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THE MAQUILADORA INDUSTRY AND ENVIRONMENTAL DEGRADATION IN THE UNITED STATES-MEXICO BORDERLANDS

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I. INTRODUCTION

Periods of rapid industrial growth and environmental degradation in the United States-Mexico Borderlands[1] have historically coincided with negative shifts in Mexico's economy.[2] Accordingly, the Mexican economic crisis of 1982 sparked burgeoning growth in the maquiladora industry.[3] During the mid-1980s, the number of maquiladora plants in the United States-Mexico Borderlands increased at a rate of fifteen percent per year;[4] thereafter, growth trailed off in the early 1990s.[5] Mexico's economic crisis of the mid-

1. The term "United States-Mexico Borderlands" is not precisely defined. Generally, the term refers to the United States-Mexico border and some imprecise distance on either side. *See* Sanford E. Gaines, *Bridges to a Better Environment: Building Cross-border Institutions for Environmental Improvement in U.S.-Mexico Border*, 12 ARIZ. J. INT'L & COMP. L. 429, 471 n.1 (1995) (defining term "Borderlands" as 100 miles on either side of border); *see also* Abelardo L. Valdez, *Expanding the Concept of Coproduction Beyond the Maquiladora: Toward a More Effective Partnership Between the United States and Mexico, and the Caribbean Basin Countries*, 22 INT'L LAW. 393, 404 (1988) (extending Borderlands as far north as San Antonio, Texas and Phoenix, Arizona).

2. *See* Leslie Sklair, *The Maquila Industry and the Creation of a Transnational Capitalist Class in United States-Mexico Border Region* (tracing effects of exchange controls and decline of peso that instigated further expansion of maquiladora industry), *in* CHANGING BOUNDARIES IN THE AMERICAS: NEW PERSPECTIVES ON THE U.S.-MEXICAN, CENTRAL AMERICAN, AND SOUTH AMERICAN BORDERS 69, 74 (Lawrence A. Herzog ed., 1992).

3. *See* Stephen Koep, *Hands Across the Border; U.S. Manufacturers Work Both Sides of the Line to Slash Costs (Firms Have Components Assembly in Mexico)*, TIME, Sept. 10, 1984, at 36, 36 (discussing rapid expansion of maquiladora industry after 1982 peso devaluation).

4. *See* LESLIE SKLAIR, ASSEMBLING FOR DEVELOPMENT: THE MAQUILA INDUSTRY IN MEXICO AND THE UNITED STATES 68 (1993) (tabulating statistics that show an average annual maquiladora growth rate of 15% during 1980s); *see also* Dale Fisher & Louis Harrel, *The Mexican Peso Devaluation and Border Area Employment*, SW. J. BUS. & ECON., Jan. 1989, at 19, 19 (noting increase in industrial employment in Mexico after devaluation of peso in early 1980s); *cf.* Susan Fleck & Constance Sorrentino, *Employment and Unemployment in Mexico's Labor Force*, MONTHLY LAB. REV., Nov. 1994, at 3, 3 (stating that Mexico's unemployment rate for urban-dwellers continuously fell from 1983 to 1991, achieving low of 2.6%).

5. *See* LESLIE SKLAIR, ASSEMBLING FOR DEVELOPMENT: THE MAQUILA INDUSTRY IN MEXICO AND THE UNITED STATES 241 (1993) (noting decrease in maquiladora growth rate from 15% to 11% during early 1990s).

1990s, however, is expected to incite renewed industrial expansion and environmental degradation in the Borderlands.[6]

Although the maquiladora industry's expansion in the late 1990s may not equal the pace of the mid-1980s, early indicators foreshadow a period of vigorous growth.[7] For example, in the first ten months of 1995, maquiladora employment rose by 9.4%[8] and maquiladora exports increased by 19.2%.[9] By March 1996, maquiladora exports increased by twelve percent above what was

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6. *See* Xavier C. Vasquez, *The North American Free Trade Agreement and Environmental Racism*, 34 HARV. INT'L L.J. 357, 361–62 (1993) (suggesting that expansion of maquiladora plants under NAFTA without enforcement of environmental laws will cause further environmental degradation); Angela C. Montez, Note, *The Run Past the Border: Consequences of Treating the Environment Under NAFTA as a Border Issue*, 5 GEO. INT'L ENVTL. L. REV. 417, 422 (1993) (commenting that industrial expansion and increases in population devastate environment along border); Joel L. Silverman, Note, *The "Giant Sucking Sound" Revisited: A Blueprint to Prevent Pollution Havens by Extending NAFTA's Unheralded "Eco-Dumping" Provisions to the New World Trade Organization*, 24 GA. J. INT'L & COMP. L. 347, 348 (1994) (stating that air and water quality is expected to worsen because of maquiladora industry); *see also* Craig Kovarik, *NAFTA and Environmental Conditions on the United States-Mexico Border*, 2 KAN. J.L. & PUB. POL'Y 61, 62 (1993) (concluding that although maquiladoras promote economic growth, such growth is harmful to border environment); Sloan Rappoport, *NAFTA and the Petrochemical Industry: A Disastrous Combination for Life at the U.S.-Mexico Border*, 11 DICK. J. INT'L L. 579, 582–83 (1993) (explaining harmful environmental effects that petrochemical maquiladoras have on environment); Paulette L. Stenzel, *Can NAFTA's Environmental Provisions Promote Sustainable Development?*, 59 ALB. L. REV. 423, 465 (1995) (concluding that waste from maquiladora plants contaminates environment).

7. *See* Thomas Black, *Mexico 1995: Maquiladora Growth Equals Boom of Late 1980s*, Dow Jones Int'l News Serv., Dec. 27, 1995 (predicting that growth of maquiladora industry in 1996 will exceed 1995's 18.2% increase), *available in* Westlaw, ALLNEWSPLUS Database; Nancy Nusser, *Surge in Border Factories Strains Natural Resources*, AUSTIN AMERICAN-STATESMAN, Dec. 17, 1995, at A4 (declaring that Mexican government will not act to restrain expansion of maquiladoras because of their importance to economy); Sara Silver, *Mexican Crisis Could Be Windfall for Manufacturers*, PORTLAND OREGONIAN, Jan. 20, 1995, at C2 (forecasting stimulation of maquiladora growth as result of peso devaluation and drastic reduction of business expenses); *see also* Marilyn Haddrill, *Zero-Sum Game for Maquiladoras*, DALLAS MORNING NEWS, Feb. 8, 1995, at D1 (commenting on tremendous profit opportunities for maquiladora owners caused by devalued peso along with unchanged dollar prices charged for products).

8. *See Mexico's Maquiladora Industry Booming, Despite Recession*, LATIN AM. L. & BUS. REP., Jan. 31, 1996 (reporting that during first 10 months of 1995, maquiladora employment rose 9.4%), *available in* Westlaw, ALLNEWSPLUS Database; *see also Manufacturing/Maquila: Maquiladora Employment up 9%*, MEX. BUS. MONTHLY, May 1, 1995 (stating that maquiladora employment in Mexico from January 1994 was up 9% in January 1995), *available in* Westlaw, ALLNEWSPLUS Database.

