks to assist in the timely completion of each recommendation. The

³² BECC, *Project Certification Criteria*, 4(b).

³³ Border Environment Cooperation Commission Technical Assistance Status Report, Fall 1998.

³⁴ NADBank, *Annual Report 1996*, description of purpose of IDP, at p. 13.

³⁵ These include system reviews and action plans; internal organization and procedures analyses; legal framework and regulation analyses; management studies; accounting; billing and collection; management information systems; operation and maintenance manuals; user registry updates; rate studies; water line and water loss surveys; as well as equipment and training. *NADBank Performance and Outlook* presentation to the Good Neighbor Environment Board by Raul Rodriguez, November 6, 1998.

follow-up process is estimated to take two years of work. This relatively small amount of IDP funds (approximately \$300,000) will ensure the system's well-being and that the current \$100 million construction program (which was going to be stopped prior to the Bank's involvement) for *colonias*³⁶ is completed and operated properly well into the future.

The nature of the IDP is to search out the communities that are the least likely to find us. The result is that the Bank staff spends a great deal of time in the local "trenches" and participating in dozens of local public meetings. Throughout this process we are willing to take politically unpopular positions, in public, if they are the basis for a sound system that fairly serves its customers in a fiduciary manner – this is a fight for long term *social equity*. I would challenge you to list all the other institutions along the border that are actually doing this.³⁷

A second observed problem was the lack of coordination among the individual efforts by border environment institutions and national governments to correct environmental degradation. NADBank officials created the Cooperative Credit Agreement Program (CCAP) and the Border Environmental Infrastructure Fund (BEIF) to respond to this dilemma. The more general CCAP will assist in the coordination of government resources, facilitate small credit arrangement, and expand available credit resources through improved coordination among the various border sources of credit, as well as through information dissemination.³⁸ Under the BEIF NADBank officials administer EPA grant resources for water and wastewater facilities, resources totaling \$170 million in 1997. This fund is intended to be used to address the most serious water/wastewater problems in the neediest communities. NADBank manages these funds under a cooperative agreement with the EPA. A most important innovation of this program requires that the amount of any BEIF contribution to a community's project will depend on its ability to pay. EPA must approve any project for which its funds are being used. The EPA views this cooperative agreement as part of its continuing commitment to NADBANK and other institutions "to assist in promoting environmental and health improvements along the border."³⁹

Features of the BEIF program

Transition assistance is intended to ease a community's adjustment to higher user fees over time. BEIF transition assistance will mitigate the impact of user rate increases by providing loan payment support while rates are gradually increased over a 5 to 7 year period. The transition funds approach provides a strong incentive to communities to develop, operate and maintain sustainable projects, as continued assistance is contingent upon compliance with covenants such as debt coverage ratios and reserves.

Construction assistance is designed to complete a financial package by covering construction costs not funded by other sources. Construction assistance will be considered when transition assistance is inappropriate for a particular community or financial package, or is insufficient to bring user fees to an affordable level. In many cases, a mix of transition assistance and construction assistance may be the most appropriate solution to a community's needs.

Hook-up assistance is designed to assist residents seeking to connect their households to water and wastewater services. If the costs associated with residential hook-ups are included in the overall

³⁶ The literal translation of "colonia" means neighborhood. It is used in this report to refer to subdivisions established in unincorporated areas on the U.S.-side of the border region that lack such basic services such as potable water, adequate sewage, drainage, or electricity. They are characterized by extreme poverty.

³⁷ Victor Miramontes, personal communication 20 November 1998.

³⁸ NADBank, *Annual Report 1996*, at pp. 14-16.

³⁹ "EPA Collaborates With North American Development Bank On U.S.-Mexico Border Water Projects," EPA press release (April 25, 1997).

project cost certified by the BECC, BEIF funds may be used for this purpose. The Lower Valley Water District project is the first to include hook-up assistance as part of a BEIF assistance package.

Implementing specific criteria for sustainable projects also has proved difficult. As demonstrated at the August 1995 meeting, there has been resistance to the idea of incorporating sustainable development and HSR criteria. There is a fear in Mexico that the better financed U.S. communities will more easily meet these standards and gain an unfair advantage. In addition, there has been resistance from agencies and others who feel that adding new requirements is burdensome and only serves to slow down the prospects for border clean up. However, it is our view that generating dialogue surrounding sustainable development should heighten public and private awareness of the factors that contribute to long-term solutions to environmental problems. The BECC certification requirements have begun this process and are making sustainable development a term that has meaning and substance. Sustainable development can thus be practically implemented in each project. The new managers have really emphasized the importance of sustainability of projects in the last year and a half, in providing in-house training for engineers and staff on more effectively applying BECC's sustainable development criteria in projects, highlighting sustainability in public presentations, providing new impetus for the voluntary HSR program, and participating in planning several conference sponsored by EPA on sustainable development.

According to many border activists, the most serious obstacle to realizing the goal of sustainability lies with the NADBank's loan program. The NADBank is restricted by Congress to market-based interest rates, rather than concessional (i.e. low) interest rates such as those offered by all other international or community development banks. Market rates can make a loan package prohibitively expensive for poor communities; especially when there are inadequate grant funds to make a financial package less burdensome. On the other hand, concessional loans require annual appropriations to subsidize them.

The problem of interest rates and loans is complicated by the fact that Mexico prohibits foreign borrowing by sub-federal jurisdictions. To acquire NADBank funds, Mexican border states and communities must borrow the funds from *Banobras*,⁴⁰ which normally charges additional points for its services. This is an unfortunate interpretation of Mexican law. It was the intention of the BECC/NADBank Agreement to create a binational bank, that neither nation would consider foreign.⁴¹ Thus although the bank's offices are located outside Mexico, and its loans and guarantees are denominated in US dollars, Mexico could have granted the NADBank special national stature and avoided these costs. To address this problem the NADBank has applied, through the Mexican Ministry of Finance and Public Credit for special status. This application was approved and was to be in place by the end of December 1998.

One significant accomplishment of NADBank's first Managing Director Alfredo Phillips Omeda was to negotiate an agreement with Mexico's finance ministry, *Hacienda*, in which it would allow NADBank funded projects to purchase insurance protection against peso fluctuation, thereby absorbing any losses as a result of borrowing money in pesos and protecting the NADBank loans from currency risks.

Despite the positive contributions to the process of project development and certification, more actual projects must be built and pollution cleaned up before the BECC and NADBank can claim the tide has turned on environmental problems in the border region. Poor communities who cannot meet the NADBank's economic viability criteria still suffer from the lack of the most basic of public infrastructure services. The BECC/NADBank must make it possible for a border

⁴⁰ Banobras is Mexico's domestic development bank for public works.

⁴¹ We do not reach the question of the legal feasibility of this intention as it is beyond the scope of this report.

communities to deliver potable water to their citizens, even when they cannot meet the economic viability loan criteria as set forth by NADBank. The BEIF is a step in the right direction but is too small a fund to match the needs that exist. At the same time, border communities must also consider conservation and preservation measures, such as the recharge of aquifers. The investment in a distribution system or purification plant may be wasted when the water supply literally dries up, even if it is economically viable given the present population.⁴² The key to balancing these two objectives is transparency, public education and public participation; if border residents are able to participate in the political process that determines the balance between immediate human health needs on the one hand, and long term environmental quality needs on the other, then the BECC/NADBank can claim to have set into motion a concrete process of sustainable development.

Projects Certified

Over 100 projects have been submitted to the BECC for consideration. Of these, approximately thirty percent are not qualified because they are not in the border zone, or do not fall within the BECC/NADBank's three programmatic areas. Other qualified project proposals are not yet ready for certification because they require additional technical assistance to meet both BECC and NADBank standards.

As of January 1999, twenty-six projects have been certified with a combined estimated cost of over \$615 million dollars. Twenty-four of these projects are profiled in Annex 2 of this report. The NADBank has authorized loans, guarantees and/or grants totaling \$105 million and leveraging over \$400 million in total financing for fourteen projects. Fourteen of these projects are under construction, and one has been completed. When complete, the projects will provide at least some benefit to an estimated seven million border residents -- approximately sixty- percent of the border's population.

Some analysts have suggested that Mexico unfortunately is not getting its fair share of benefit, given its fifty- percent support of the BECC/NADBank institutions. The US has 14 projects certified which at \$380.2 million are worth more money, than does Mexico with 12 projects costing \$236.05 million.

A view held by many border activists is that the Brawley and Ensenada projects (the first two projects certified by BECC) were rushed through the certification process, presumably in response to pressures to produce concrete evidence of their work. As noted in Annex 2, the Ensenada project has gone back to the drawing board. On the other hand, the City of Brawley has almost completed the construction of its new water treatment plant. Four of the certified projects have received public acclaim at the time of certification for their quality and design as well as for the transparent process in which they were brought forward (Somerton, Naco, Douglas, and EPISO). These projects made use of appropriate technology, appear to have been produced through a process that included substantial public input. Most importantly, they demonstrated that the public understood the project and were supportive of it.