9. *See Finance Secretariat Reports Trade Surplus of Almost 7.4 Billion in 1995*, SOURCEMEX ECON. NEWS & ANALYSIS ON MEX., Jan. 24, 1996 (announcing 19.2% increase in maquiladora exports for 1995), *available in* Westlaw, ALLNEWSPLUS Database.

exported during the first quarter of 1995.[10] In November 1995, Mexican authorities approved 432 new maquiladoras and the expansion of 635 existing maquiladoras.[11] Further, declining wage rates in the maquiladora industry are expected to encourage foreign corporations to continue expanding into the United States-Mexico Borderlands through the turn of the century.[12] As the value of the Mexican peso plummets, so too does the cost of Mexican labor in the maquiladoras.[13] Measured in United States dollars, the wages earned in the maquiladoras decreased almost thirteen percent in January of 1995 alone.[14]

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10. *See Mexico's First Quarter of 1996 Trade: Imports up 9.6% Versus First Quarter of 1995*, Dow Jones Int'l News Serv., May 9, 1996 (reporting 1996 first quarter statistics showing increase of 12% for maquiladora exports and increase of 28% for nonmaquiladora exports), *available in* Westlaw, ALLNEWSPLUS Database; *see also Finance Secretariat Reports Trade Surplus of $1.12 Billion for January-February*, SOURCEMEX ECON. NEWS & ANALYSIS ON MEX., Apr. 17, 1996 (stating that maquiladora exports increased 17% for first two months of 1996 as compared to same two-month period in 1995), *available in* Westlaw, ALLNEWSPLUS Database.

11. *See Value of Maquiladoras Rising*, FIN. POST, Jan. 10, 1996, at 47 (noting that Mexican government approved addition of 432 maquiladoras and expansion of 635 existing maquiladoras as of November 1995); *see also* Kevin G. Hall, *Boom Goes on: Industry Still Pouring Development onto Mexican Border*, CHI. TRIB., June 18, 1995, at A7 (reporting that 160 additional maquiladoras are expected to be built by 1997); *Mexico's Maquiladoras Add 3,780 Jobs in March*, Dow Jones Int'l News Serv., May 7, 1996 (stating that Mexico's commerce industry approved 52 additional maquiladora plants), *available in* Westlaw, ALLNEWSPLUS Database; *cf.* Graciela Sevilla, *South Korea Firms Flock to Sonora*, ARIZ. REPUBLIC, Mar. 20, 1996, at E3 (reporting that several South Korean electronics firms plan to hire 1500 workers for new maquiladora plants in 1996).

12. *See* Kevin G. Hall, *Boom Goes on: Industry Still Pouring Development onto Mexican Border*, CHI. TRIB., June 18, 1995, at A7 (focusing on effects of weak peso in promoting foreign business investment); David Melemore, *Maquiladoras to Speed Border Diversification*, DALLAS MORNING NEWS, Sept. 24, 1995, at H6 (suggesting that maquiladora growth will continue through turn of century); *Maquiladoras Show First-Half Expansion*, SAN ANTONIO EXPRESS-NEWS, Oct. 4, 1995, at E2 (outlining growth in industry since December 1994 peso evaluation). *But cf.* Leslie Crawford, *Television "Assembly Capital" Set to Expand but Attracting New Companies to the Mexican Town of Tijuana Is Proving Difficult*, FIN. TIMES, Sept. 5, 1995, at 8 (finding manufacturers less interested in investment since peso devaluation).

13. *See* Bob Davis, *Two Years Later, the Promises Used to Sell NAFTA Haven't Come True, but Its Foes Were Wrong, Too*, WALL ST. J., Oct. 26, 1995, at A24 (reporting that Mexico's economic crisis of mid-1990s caused rapid peso devaluation which reduced value of maquiladora labor from $2.54 to $1.80 per hour).

14. *See* INSTITUTO NACIONAL DE ESTADÍSTICA GEOGRAFÍA E INFORMATICA, AVANCE DE INFORMACIÓN ECONÓMICA: INDUSTRIA MAQUILADORA DE EXPORTACIÓN 9 (July 1995) (on file with the *St. Mary's Law Journal*) (noting that after adjustment, maquiladora wages dipped 12.7% in January 1995).

This Article analyzes the tension between industrial growth inspired by a desire for economic stability and efforts to halt environmental degradation in the United States-Mexico Borderlands, paying special attention to the political influences involved in the struggle. Part II of this Article describes the maquiladora industry and its role in the environmental degradation of the Borderlands. Expanding upon this description, Part III provides a political analysis by examining the goals and interests of several entities and groups: (1) the United States and Mexican national governments; (2) state and local governments within each nation; and (3) environmental and social action groups. Finally, Part IV discusses emerging movements that promise to relieve the tension between the expanding maquiladora industry and efforts to halt environmental degradation in the United States-Mexico Borderlands.

II. THE MAQUILADORA INDUSTRY AND ENVIRONMENTAL DEGRADATION

A. *The Maquiladora Industry*

The maquiladora program is the most frequently used name to identify the cooperative industrial effort between the United States and Mexico.[15] The term "maquiladora" (or maquila) refers to an assembly process in which twin plants operate on each side of the United States-Mexico border—large assembly plants on the Mexican side and smaller distribution plants on the American side.[16]

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15. *See* Sherri M. Durand, *American Maquiladoras: Are They Exploiting Mexico's Working Poor?*, 3 KAN. J.L. & PUB. POL'Y 128, 129 n.2 (1994) (listing several terms used to describe maquiladora program, including "offshore assembly industry," "in-bond industry," "border industrialization program," and "twin-plant program").

16. *See, e.g.*, James E. Bailey, *Free Trade and the Environment—Can NAFTA Reconcile the Irreconcilable?*, 8 AM. U. J. INT'L L. & POL'Y 839, 866 (1993) (describing correspondent operations on either side of United States-Mexico border as twin plants); Phillip E. Koehnke, *North American Free Trade: Mexico, Canada and the United States*, 12 CHICANO-LATINO L. REV. 67, 100 n.123 (1992) (stating that common maquiladora program entails twin plants operating on opposite sides of border); Stephen M. Lerner, *The Maquiladoras and Hazardous Waste: The Effects Under NAFTA*, 6 TRANSNAT'L LAW. 255, 256 n.5 (1993) (explaining that term "maquiladora" originally referred to grain mills, but today term connotes "export-oriented processing" in Mexican border area); Susan Tiano, *Maquiladora Women: A New Category of Workers?* (detailing export processing strategy in which one country develops product and sends components to third world country for assembly and further processing, and then finished product is re-exported to country of origin), *in* WOMEN WORKERS AND GLOBAL RESTRUCTURING 193, 194 (Kathryn Ward ed., 1990). Generally, the maquiladora program has the following characteristics: (1) foreign countries

The plants located in Mexico receive raw materials from the United States, process these materials, then send finished products back to the United States "in-bond."[17]

Historical trends peculiar to the United States-Mexico border region helped shape the maquiladora program.[18] The Mexican government sought to improve the border region to take advantage of its close proximity to the United States.[19] As early as 1933, the

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provide capital and machinery to industrial plants in Mexico; (2) the Mexican government agrees to place no tax or import duties on these plants; (3) low-cost laborers assemble and process the goods for export; and (4) the United States agrees to base tariffs on the value added to the raw materials while in Mexico. Louis F. Del Duca, *Teachings of the European Community Experience for Developing Regional Organizations*, 11 DICK. J. INT'L L. 485, 520 (1993).