Two BECC certified projects are mired in controversy (Nogales and FINSA). The controversy stems, in the case of Nogales, from unresolved allegations of conflict of interest and from a lack of strict compliance with certification criteria. The case of FINSA, a \$1 million dollar private wastewater treatment plant for its workers, raised the issue of what public benefit derives from funding a purely private project. Some border advocates were concerned about the use of public funds for a private project. Others recalled that the BECC/NADBank Agreement was written in

⁴² Spalding, Mark "Balancing the Border: How BECC and NADBank Can Help Small Communities" published in *BorderLines*. (March 1997).

part with private borrowers in mind. FINSA was required to agree to provide \$50,000 worth of in-kind environmental infrastructure development to the surrounding thirteen colonias, but this has stirred a controversy over how future "private projects" will be handled. To clarify what were private projects for purely private gain, and what constituted the leveraging of private funding for public goods, what was called a "private only" policy was developed. This policy is described in the box below. The "private only" policy promoted within BECC by Board member Lynda Taylor as well as by Congressmen Richard Gephardt and Esteban Torres was a positive outcome of this debate in BECC.

The "Private Only" Policy

Category 1. Public/private partnerships to build a public project (e.g. an engineering firm teaming with a municipality to propose a sewage treatment project). This type of partnership is also sometimes called a "Concession." Financing may be attractive to passive investors if packaged the right way. The for-profit private entity's credit worthiness as well as its ability to deliver the project, operate it, maintain it, and undertake cost recovery will aid in accessing lending markets. To avoid objections, the granting of concessions should be an open, transparent bidding process. Can include build-operate-transfer ("BOT") projects.

Category 2. Private promoters building a public project (e.g. an engineering firm proposal to build and operate a sewage treatment facility for a municipality). Also called a "stand alone" infrastructure projects in which the debt is repaid solely from user fees and/or tariffs. This type of project may also be of interest to passive investors such as pension funds. As with the Arequipa (Inter-American Development Bank loan to Peru) project, a community could create a public water company independent of the government to undertake a "stand alone" infrastructure project. Can also include BOTs.

Category 3. Private promoters building a private project (e.g. an industrial park building a pre-treatment facility). This category would allow a purely private facility to use its credit rating to access NADBank (or other) funds once its project was BECC certified. Border communities will benefit from the BECC's requirement of the incorporation of a measurable public benefit for those communities before these solely private projects can access the NADBank's public funds.

(BECC's private project policy as announced at its 18 July 1996 public meeting)

Clearly, the original intent of the BECC/NADBank institutional structure--to provide some level of government-backed risk reduction mechanism (through loans, loan guarantees, credit enhancement, etc) was in part to help attract private capital to public infrastructure projects.⁴³ The hope was that non-governmental organizations (NGOs), universities and most importantly the private industrial sector would find this system attractive and participate in meeting the needs of border communities that were beyond the reach of the communities themselves.

This said, some have argued that, while certain phrases of the Agreement establishing the BECC and the NADBank, can be read to allow the BECC to certify and the NADBank to fund solely private environmental infrastructure projects, there is absolutely no mandate that such projects be funded. Ultimately, the BECC has full discretion to certify or not certify projects and thus could make a policy decision that the limited resources of the BECC will be focused on the greatest need: public and public/private partnership environmental infrastructure projects that address substantial public need.

The unfortunate outcome to date has been that only one private project has attempted to go through certification. The FINSA project discussed above was not handled well, and may have scared off

⁴³ This intent is implied in Ch. I, Art. 1(b).

other potential private for-profit project proponents. However, the opportunity for funding usually will overcome other barriers. Thus it can reasonably be assumed that either the private infrastructure sector does not know about the BECC/NADBank (a lack of outreach), or they think they cannot make any profit on one of these projects (a lack of incentives). Regardless, this must be corrected and the private sector must be invited to participate with border communities in actively creating a positive outcome for the border.

Analysis

From this report, we hope readers will see that to evaluate the BECC/NADBank structures we have used two measures. The first evaluation measure represents actual visible or physically measurable differences in the border environment as a result of the creation of these institutions. In this area, we agree that there is not yet much to see. We also assert that it is too soon to judge. The second measure evaluates institutional changes. This is where we see vast improvement. By the same token, this is an area where the everyday border citizen may not see the change. It is the basis of such an evaluation that we allow ourselves to cautiously give a positive report on these institutions without marked, measurable changes in the border environment.

In many respects, the BECC and NADBank represent a grand experiment in public participation, transparency and sustainable development. They are full of potential for success as well as opportunity for mistakes. The BECC/NADBank structure is demonstrating something new, that an international trade agreement such as NAFTA can address the economic issues of trade, while at the same time addressing the important social and environmental issues surrounding trade and development. This is the foundation on which sustainable development is built. If we are to see sustainable development occur globally, we need more mechanisms, including trade agreements and multilateral bank loans, that will help foster economic prosperity, social participation of citizens in democratic decision-making, and protection of our environment and conservation of natural resources. BECC and the NADBank, due to their uniqueness in this international area, and in spite of some continuing weaknesses, have begun to set an example for other like-institutions. On the whole, we must conclude that they are now on the right track toward realizing their potential.

The BECC/NADBank institutions were created to address the present crisis of the border **and** the future crisis of the border. By definition, following the principles of sustainable development requires the BECC/NADBank to look at the needs of present and future generations. Specifically, the BECC/NADBank must meet the present and future needs of the border for water, wastewater treatment, and solid waste disposal. While the institutions may be on track for the future, there still are many calling for significant achievement in the present.

The first and perhaps most important issue to bring to any analysis of these two organizations' performance is one of historical perspective. No two organizations are capable of correcting nearly a century's accumulation of environmental problems, made worse by the fact that they have occurred along a 2000-mile border between the countries with different cultures, politics, and economic histories. To expect the BECC and NADBank to correct systematic abuse and inattention to the border in the short span of four years is unrealistic.

There is blame enough for all involved to shoulder some burden. Some of the blame for such high expectations must be placed on the advocates of the NAFTA. In the politics surrounding NAFTA's passage, unrealistic promises made by its supporters placed an unreasonable burden upon the shoulders of the two young organizations. Another source of blame is the lack of commitment expressed by both the United States and Mexico toward these two institutions. For example, it took President Clinton more than a year to appoint BECC board members. Congressional indifference to the performance of the BECC and NADBank has made their budget

a political battleground. Now that the NADBank is fully capitalized, it will find itself under less pressure to respond to political demands from Washington and Mexican national politicians, but the BECC remains subject to such pressure during each appropriation. When placed into a context that recognizes these obstacles, the performance of these two organizations is on the right track. Finally, there are a number of major environmental NGOs which participated in the NAFTA debate but have been conspicuously absent during the implementation of the side agreement to establish these institutions.

A comparison between the performance of the BECC/NADBank and other multilateral lending institutions also helps place the two organizations in some kind of perspective. The World Bank took over 15 months--from its inaugural board of governors meeting in 1946 to May 1947--to make its first loan. Likewise, the Inter-American Development Bank was founded in December 1959 and did not fund its first loan until 1961.⁴⁴ In this light the performance of the BECC/NADBank is quite impressive, especially when one considers the differences between the institutions. The BECC was required to develop project certification criteria that neither the World Bank, nor neither the Inter-American Development Bank, nor their borrowers were required to do. The BECC must also certify projects in public, using an unprecedented process of public participation and input which the others are not required to do. Finally, the World Bank and the IDB also had the advantage of sovereign guarantees and only had to negotiate with one "sophisticated" borrower per country. The NADBank has no such guarantees and dozens of borrowers who have never borrowed money before.

The BECC and NADBank have embarked on an impressive effort to weave public input into the process of setting priorities for environmental infrastructure and implementation of solutions. Border residents, who formerly believed that neither national governments nor binational environmental institutions would ever resolve their environmental problems, now find themselves actively engaged in the public process of project development and certification. Public participation surrounding BECC activities has begun to empower citizens to resolve for themselves local environmental problems.

Participation is, however, weighted heavily in favor of U.S. citizens. We believe that, as time progresses, Mexican citizens will develop their own means of effectively communicating their opinions and project ideas to both BECC and NADBank officials. Until that occurs, however, we urge both organizations to take additional steps to assist Mexicans as they develop their own capacity for participation.