17. *See* Guillermo Marrero, *What Foreigners Should Know About the Mexican Market* (defining term "in-bond" as status of goods that are manufactured in Mexico with foreign country's raw materials and re-exported for sale elsewhere), *in* NAFTA: WHAT YOU NEED TO KNOW NOW 1994, at 117, 133 (PLI Comm'l Law & Practice Course Handbook Series No. A4-4466, 1994). The "in-bond" status of manufactured goods also assures that these goods will not be sold in Mexico. *Id.*; *see also* Charles T. DuMars, *Liberalization of Foreign Investment Policies in Mexico: Legal Changes Encouraging New Direct Foreign Investment*, 21 N.M. L. REV. 251, 263 (1991) (stating that "to ensure that the finished products are returned to the United States, a bond is required in the amount of the duty which would have to be paid if the product is not re-exported to the United States," but also noting that after 1989, maquiladora operations may sell goods on Mexican market as long as such sales do not exceed one-third of plant's current production). The term "in-bond industry" is often used in place of or in addition to the term "maquiladora" in Mexican writings. *See* Guillermo Marrero, *What Foreigners Should Know About the Mexican Market* (using "maquiladora" and "in-bond" interchangeably), *in* NAFTA: WHAT YOU NEED TO KNOW NOW 1994, at 117, 133 (PLI Comm'l Law & Practice Course Handbook Series No. A4-4466, 1994); Magda Kornis, *During the First NAFTA Year, U.S.-Mexican Bilateral Trade Was Virtually in Balance*, MEX. TRADE & L. REP., Apr. 1995, at 10, 11 (defining "maquiladoras" as "in-bond production units").

18. *See* Joel L. Silverman, Note, *The "Giant Sucking Sound" Revisited: A Blueprint to Prevent Pollution Havens by Extending NAFTA's Unheralded "Eco-Dumping" Provisions to the New World Trade Organization*, 24 GA. J. INT'L & COMP. L. 347, 350 (1994) (reviewing economic history of Borderlands that contributed to makeup of maquiladora program). Conceptually, the maquiladora program reflects a post-World War II global trend toward new forms of production. *See* Joshua A. Cohen, *A Case Study of Internationalization: The Rise of the Maquiladora*, BUS. MEX., Jan.-Feb. 1994, at 52, 53 (noting past economic climate and rise of international trade after World War II); *cf.* Louis F. Del Duca, *Teachings of the European Community Experience for Developing Regional Organizations*, 11 DICK. J. INT'L L. 485, 488–89 (1993) (illustrating rise of international cooperative efforts after World War II and especially during later half of the twentieth century).

19. *See* Joel L. Silverman, Note, *The "Giant Sucking Sound" Revisited: A Blueprint to Prevent Pollution Havens by Extending NAFTA's Unheralded "Eco-Dumping" Provisions to the New World Trade Organization*, 24 GA. J. INT'L & COMP. L. 347, 350 (1994) (asserting that Mexico has history of dissolving trade barriers to promote economic growth along its border); *see also* Abelardo L. Valdez, *Expanding the Concept of Co-Production Beyond*

Mexican government promoted the industrialization and economic development of the Borderlands by establishing free trade privileges in the region.[20] For example, the Bracero Program was a historical antecedent to the maquiladora industry.[21] To counteract World War II labor shortages, the Bracero Program brought over 400,000 temporary Mexican workers to the United States to work in agricultural areas.[22] When the Bracero Program ended in 1964, hundreds of thousands of Mexican workers were left idle, most of them residing in Mexico's border cities.[23]

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the Maquiladora: Toward a More Effective Partnership Between the United States and Mexico, and the Caribbean Basin Countries, 22 INT'L L. 393, 398–99 (1988) (explaining potential economic benefits resulting from Mexico's close proximity to United States markets).

20. *See* Joel L. Silverman, Note, *The "Giant Sucking Sound" Revisited: A Blueprint to Prevent Pollution Havens by Extending NAFTA's Unheralded "Eco-Dumping" Provisions to the New World Trade Organization*, 24 GA. J. INT'L & COMP. L. 347, 378 n.29 (1994) (outlining how Mexican government between 1933 and 1939 promoted economic development along border to encourage transport of goods from central Mexico to markets in United States).

21. *See* Agreement Respecting the Temporary Migration of Migrant Agricultural Workers, Aug. 4, 1942, United States-Mex., 2 U.S.T. 1048, 56 Stat. 1759 (implementing program that allowed for temporary migration of Mexican workers to United States and outlining basic terms of employment for these temporary workers).

22. Joel L. Silverman, Note, *The "Giant Sucking Sound" Revisited: A Blueprint to Prevent Pollution Havens by Extending NAFTA's Unheralded "Eco-Dumping" Provisions to the New World Trade Organization*, 24 GA. J. INT'L & COMP. L. 347, 350 (1994); *see* George Vernez & David Ronfeldt, *The Current Situation in Mexican Immigration*, 251 SCIENCE 1189, 1189–90 (1991) (detailing how Bracero Program allowed unlimited number of temporary workers, or *Braceros*, into United States); Joshua A. Cohen, *A Case Study of Internationalization: The Rise of the Maquiladora*, BUS. MEX., Jan.-Feb. 1994, at 52, 52 (noting that Bracero Program allowed Mexican worker to labor in American agricultural industry); Steven Greenhouse, *New Plan, Old Flaws*, N.Y. TIMES, Aug. 23, 1981, at 21 (stating that United States participated in Bracero Program to combat war-time labor shortages); Toni Mack, *Bring Back Braceros*, FORBES, Dec. 22, 1980, at 30, 31 (commenting that Bracero Program brought over 400,000 Mexican agriculture workers to United States at its peak during late 1950s); *When Guest Workers Last Came to U.S.*, U.S. NEWS & WORLD REP., Aug. 3, 1981, at 43 (remarking that approximately 4.8 million workers came to United States during Bracero Program).

23. *See* Kitty Calavita, *U.S. Immigration Policy: Contradictions and Projections for the Future*, 2 IND. J. GLOBAL LEGAL STUD. 143, 146 (1994) (noting that Bracero Program stopped in 1964 because of President Kennedy's intolerance of human rights abuses occurring in program); William Langewiesche, *The Border: Boundaries Between United States and Mexico (Part 1)*, ATLANTIC, May 1992, at 53, 68 (stating that Mexico's unemployment rate rose when Bracero Program ended in 1964). Realizing the need to create an alternative for displaced workers, the Mexican government launched a *Programa Nacional Fronterizo* [National Border Program] (PRONAF) to promote economic development along the border. *See* Harry Bernstein, *Labor: Borderline of Corporate Generosity*, L.A. TIMES, Feb. 13, 1990, at 3 (noting that after Bracero Program ceased, Mexico offered tax

At the same time the Bracero Program ended, increasing international competition forced United States businesses to lower production costs by implementing new forms of international production relationships.[24] Mexico responded in 1965 by imple-

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and thrift incentives to United States companies to build maquiladoras and help alleviate unemployment for displaced farm workers); Dale Fisher & Louis Harrell, *The Mexican Peso Devaluation and Border Area Employment*, SW. J. BUS. & ECON., Jan. 1989, at 19, 19 (noting that PRONAF financed jobs to build roads and railroads to encourage foreign investment); *see also* Joshua A. Cohen, *A Case Study of Internationalization: The Rise of the Maquiladora*, BUS. MEX., Jan.-Feb. 1994, at 52, 52–53 (recognizing need for Mexico to participate in world market by offering low labor costs and minimal taxation for manufacturing plants).