A process as public as the BECC's is bound to lead to disagreements and differences of opinions over decisions and procedures. It is also true that the BECC has made a number of mistakes regarding information access and project certification. However, disagreements over project certification and procedure, if done in public, are a hallmark of democratic decision-making processes. The current management of the NADBank generally does well in providing information about projects and in making its work known to the public, however the NADBank could still do more to make public its internal decision-making process, and to institutionalize it through the adoption of clear document disclosure policies. Instead, Bank officials have chosen to use the BECC forum to discuss general financial issues. This procedure may strengthen the relationship

⁴⁴ The World Bank, "50 Years of World Bank Operational Highlights" from the World Bank Internet Web page: <http://www.worldbank.org/html/extdr/backgrd/ibrd/history.htm>
<http://www.worldbank.org/html/extdr/backgrd/ibrd/history.htm>. This period does not include the time necessary to select and appoint the board of governors, find office space, etc. The Inter-American Development Bank, "About the IDB" from the Inter-American Development Bank's Internet Web page: http://www.iadb.org/ENGLISH/ABOUTIDB/about_idb.html. And see: The Inter-American Development Bank, "Pioneering Project Still a Role Model" *The IDB* (May 1996).

between the two organizations, as it will likely help the two organizations communicate more effectively about projects under consideration by the BECC. However, public input through the BECC does not extend directly to the interaction between the public and NADBank decision-makers while they are making funding decisions. The NADBank is not required by its mandate to make funding decisions in private; the two federal governments (in part) provide its resources, and citizens have the right to hold these officials accountable for their decisions. Procurement procedures provide one avenue for accountability. With its focus on national representation at the board level, the NADBank further distances border residents from its decision making process, even though the Board is said to often “rubber stamp” the decisions made by NADBank staff. We recommend that the NADBank spend more time building a broader constituency for its otherwise excellent work, who would then press elected officials for regional support for the border area. This method of constituency-based advocacy is more likely to occur if the NADBank engages in more direct and transparent interaction with the public.

A second positive step was the development and implementation of project certification criteria. While it is too early to determine the overall effect of the BECC’s criteria, the fact that they include strong community participation in project development, and are based upon an applied version of the principles of sustainable development, is positive. The inclusion of strong community participation is a particularly important accomplishment for Mexico. The inclusion of sustainable development considerations for project approval and funding is probably the most important contribution of the BECC/NADBank structures for the future of the border and to enable BECC/NADBank to serve as models for other development banks. The key factors are the manner in which the criteria are applied, and the requirement that communities determine what sustainable development means in their own context. The criteria themselves are not perfect, but neither is the concept of sustainable development. What is important is that citizens and elected officials remain flexible as to its definition, and work to ensure that the broadest range of residents participate in project certification. NADBank’s primary emphasis may be on economic viability, but economic viability is, in fact, one of the three central concepts of sustainable development, along with ecological health and social equity. Also if we look at social equity at the broadest level, the affordability criteria for the BEIF developed by EPA and the NADBank are intended to ensure more equitable distribution of funds for infrastructure in the border region. Thus even the NADBank’s efforts make a contribution to sustainable development as long as they are not viewed in isolation.

Despite their flexibility and relatively rapid creation and implementation, both BECC and NADBank will be criticized because of their failure so far to respond quickly enough to the needs of poor communities that still suffer from inadequate infrastructure. However, they can share the blame with the national, state and local government as well as the other border related institutions. NADBank’s emphasis on economic viability criterion and the fact that the loans are tied to current bank rates have often created an insurmountable barrier for poor communities that cannot provide evidence of their ability to pay off a loan. EPA grant support to assist the BECC and NADBank work with communities to develop projects will help to address this need to a large extent. However, reliance upon EPA support to fund projects desperately needed by border communities unable to pay for a NADBank loan is a tenuous solution to longstanding environmental infrastructure problems. The fact that neglected communities must still rely upon the political good will of agencies themselves under pressure by their national governments suggests that the funding problems most often associated with NADBank loan criteria actually lie at the feet of the United States and Mexico.

We disagree with critics who complain that the number of projects actually completed or under construction falls woefully short of what is needed in the region. We accept the fact that more infrastructure projects must be developed and implemented; it is unacceptable to permit citizens of either country to live without their basic environmental infrastructure needs met. In this regard, however, the NADBank and BECC themselves are not completely at fault. First, although the

NADBank did not make a single loan in the first two years after NAFTA was passed; it was constrained by the fact it could not finance anything until BECC presented certified projects. This did not occur until September 1995, or 21 months after the BECC/NADBank Agreement took effect. In addition, it should be noted that the BECC/NADBank already have as many environmental infrastructure projects underway after four years as the IBWC has completed in 50 years of existence.

Second, the NADBank is required by its mandate to fund only those projects that can provide evidence of their economic viability. Bank officials must be given credit for their efforts to coordinate national and state grants to create funding packages such as the BEIF and coordination of various water boards' finance opportunities. Bank officials have committed to using profits from private loans as a source for future grant funds; however the process of generating adequate revenues through Bank profits will take time.

A more sober analysis of the certification process suggests that the BECC may have acted too quickly to certify early projects that were not yet ready for consideration by the NADBank. Unlike the NADBank, the BECC developed its certification and public participation criteria in public, a process that took a year to finally resolve. BECC officials showed a great deal of responsibility when they realized that the first draft of the BECC certification criteria was inadequate. But public processes like these take time, especially when confronted with the systemic problems facing communities lacking the technical skills to produce good project proposals. Again, both BECC and NADBank officials responded to this problem by providing technical and management assistance to communities who needed it.

Ironically, the lack of step-by-step directions for their creation and operation may have helped both institutions remain flexible enough to respond to their dynamic circumstances. The BECC and the NADBank have shown themselves to be flexible institutions, willing to respond to particular border needs. The formation of new programs like the PDAP, BIEF, and IDP show that organization officials can and do respond to the needs as expressed by citizens and communities involved in project development, financing and management. In this respect the NADBank has shown particular skill at anticipating the management needs of new facilities. Maintaining economic viability is critical to the NADBank's success if it hopes to use bank profits to provide poorer communities with larger grants.

Finally, the narrow mandates of the two organizations also cause problems for communities who suffer from problems unrelated to water infrastructure and waste disposal such as air pollution. This said, we do not recommend expanding the mandate of the BECC or the NADBank to include other environmental problems until substantial progress is made on water, wastewater and municipal solid waste. The BECC and NADBank should develop criteria by which to evaluate their progress in addressing water, wastewater and municipal solid waste.

Recommendations for Future Trade Agreements

In the future, as we contemplate further trade liberalization, some observers advocate development of supplemental environmental agreements and institutions analogous to the BECC and NADBank. This raises the question of whether these could be developed within the context of existing institutions. While further study is needed (remember that the designers of the BECC/NADBank structures spent their time trying to avoid the errors of the other development bank models), our preliminary conclusion is that it might be most cost efficient to create a BECC-like institution, attached to the existing Inter-American Development Bank.

Any negotiations to establish a BECC-analogous institution must be linked to the negotiations for a Free Trade Area of the Americas if they are to succeed in attracting signatory governments. The BECC-like body and a new role for the IDB should be seen as a way to resolve the potential environmental consequences of trade liberalization and economic integration in the Western Hemisphere.

To deal with the myriad of environmental issues that will undoubtedly arise in a hemispheric trade accord, the scope of certifiable projects eventually should be broadened. While the limited mandate of the BECC/NADBank scope is necessary for now, as a way to maximize the impact of limited funds on the highest priority environmental health problems of the border, there are many other environmental issues to consider throughout the Americas. We do not criticize the BECC/NADBank for their inability to focus on, or fund, these other types of projects. However, as we look ahead, such a narrow mandate leaves many important problems unaddressed.

Annex 1: Analysis of BECC and NADBank in Context

Regardless of their tenure, any evaluation of the BECC/NADBank should be undertaken in the context of the border region's incredible complexity. Two cultures, two political systems, two levels of development, two different legal systems, two currencies and 10 states are united to create the border region's own unique history and needs. Any evaluation should also consider the complex web of interconnected and overlapping agreements and institutions that relate to border environmental issues. Sometimes poor federal, state and local government relations even further complicate bilateral cooperation. And, while there is high population growth and rapid industrialization, natural resources scarcity, water and wastewater problems, solid and toxic waste disposal headaches, and air quality diminution - the financial and technical resources of the region limit local government's ability to fully address natural resources scarcity, water and wastewater problems etc.

Geopolitical: Environmental administration and regulation in the border region is a confusing mosaic of international, federal, Tribal, state, and local agencies and jurisdictions. It is often difficult to determine which agency is responsible for addressing which environmental problems. Two very different political systems meet at the border. Mexico has a highly centralized system of governance, while the United States' federal system creates three tiers of governing bodies at the local, state, and national level.⁴⁵ Four U.S. and six Mexican states as well as a number of Tribal Nations comprise the international boundary, and each has its own system of government, and social, economic, and political objectives. Some Tribal nations who do not recognize the international boundary migrate between countries, and express a desire that their own sovereignty be respected.