24. *See* Joshua A. Cohen, *A Case Study of Internationalization: The Rise of the Maquiladora*, BUS. MEX., Jan.-Feb. 1994, at 52, 52–53 (stating that international competition after World War II was impetus for maquiladora industry's expansion). These international production relationships are referred to by various terms including "production sharing," "global assembly line," "offshore assembly," "international subcontracting," and "co-production." *See* Lance Compa, *Labor Rights and Labor Standards in International Trade*, 25 LAW & POL'Y INT'L BUS. 165, 173–74 (1993) (describing use of "global assembly line" as movement of electronic and garment production to developing countries while maintaining management and research base in developed countries); Sherri M. Durand, *American Maquiladoras: Are They Exploiting Mexico's Working Poor?*, 3 KAN. J.L. & PUB. POL'Y 128, 129 (1994) (characterizing "offshore assembly" as method used by developing countries to attract foreign investment by providing low labor costs); M. Patricia Fernandez-Kelly, *Labor Force Recomposition and Industrial Restructuring in Electronics: Implications for Free Trade*, 10 HOFSTRA LAB. L.J. 623, 632, 645–46, 663 (1993) (stating that maquiladora industry is based on "international subcontracting" in which firms subcontract production operations to foreign countries to lower operating costs); Guillermo Marrero, *What Foreigners Should Know About the Mexican Market* (describing "global production sharing" as trade relationship wherein industrialized nation exports raw materials into developing nation for assembly and subsequent export back to country of origin), *in* NAFTA: WHAT YOU NEED TO KNOW NOW 1994, at 117, 134 (PLI Comm'l Law & Practice Course Handbook Series No. A4-4466, 1994); David Voigt, Note, *The Maquiladora Problem in the Age of NAFTA: Where Will We Find Solutions?*, 2 MINN. J. GLOBAL TRADE 323, 325 (1993) (using term "co-production" to describe maquiladora system in which two or more countries pool human and raw resources to create single product). Lower wages in Mexico continue to attract United States investment. *See* Joel L. Silverman, Note, *The "Giant Sucking Sound" Revisited: A Blueprint to Prevent Pollution Havens by Extending NAFTA's Unheralded "Eco-Dumping" Provisions to the New World Trade Organization*, 24 GA. J. INT'L & COMP. L. 347, 350 (1994) (noting low wages as factor of maquila industry's growth); Sue Greenfield & Harold Dyck, *Free Trade in the Americas: The Debate Heats up*, BUS. FORUM, Sept. 22, 1992, at 17, 17 (stating that wages in Mexico are "among lowest in the world" and noting that in 1990 Mexico's average hourly rate was $.83, as compared to $12.04 in United States). The experiences of companies in Asian nations like South Korea and Taiwan, which utilized assembly plants as a vehicle for industrial growth, have been well documented. *See, e.g.*, Gerard Baker, *Survey of Malaysia: The High-Tech Trail Blazer*, FIN. TIMES, Sept. 19, 1995, at VI (evaluating emergence of Malaysia's assembly plant industrial base); William J. Holstein & Laxmi Nakarmi, *Korea: It Could Well Become the First Country to Establish Itself As an Ad-*

menting the *Programa de Industrialization Fronteriza* [Border Industrialization Program] (BIP) to facilitate financial incentives for foreign investment in the maquiladora industry.[25] Global production-sharing techniques enabled maquiladora investors to capitalize on both the technological sophistication of the United States and the cheap labor in Mexico.[26] The economic advantages of international production sharing, however, have contributed to environmental degradation in the United States-Mexico Borderlands.

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vanced Industrial Power Since the Emergence of Japan, BUS. WEEK, July 31, 1995, at 56, 56–63 (analyzing industrial growth and expansion in South Korea); Cynthia G. Marasigan, *Industry: Cleared for Takeoff*, FAR EASTERN ECON. REV., July 6, 1995, at 44, 44 (looking at profit potential of Philippine assembly plant industry).

25. *See* Joshua A. Cohen, *A Case Study of Internationalization: The Rise of the Maquiladora*, BUS. MEX., Jan.-Feb. 1994, at 52, 53 (explaining Mexico's implementation of incentives, including BIP, which resulted in establishment of maquiladora industry); Mary B. Teagarden et al., *Mexico's Maquila Industry: Where Strategic Human Resource Management Makes a Difference*, ORGANIZATIONAL DYNAMICS, Jan. 1992, at 34, 35 (remarking that BIP eased Mexico's foreign investment restrictions, which in turn encouraged formation of maquiladoras); *see also* Ruth Buchanan, *Border Crossings: NAFTA, Regulatory Restructuring and the Politics of Place*, 2 IND. J. GLOBAL LEGAL STUD. 371, 383 (1995) (citing BIP as example of United States-Mexico industrial cooperation); Reid A. Middleton, *NAFTA and the Environmental Side Agreement: Fusing Economic Development with Ecological Responsibility*, 31 SAN DIEGO L. REV. 1025, 1027–28 (1994) (stating that BIP evolved from PRONAF).

26. *See* Guillermo Marrero, *What Foreigners Should Know About the Mexican Market* (stating that maquiladora program's "evolution and rapid growth is part of the general trend toward 'global production sharing,'" whereby industrialized nation produces raw materials for assembly in developing nation with lower labor costs), *in* NAFTA: WHAT YOU NEED TO KNOW NOW 1994, at 117, 134 (PLI Comm'l Law & Practice Course Handbook Series No. A4-4466, 1994); Edward M. Ranger, *Environmental Aspects of Building a Facility in Northern Mexico*, C990 A.L.I.-A.B.A. 497, 540 (1995) (defining maquiladora program as "production sharing" scheme involving United States and Mexican factories along border); *Maquiladoras Will Be Transformed by NAFTA*, MEX. TRADE & L. REP., Sept. 1994, at 8, 9 (concluding that main advantage of maquiladora program is combination of Mexico's cheap labor and ready access to United States corporate planners, engineers and markets); *see also* Sherri M. Durand, *American Maquiladoras: Are They Exploiting Mexico's Working Poor?*, 3 KAN. J.L. & PUB. POL'Y 128, 134 (1994) (contending that cheap labor is advantage of maquiladora program as is quality of Mexican labor); Rachel F. Moran, *Demography and Distrust: The Latino Challenge to Civil Rights and Immigration Policy in the 1990s and Beyond*, 8 LA RAZA L.J. 1, 18 (1995) (noting American employers' attraction to cheap labor in maquiladoras); *cf.* James E. Bailey, *Free Trade and the Environment—Can NAFTA Reconcile The Irreconcilable?*, 8 AM. U. J. INT'L L. & POL'Y 839, 867 (1993) (finding that more than 1,871 maquiladora plants utilize over 400,000 workers and employ more than 15% of Mexico's total industrial work force).

B. *Environmental Degradation*

The maquiladora industry contributes both directly and indirectly to environmental degradation in the Borderlands. Directly, the assembly plants blight the Borderlands environment with undisciplined and illegal disposal of waste material.[27] This direct contribution to environmental degradation has been aggravated by recent qualitative changes in the makeup of the maquiladora industry and by a general quantitative increase in the number of maquiladoras. Indirectly, the program has pulled citizens from central and southern Mexico to the Borderlands.[28] This population shift has created new burdens for the region's inadequate urban infrastructure and fragile ecology.[29]

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27. *See* Laura J. Van Pelt, *Countervailing Environmental Subsidies: A Solution to the Environmental Inequities of the North American Free Trade Agreement*, 29 TEX. INT'L L.J. 123, 135 (1994) (asserting that companies relocate in Mexico to avoid complying with United States environmental laws and that United States companies illegally dump hazardous waste in Mexico); Lillian M. Pinzon, Note, *Criminalization of the Transboundary Movement of Hazardous Waste and the Effect on Corporations*, 7 DEPAUL BUS. L.J. 173, 185 (1994) (describing illegal dumping techniques resorted to by maquiladora owners). "Midnight Dumping" and "Sham Recycling" are two examples of illegal waste disposal. Lillian M. Pinzon, Note, *Criminalization of the Transboundary Movement of Hazardous Waste and the Effect on Corporations*, 7 DEPAUL BUS. L.J. 173, 185 (1994). Generally, "midnight dumping" occurs when a disposal company, disguised as a legitimate business, dumps wastes into public areas such as ditches, sewers, municipal landfills, or into the sea. *Id.* "Sham recycling" occurs when hazardous waste is supposedly exported to a recycling plant, but in reality it is shipped to third world countries or eastern Europe. *Id.*

28. *See* C. O'Neal Layor, *Fast Track, Trade Policy, and Free Trade Agreements: Why the NAFTA Turned into a Battle*, 28 GEO. WASH. J. INT'L L. & ECON. 1, 107 (1994) (stating that Mexican workers migrated to border cities seeking work in maquiladora plants); *see also* Michael S. Barr et al., *Labor and Environmental Rights in the Proposed Mexico-United States Trade Agreement*, 14 HOUS. J. INT'L L. 1, 22–23 (1991) (contending that maquiladora industry encourages migration to border communities which lack resources to sustain growing population).

29. *See* James A. Funt, Comment, *The North American Free Trade Agreement and the Integrated Environmental Border Plan: Feasible Solutions to U.S.-Mexico Border Pollution?*, 12 TEMP. ENVTL. L. & TECH. J. 77, 78 (1993) (describing negative indirect effects on environment generated by maquiladora program). As workers move to the border areas seeking work in the maquiladoras, they place excessive strain on waste-treatment facilities and municipal resources, which further exacerbates the dangerous environmental climate. *Id.*

1. The Disposal of Waste Materials and Its Direct Impact on the Environment

The maquiladora industry's production and illegal disposal of waste material directly harms the Borderlands environment.[30] Maquiladoras dump everything from raw sewage to toxic metals into the local environment.[31] Numerous reports regularly document these assembly plants' unsafe and illegal disposal practices.[32] For instance, in one case, a young Mexican girl burned her foot on acid waste dumped by a United States-owned lock-manufacturing

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30. *See* Michael S. Feeley & Elizabeth Knier, *Environmental Considerations of the Emerging United States-Mexico Free Trade Agreement*, 2 DUKE J. COMP. & INT'L L. 259, 275–76 (1992) (describing maquiladora plants' illicit dumping practices and asserting that such practices turn surrounding neighborhoods into cesspools); Chris Wood & Augusta Dwyer, *Borderline: Mexico's Vast Industrial Corridor Takes a Heavy Toll on Health and the Environment*, MACLEAN'S, July 19, 1993, at 24, 24 (presenting graphic images of subhuman living conditions in northern Mexican border town where numerous maquiladoras are located); *NAFTA: Four House Members Denounce Trade Deal, Want Mexican Side of Border Cleaned up*, 10 Int'l Envtl. Rep. (BNA) No. 31 (July 29, 1993) (quoting United States Representative Lydia Velazquez's description of polluted border areas as "environmental disaster that has been created by the irresponsible dumping of waste by the United States-owned maquiladora plants," and implying that approval of NAFTA will lead to increase in number of maquiladoras, and as a result, living standards for Mexican families will decline), *available in* Westlaw, BNA-IED Database; *see also* Patrick J. McDonnell, *Mexicans Fear Plant Could Cause "Next Bhopal" Hazards*, L.A. TIMES, Nov. 20, 1991, at A21 (describing potential for toxic tragedy caused by maquiladoras's generation of toxic and corrosive substances); *cf. Border Town Logs Highest Rate of Anencephaly*, Greenwire, Nov. 9, 1992 (suggesting link between maquiladora waste and fatal birth defect anencephaly), *available in* LEXIS, News Library, GRNWRE File.

31. Melanie Trevino & Adolfo Fernández, *The Maquiladora Industry; Adverse Environmental Impact, and Proposed Solutions*, J. BORDERLANDS STUD., Fall 1992, at 57, 57–61; *see* Harry Bernstein, *Labor: Borderline Corporate Generosity*, L.A. TIMES, Feb. 13, 1990, at 3 (stating that United States-owned maquiladoras generate large amounts of lethal waste and pollution).

32. *See, e.g.*, Michael S. Feeley & Elizabeth Knier, *Environmental Considerations of the Emerging United States—Mexico Free Trade Agreement*, 2 DUKE J. COMP. & INT'L L. 259, 275–76 (1992) (reporting sales of hazardous waste drums for use as drinking water storage containers); Elizabeth C. Rose, *Transboundary Harm: Hazardous Waste Management Problems and Mexico's Maquiladoras*, 23 INT'L LAW. 223, 225–28, 232 (1989) (summarizing reports of abusive maquiladora waste disposal practices); Roberto A. Sanchez, *Health and Environmental Risks of the Maquiladora in Mexicali*, 30 NAT. RESOURCES J. 163, 183–84 (1990) (exposing environmental abuses of "recycling" operations that are actually illegal dumping operations); Melanie Treviño & Adolfo Fernandez, *The Maquiladora Industry, Adverse Environmental Impact, and Proposed Solutions*, J. BORDERLANDS STUD., Fall 1992, at 57, 57 (1992) (detailing incident in Ciudad Juárez where children were poisoned by sniffing green rocks covered in toluene); *Reader's Views*, INDIANAPOLIS NEWS, Aug. 16, 1993, at A5 (letter of Charles Depport, President of Indiana State AFL-CIO) (recounting grisly death of chicken that drank from river polluted by maquiladora).

plant.[33] In another case, a maquiladora owner abandoned 800 gallons of hazardous waste when he closed his operation.[34]

Several recent environmental studies present additional proof of the irregular hazardous waste disposal practices within the maquiladora industry. In 1990, the National Toxics Campaign Fund collected water samples in several Borderland cities adjacent to or near suspect assembly plants.[35] These samples detected xylenes, ethyl benzene, acetone, methylene chloride, toluene, and other hazardous substances.[36] In 1991, the Texas Water Commission claimed that only sixty percent of the hazardous waste going from the United States to Mexico was accounted for and returned to the United States.[37] According to the Commission, the remaining forty percent was likely disposed of illegally or stored in Mexico.[38] Even the Mexican government acknowledged that the maquiladora

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33. *See* Gary Lee, *At Border: NAFTA's Environmental Promise Is Murky*, WASH. POST, Nov. 15, 1993, at A1 (reporting that young girl's foot injury from toxic waste forced closure of maquiladora); *cf.* Polly Chaz, *America's Deadly Border*, GUARDIAN (London), Dec. 12, 1993, at 16 (stating that 10 minutes outside of Matamoros, Mexico, children play in pools of toxic green scum and treacly hazardous waste dumped by local factories onto streets).

34. *See* TOM BARRY & BETH SIMS, THE CHALLENGE OF CROSS-BORDER ENVIRONMENTALISM 62 (1994) (describing how Precision Microelectronics shut down its maquiladora and left toxic waste in barrels that were marked, "Inhalation of Concentrated Vapors Can Be Fatal" within yards of Juárez neighborhood).