In the United States, the Departments of State,⁴⁶ Interior, Health and Human Services and Commerce, are actively involved in border environmental protection, while in recent years the EPA has taken the lead role for the U.S. government. Mexico brings its ministries of environment, social development, water and health to address the border's environmental problems. Its environmental counterpart to the EPA and Interior, SEMARNAP, is the principal agency responsible for border environmental issues. When Tribal, state, local and municipal agencies are added, there is a general chaotic quality to the political process that leads to a morass of organizational and jurisdictional complexity.

Communities, citizens, and particularly NGOs⁴⁷ in the border region have come to play a more important role in the formulation of environmental policy and enforcement and administrative activities. There are substantial differences, however, in the perception of what constitutes public participation on each side of the border. In the U.S., citizens are accustomed to a public meeting process in which people voice their thoughts on projects and on the politics behind them. Mexicans are not accustomed to such public politics, but are more accustomed to reaching consensus through informal discussions and private persuasion. In addition, Mexican politicians are often likely to assert that their view is the public's view. Many of them argue that to have elected officials is redundant if you are going to consult the public on important decisions. This is especially true for decisions that require specialized knowledge that the general public may be ill equipped to address. This attitude is on the decline as the US model (for better or worse) is folded into the Mexican system.

⁴⁵ Mexico has recently begun a slow process of decentralization.

⁴⁶ In part through the International Boundary and Water Commission.

⁴⁷ Although this paper will use the conventional reference to non-profit groups as NGOs, it is noted that it is becoming more common, especially in Mexico, to avoid defining these groups by what they are not and to instead call them Civil Organizations.

Population: One of the most serious problems facing border communities is the rapidly growing human population. There were fewer than 5 million people living in the 2000-mile region ten years ago. That figure has now more than doubled. While the population on both sides of the border continues to grow, most of the growth has occurred in Mexico as the result of industry relocation seeking inexpensive labor while not sacrificing direct access to U.S. markets. Between 1970 and 1988, the population in Mexican border states grew at an average annual rate of 36%. At current growth rates, the population of the border will double again by the year 2020.⁴⁸

Economic and Industrial: The economy in the border region always has been oriented toward the United States, but an economic policy enacted in the 1960s cemented that direction. The 1963 *Border Industrialization Program* (BIP) encouraged primarily U.S. firms to operate labor-intensive industries in Mexico, provided their goods were shipped to markets outside the country. Low labor costs and the continued peso devaluation pushed the number of such industries -- often referred to as *maquiladoras* -- to nearly 2,624 in 1997.

The *maquiladora* program brought much-needed jobs to the region, but it did so without the usual growth of horizontal industries -- those businesses and services that support such a huge commercial enterprise. The weak supporting infrastructure, combined with the in-bond conditions,⁴⁹ compelled *maquiladoras* to source intermediate goods and services solely in the U.S.

The *maquiladora* program and related population boom also came without supporting environmental infrastructure: sewage systems, waste disposal sites, and potable water delivery systems. To make matters worse, some policy-makers, undoubtedly with good intentions, sometimes made water supply guarantees to attract industry (including some high water use industries). Or in a few cases, such water resources were made available at low costs as an incentive to the potential investor.

Macroeconomic factors also are important to the implementation of the BECC and NADBank. Mexico experienced a dramatic peso devaluation in 1994--the year that NAFTA and its environmental agreements took effect. While the peso devaluation caused tremendous problems for the people of Mexico, it had two direct effects on the BECC and NADBank. On one hand, Mexico never delayed its funding for the BECC or the NADBank. In some cases it made its contributions to the institutions while the US was still fighting budget battles. However, the real effect of the devaluation was the disruption of normal financial transactions. High interest rates effectively cut off all borrowing in Mexico, and Mexico had to radically alter its budget and eliminate projects that had been planned previously and scale down efforts such as the World Bank northern Mexico border loan program. The result was an aggravation of the already extant shortfall between environmental infrastructure needs and their supply.