35. *See* Michael Satchell, *Poisoning the Border*, U.S. NEWS & WORLD REP., May 6, 1991, at 32, 40 (reporting that "National Toxics Campaign Fund collected some 100 separate samples from discharge pipes at 22 United States plants in Mexico"); *see also NAFTA: Four House Members Denounce Trade Deal, Want Mexican Side of Border Cleaned up*, Int'l Envtl. Daily (BNA) (July 29, 1993) (detailing types and levels of contamination discovered in Borderland soil and water), *available in* Westlaw, BNA-IED Database.

36. *See* Michael Satchell, *Poisoning the Border*, U.S. NEWS & WORLD REP., May 6, 1991, at 32, 40 (reporting concentrations of hazardous substances far in excess of EPA limits and noting that some water samples taken along border had such high concentrations of hazardous materials that they could not be accurately measured).

37. Joseph LaDou, *Deadly Migration: Hazardous Industries' Flight to the Third World*, TECH. REV., July 1991, at 46, 46; *see* Hugh Stevenson, *Cleaning up the Law: Experts Challenge Mexico's Environmental Legislation*, BUS. MEX., July, 1995, at 48, 49 (declaring that maquiladoras fail to repatriate hazardous waste products because mixed processing of domestic and imported material makes determination of "country of origin" impossible).

38. Joseph LaDou, *Deadly Migration: Hazardous Industries' Flight to the Third World*, TECH. REV., July 1991, at 46, 46; *see also* Patrick J. McDonnell, *Foreign-Owned Companies Add to Mexico's Pollution Environment*, L.A. TIMES, Nov. 18, 1991, at A1 (quoting letter sent by Texas Water Commission to Environmental Protection Agency concerning issue of toxic disposal and corporate ignorance of environmental issues).

industry failed to account for 28,000 tons of hazardous waste produced in 1995.[39]

a. How Qualitative Changes Contribute to Environmental Degradation

As indicated above, the most serious problems with hazardous waste have occurred in recent times. Since the mid-1980s, the composition of the maquiladora industry has changed and the number of industrial plants has multiplied, thereby creating new threats to the environment.[40] From 1965 through the early 1970s, the apparel industry was the largest maquiladora industry,[41] yet it constituted a minimal threat to the physical environment of the Borderlands. Beginning in the 1980s, however, the electronics, chemical, and furniture industries moved to the area, creating an increased threat of environmental pollution.[42]

During the 1980s, electronics surpassed apparels as the largest industry in the Borderlands.[43] From 1979 through 1985, the number of apparel plants shrunk by ten percent, while the number of electronic equipment and electronic component plants increased by forty and sixty percent respectively.[44] By the early 1990s, the electronics industry comprised the majority of the Borderlands as-

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39. *See* Dora Delgado, *U.S.-Mexico Border: Border Environmental Plan Final Draft Slated for Mid-December, Official Says*, Int'l Envtl. Daily (BNA) (Nov. 30, 1995) (noting that only 32,000 tons out of officially estimated 60,000 tons of waste produced by maquiladoras each year is returned to United States), *available in* Westlaw, BNA-IED Database; *see also* Mike Reid, *Environment: Paydirt Down Mexico Way*, GUARDIAN (London), Nov. 19, 1993, at 14 (estimating that one-third of toxic waste generated by maquiladoras is illegally dumped); *A Binational Disgrace: Only Cooperation Can Clean up the New River*, SAN DIEGO UNION-TRIB., Nov. 27, 1994, at G2 (accusing United States-owned maquiladoras of deliberate noncompliance with waste disposal laws based on failure of 80% to file documents proving proper handling of waste).

40. *See* Roberto A. Sanchez, *Health and Environmental Risks of the Maquiladora in Mexicali*, 30 NAT. RESOURCES J. 163, 167–68 (1990) (summarizing problems produced by expansion and change in composition of maquiladora industry).

41. LESLIE SKLAIR, ASSEMBLING FOR DEVELOPMENT: THE MAQUILA INDUSTRY IN MEXICO AND THE UNITED STATES 12 (1993).

42. *Id.* at 70.

43. *Id.*

44. *Id.*; *see* Susan Tiano, *Maquiladora Women: A New Category of Workers?* (stating that in 1985, over 45% of maquiladora labor pool was involved in electronics assembly while 14% worked in apparel industry), *in* WOMEN WORKERS AND GLOBAL RESTRUCTURING 193, 197 (Kathryn Ward ed., 1990).

sembly plants.[45] For example, in Tijuana, Ciudad Juárez, and Monterrey, electronics installations accounted for sixty-five percent of all maquiladoras and eighty percent of all maquiladora employment.[46] The electronics industry now poses the most serious threat to surface and ground water in the Borderlands because it utilizes large amounts of industrial solvents in the production process.[47]

Although not as prominent as the electronics industry, the chemical industry also moved into the Borderlands during the 1980s.[48] From 1984 to 1988, the number of workers at maquiladora chemical plants increased from 272 to 1,674.[49] This trend continues today.[50] In May 1996, for example, a United States chemical producer announced plans to build a silica plant in Altamira, Tamaulipas, Mexico.[51] The chemical industry poses obvious environmental dangers, eliciting condemnation and vigilance from environmental activists in the Borderlands.[52]

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45. LESLIE SKLAIR, ASSEMBLING FOR DEVELOPMENT: THE MAQUILA INDUSTRY IN MEXICO AND THE UNITED STATES 12, 70 (1993).

46. *See id.* at 70 (listing number of plants and employees for each industry).

47. *See* TOM BARRY ET AL., CROSSING THE LINE: IMMIGRANTS, ECONOMIC INTEGRATION, AND DRUG ENFORCEMENT ON THE U.S.-MEXICO BORDER 85-95 (1994) (describing Borderlands industrial development, including electronics industry, and accompanying problems).

48. *See* LESLIE SKLAIR, ASSEMBLING FOR DEVELOPMENT: THE MAQUILA INDUSTRY IN MEXICO AND THE UNITED STATES 70 (1993) (noting that three new chemical plants opened operations in Borderland between 1979 and 1985).

49. *See* Barbara R. Chrispin, *Employment and Manpower Development in the Maquiladora Industry: Reaching Maturity* (noting increase of 515% in workers at chemical maquiladora plants during late 1980s), *in* THE MAQUILADORA INDUSTRY: ECONOMIC SOLUTION OR PROBLEM? 71, 79–80 (Khasrow Fatemi ed., 1990).

50. *See* TOM BARRY & BETH SIMS, THE CHALLENGE OF CROSS-BORDER ENVIRONMENTALISM 59 (1994) (concluding that maquiladora chemical plants are fastest-growing type of maquiladora out of all new types of maquiladora plants).

51. *See Manufacturing/Maquila: New Chemical Plant*, MEX. BUS. MONTHLY, May 1, 1996 (announcing plans of United States subsidiary to build $30 million silica plant to manufacture tires, bootwear, and toothpaste), *available in* LEXIS, News Library, CURNWS File.

52. *See* Leslie Layton, *Mexico's Responsabilidad Integral: A High-Stake Move*, CHEMICAL WK., Dec. 11, 1991, at 60, 60–61 (relating public's frustration with chemical plants because waste from such plants destroys crops and harms citizens); *see also* TOM BARRY & BETH SIMS, THE CHALLENGE OF CROSS-BORDER ENVIRONMENTALISM 63 (1994) (stating that haphazard chemical dumping from maquiladoras create health and environmental dangers).