Water and Wastewater: The single most important public health issue for the border relates to water supply and water quality. In order to exist, people need water for drinking, food preparation, and sanitary purposes. In addition, water is used for other domestic and industrial needs and in large quantities for agriculture. At current growth and consumption rates, the water supply for many border communities is expected to be exhausted in 20 to 30 years, and most of the region's rivers are contaminated or used up long before they reach the border. Some large and small U.S. border cities have failed to upgrade and maintain wastewater treatment systems. Meanwhile, many Mexican communities have struggled for more than 50 years to provide or meet needs for sewage collection and treatment facilities for their growing populations.

⁴⁸ Suárez, Enrique and Octavio Chávez, *Profile of the United States- México Border* (1996) at p. 29.

⁴⁹ The term "in-bond" refers to the concept of waiving import and export duties on component parts or raw materials for manufactured products, which will be re-exported upon completion. These arrangements are in-bond, or guaranteed.

Surface and groundwater are critical resources in the border region, especially in the Rio Bravo valley west of El Paso/Juarez where most of the region lies in the Chihuahuan and Sonoran deserts. In the Rio Bravo valley, most of the water allocated from the Rio Grande is reserved for agriculture on both sides of the border, leaving little for growing communities.⁵⁰

Expanding urban communities put pressure on water systems in two ways. First, clean water for drinking, agriculture, and industry is an essential part of any healthy community. Second, urban waste and agricultural runoff threaten water quality. Officials estimate that more than a million people live in communities on the border that lack basic life supporting services. Absent sewage collection and water and wastewater treatment, human diseases like intestinal infections and Hepatitis-A are rampant. This lack of infrastructure also contributes to the higher than average infant mortality figures for the region as a whole.⁵¹ The contamination of air, water, soil and workplace environments by pesticides, fertilizers, raw sewage, fossil fuel consumption and the like are suspected of being key contributors to the high rates of certain diseases found in the border region.⁵²

Solid and Toxic Wastes: Increasing urbanization and industrialization of the border region has meant an increasing use, transport and release of municipal and industrial waste. Unlike residents living in well-funded cities like El Paso and San Diego, residents of Juarez and Tijuana, or the *colonias* and rural areas of both sides of the border generally lack any coordinated or comprehensive solid waste collection and disposal services. The high cost of toxic waste disposal combined with poor regulatory enforcement has resulted in routine illegal dumping of toxic materials. These improperly disposed hazardous materials are strongly suspected to endanger nearby residents, creating health-related problems, such as damage to the nervous and respiratory systems, deformities and cancer.

Air Quality: Increasing border traffic and industrial activity increased the level of air pollutants, exacerbating particulate, ozone, and other toxic air quality problems. Air quality standards in both countries are routinely violated. The air pollution problems are often worsened by temperature inversions that keep polluted air from dispersing in the hot, dry border region. Air quality is particularly problematic in the Juarez/El Paso area. There are eight new air monitoring stations in Tijuana that are documenting this air quality degradation. On the positive side, we see the development of the San Diego/Tijuana/Rosarito Air Basin Project modeled on the successful Paso Del Norte Air Quality Task Force of El Paso/Juarez.

The political, economic, and environmental factors discussed produced serious environmental health conditions, environmental degradation and unsustainable use of natural resources. As more businesses and people moved into the area, border communities grew without developing land management programs. Few communities have the resources or technical skills necessary to respond to the growing need for urban infrastructure and wastewater disposal and treatment. They often lack the political clout or the savvy necessary to command the attention of national governments that exert authority over the relations between neighboring communities divided by an international boundary. Appropriating the financial resources necessary to adequately fund environmental infrastructure projects proved to be a political obstacle that border communities can only rarely overcome.

⁵⁰ Mumme, Stephen, *Water Use Along the Rio Grande/Rio Bravo* at 104.

⁵¹ Suárez, Enrique and Octavio Chávez, *Profile of the United States- México Border* (1996) at pp. 42-44.

⁵² Cases of asthma, tuberculosis, anencephaly, multiple myeloma, lupus, elevated blood lead levels, hepatitis A, gastrointestinal infections and pesticide poisonings, occur at alarming rates in different regions of the border.

The presence of an international political boundary dividing communities meant that a local effort to identify and resolve problems with sewage disposal and air quality required nations whose political systems and economic circumstances differed dramatically, to work together. And technically required the involvement of the state departments of the two sovereign nations. Providing basic public goods in local communities is not the focus of national governments (and certainly not their state departments), and thus the international boundary created diplomatic obstacles that block efforts by local municipalities to respond to collective infrastructure problems. Geographically distant from government agencies located in Washington, D.C. and Mexico City, the needs of border communities went unmet for decades.