Additionally, significant segments of California's furniture industry have moved to the United States-Mexico Borderlands,[53] primarily to avoid newly enacted environmental regulations on the use of solvent-based paints.[54] United States furniture companies also sought the lower labor costs that Mexico provides.[55] Specifically, from 1980 to 1990, the number of maquiladora furniture plants increased from 59 to 274 and the number of workers in these plants rose from 3000 to 25,000.[56] All of these industries combine to impose qualitative changes to the Borderlands environment.

b. How Quantitative Growth Contributes to Environmental Degradation

In conjunction with qualitative changes in the makeup of the maquiladora industry, the increase in its quantitative growth has also created new challenges for the Borderlands environment. During the mid-1980s, the maquiladora industry saw significant growth in the number of assembly plants and employees.[57] Following the beginning of Mexico's economic crisis and the 1982 devaluation of

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53. *See* TOM BARRY & BETH SIMS, THE CHALLENGE OF CROSS-BORDER ENVIRONMENTALISM 68 (1994) (reporting migration of furniture factories to Mexico because of southern California's tough air-quality regulations).

54. *Id.* at 67.

55. *See* Naomi Roht-Arriaza, *Shifting the Point of Regulation: The International Organization for Standardization and Global Lawmaking on Trade and the Environment*, 22 ECOLOGY L.J. 479, 539 n.19 (1995) (noting that major reason for furniture companies' move to Mexico is to take advantage of lower labor costs).

56. TOM BARRY & BETH SIMS, THE CHALLENGE OF CROSS-BORDER ENVIRONMENTALISM 68 (1994).

57. Plants and Employees in the Maquiladora Industry: Selected Years

Year	Number of Plants	Employees (Annual average)
1965	0	3000
1970	160	20,300
1975	454	62,200
1980	620	119,500
1985	760	212,000
1990	1818	441,100
1995	2136	497,000

The statistics in this table were gathered from a compilation of sources and then rounded to the closest 100. *See* LESLIE SKLAIR, ASSEMBLING FOR DEVELOPMENT: THE MAQUILA INDUSTRY IN MEXICO AND THE UNITED STATES 54, 63, 68, 241 (1993) (providing statistics for years 1970 through 1990); ELLWYN R. STODDARD, MAQUILA: ASSEMBLY PLANTS IN NORTHERN MEXICO 24 (1987) (providing statistics for 1965); *Maquila Scoreboard*, TWIN PLANT NEWS (El Paso), Feb. 1995, at 41 (providing statistics for 1995).

the peso, wages plunged, catalyzing a period of rapid maquiladora expansion that continued until the late 1980s.[58] As the number of assembly plants and workers multiplied in the Borderlands, the threat of environmental degradation correspondingly increased because of the significant increase in the production of waste materials.[59] In 1990, for example, Mexico's *Secretaria de Desarrollo Urban y Ecologia* [Secretariat of Urban Development and Ecology] (SEDUE)[60] estimated that more than 1000 maquiladoras generated hazardous waste materials.[61]

Mexico's economic crisis of the 1980s also compounded the misery suffered by the Borderlands inhabitants because of the wide-

58. *See* James R. Gallop & Christopher J. Graddock, Note, *The North American Free Trade Agreement: Economic Integration and Employment Dislocation*, 19 J. LEGIS. 265, 277 (1993) (noting that growth of maquiladora industry in 1980s was due to reduction in Mexican wages caused by devaluation of peso); M. Angeles Villarreal, *Mexico's Maquiladora Industry*, MEX. TRADE & L. REP., Apr. 1992, at 17, 19 (tracing maquiladora growth to peso's devaluation); *see also* William Langewiesche, *The Border: Boundaries Between the United States and Mexico (Part 1)*, ATLANTIC, May 1992, at 53, 53 (stating that during 1980s, real wages in Mexico declined by 40%).

59. *See* Thomas J. Schoenbaum, *The North American Free Trade Agreement (NAFTA): Good for Jobs, for the Environment, and for America*, 23 GA. J. INT'L & COMP. L. 461, 478 (1993) (concluding that immense growth along United States-Mexico border during 1980s caused increased pollution, resulting in environmental degradation); *see also* Michael Satchell, *Poisoning the Border*, U.S. NEWS & WORLD REP., May 6, 1991, at 32, 34 (positing that combination of cheap labor and lax environmental protection laws encouraged United States companies to build maquiladoras during 1980s).

60. In 1992, the *Secretaria de Desarollo Social* [Secretariat of Social Development] (SEDESOL) replaced SEDUE as Mexico's paramount environmental agency. Nicolas Kublicki, *The Greening of Free Trade: NAFTA, Mexican Environmental Law, and Debt Exchanges for Mexican Environmental Infrastructure Development*, 19 COLUM. J. ENVTL. L. 59, 84 (1994). In December 1994, President Zedillo reorganized Mexico's environmental agency placing environmental policy-making power and enforcement responsibility into a new Secretariat for the Environment, Natural Resources, and Fisheries (SMARNAP). Decreto que Reforma Disposiciones de la Ley Organica de la Administracion Publica Federal, D.O., Dec. 28, 1994.

61. *See* TOM BARRY & BETH SIMS, THE CHALLENGE OF CROSS-BORDER ENVIRONMENTALISM 61 (1994) (stating that about half of some 2000 maquiladoras produce hazardous wastes and only 300 plants gave SEDUE required waste assessments); Victoria L. Engfer et al., *By-Products of Prosperity: Transborder Hazardous Waste Issues Confronting the Maquiladora Industry*, 28 SAN DIEGO L. REV. 819, 827–28 n.45 (1991) (remarking that head of SEDUE stated in February 1990 that approximately "25% of maquiladoras were in total compliance with Mexico's environmental laws" and further reporting that many maquiladora organizations contend that this figure is understated because of inaccurate recordkeeping at SEDUE).

spread environmental degradation.[62] Extremely scarce resources in an already poor country left precious little to satisfy the border cities' needs for sewage systems, potable water, housing, and transportation.[63] Consequently, the Borderlands environment suffered devastating degradation in the 1980s, bringing the region to the cusp of catastrophe today.[64] A report issued in 1990 by the Council on Scientific Affairs of the American Medical Association posited that "[t]he major factors affecting environmental health in the [border] area are water and air pollution."[65] The Council's report concluded that "the border area is a virtual cesspool and breeding ground for infectious disease."[66] Because of the direct social, economic, and political nature of the pollution, the political forces within the Borderlands will significantly influence the environmental impact of the maquiladora industry during its next period of rapid growth.

2. A Growing Population and Its Indirect Impact on the Environment

The already large population continues to flourish in the United States-Mexico Borderlands, particularly on the Mexican side.[67]

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62. *See* James R. Gallop & Christopher J. Graddock, Note, *The North American Free Trade Agreement: Economic Integration and Employment Dislocation*, 19 J. LEGIS. 265, 277 (1993) (correlating peso crisis of 1982 with decline in Mexican standard of living during 1980s); *see also* Carl F. Schwenker, Note, *Protecting the Environment and U.S. Competitiveness in the Era of Free Trade: A Proposal*, 72 TEX. L. REV. 1355, 1362 n.38 (1993) (noting inflation rate of 160% for Mexico in 1987).

63. *See* Michael S. Feeley & Elizabeth Knier, *Environmental Considerations of the Emerging United States-Mexico Free Trade Agreement*, 2 DUKE J. COMP. & INT'L L. 259, 272 (1992) (noting that NAFTA and increased number of maquiladoras are aggravating Borderland environmental and ecological problems because infrastructure of Borderland towns can not handle present residential and commercial needs in environmentally sound manner).

64. *Id.* at 272–73, 275, 279–80 (summarizing environmental and ecological devastation wrought by industrial growth in Borderlands); *see also* Robert F. Housman & Durwood J. Zaelke, *Trade, Environment, and Sustainable Development: A Primer*, 15 HASTINGS INT'L & COMP. L. REV. 535, 574 n.191 (1992) (finding incidences of liver and gall bladder cancer along Rio Grande River higher than United States national averages); Ruben Hernandez, *UA Office Receives New Status*, TUCSON CITIZEN, Oct. 9, 1992, at A1 (investigating unusually high incidence of anencephaly in Borderlands).

65. Committee on Scientific Affairs, *A Permanent U.S.-Mexico Border Environmental Health Commission*, 263 JAMA 3319, 3320 (1990).

66. *Id.*

67. *See* Patti Goldman, *The Legal Effect of Trade Agreements on Domestic Health and Environmental Regulation*, 7 J. ENVTL. L. & LITIG. 11, 56 n.63 (1992) (attributing vast

During the 1980s, the population in nine Mexican border cities increased at an average rate of thirty-six percent.[68] For example, Tijuana, Baja California and San Luis, Sonora may be the world's most rapidly growing cities, with growth rates during the 1980s at 61% and 116%, respectively.[69]

At least two factors draw central and southern Mexicans to the border region. First, and most significant, the border region is relatively wealthy compared to the rest of Mexico.[70] Economic spillover from the United States provides the greatest source of wealth to the border region,[71] while the maquiladora program is one of the

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population increases along Mexican border to creation of maquiladora zone); *see also* Sherri M. Durand, *American Maquiladoras: Are They Exploiting Mexico's Working Poor?*, 3 KAN. J.L. & PUB. POL'Y 128, 129 n.2 (1994) (describing how maquiladora industry lures workers from central areas of Mexico to border areas).

68. *See* ARIZONA TOWN HALL, FREE TRADE: ARIZONA AT THE CROSSROADS 62 (1992) (listing population increases in San Luis R.C., Mexicali, Nogales, Piedras Negras, Reynosa, Matamoras, Nuevo Laredo, Cuidad Juárez, and Tijuana, which collectively realized average annual increase of 36.1% during late 1980s); *see also* Brenda S. Hustis, Note, *The Environmental Implications of the North American Free Trade Agreement*, 28 TEX. INT'L L.J. 589, 594 (1993) (noting that Ciudad Juárez experienced population increase of 135% between 1975 and 1986); Angela C. Montez, Note, *The Run Past the Border: Consequences of Treating the Environment Under NAFTA As a Border Issue*, 5 GEO. INT'L ENVTL. L. REV. 417, 421 (1993) (noting that total population of Borderlands doubled and, in some cities, quadrupled during 1980s).

69. ARIZONA TOWN HALL, FREE TRADE: ARIZONA AT THE CROSSROADS 62 (1992); *see* James A. Funt, *The North American Free Trade Agreement and the Integrated Environmental Border Plan: Feasible Solutions to U.S.-Mexico Border Pollution?*, 12 TEMP. ENVTL. L. & TECH. J. 77, 84 n.65 (1993) (citing 1990 census figures, which reported Tijuana's population as 742,686, an increase of 280,000 in fewer than 10 years). *See generally* JAMES B. PICK & EDGAR W. BUTLER, THE MEXICO HANDBOOK 75 (1994) (indicating 41% population increase in Baja, California between 1980 and 1990, and 38.59% combined population increase in twin cities Tijuana, Baja California and San Diego, California between 1980 and 1990).

70. *See* L. Diane Schenke et al., *Report of the Committee on the Environment*, 26 URB. LAW. 713, 720 (1994) (commenting on maquiladora industry's responsibility for economic vitality of northern Mexico); Mark A. Sinclair, Note, *The Environmental Cooperation Agreement Between Mexico and the United States: A Response to the Pollution Problems of the Borderlands*, 19 CORNELL INT'L L.J. 87, 90–91 n.14 (1986) (listing forces drawing industry and labor to border region, including Mexican workers' desires for better economic conditions); *see also* James E. Bailey, *Free Trade and the Environment—Can NAFTA Reconcile the Irreconcilable?*, 8 AM. U. J. INT'L L. & POL'Y 839, 868 (1993) (decrying NAFTA's "great economic promise" as a magnet which draws workers into already overpopulated areas).

71. *See* Rebecca Morales & Jesús Tamayo-Sánchez, *Urbanization and Development of the United States-Mexico Border* (describing how United States companies increase investments in northern Mexico when peso devaluation occurs), *in* CHANGING BOUNDARIES IN THE AMERICAS: NEW PERSPECTIVES ON THE U.S.-MEXICAN, CENTRAL AMERICAN, AND

richest production resources for Mexico.[72] Second, potential employment in the maquiladoras encourages Mexican migrants to crowd the Borderlands.[73] The impact on the environment caused by the dense population in the ecologically fragile Borderlands is compounded by Mexico's lack of financial and human resources to construct and maintain sufficient infrastructure and services.[74]

SOUTH AMERICAN BORDERS 49, 65 (Lawrence A. Herzog ed., 1992); Osvaldo Nunez, *Quebec's Perspectives on Social Aspects and the Broadening of Free Trade in the Americas*, 11 CONN. J. INT'L L. 279, 294 (1996) (labeling Mexico and United States as "significant trading partners" and indicating that Mexico stands as second largest importer of United States goods); Arnoldo Medina, Jr., Comment, *NAFTA and Petroleum Development in the Gulf of Mexico: The Need for a Bilateral Oil Spill Response Regime Between the United States and Mexico*, 6 COLO. J. INT'L L. & POL'Y 405, 407 (1995) (stating that 70% of Mexico's imports and 64% of its total foreign investment derives from United States); *cf.* Ruth Buchanan, *Border Crossings: NAFTA, Regulatory Restructuring and the Politics of Place*, 2 IND. J. GLOBAL LEGAL STUD. 371, 379 (1995) (remarking that economic interdependence is encourage by rapid economic development on United States-Mexico border); Irasema Coronado, *Legal Solutions vs. Environmental Realties: The Case of the United States-Mexico Border Region*, 10 CONN. J. INT'L L. 281, 285 (1995) (asserting that United States role as global industrial leader is aided by mutually dependent relationship with Mexico).

72. *See* Marc N. Scheinman, *Report on the Present Status of Maquiladoras* (ranking maquiladora plants as second most productive resource in Mexico after oil), *in* THE MAQUILADORA INDUSTRY: ECONOMIC SOLUTION OR PROBLEM? 19, 23 (Khasrow Fatemi ed., 1990).

73. *See* L. Diane Schenke et al., *Report of the Committee on the Environment*, 26 URB. LAW. 713, 720 (1994) (finding lure of employment in foreign-owned maquiladoras key factor in Mexico's internal migration); Angela C. Montez, Note, *The Run Past the Border: Consequences of Treating the Environment Under NAFTA As a Border Issue*, 5 GEO. INT'L ENVTL. L. REV. 417, 420–21 (1993) (contrasting maquiladora program's original purpose of unemployment alleviation with present status as major employer of Mexican citizens); Mark A. Sinclair, Note, *The Environmental Cooperation Agreement Between Mexico and the United States: A Response to the Pollution Problems of the Borderlands*, 19 CORNELL INT'L L.J. 87, 90–91 n.14 (1986) (capsulizing attraction of employment in Borderlands as either work in industrial plants or tourist industry).

74. *See, e.g.*, Paulette L. Stenzel, *Can NAFTA's Environmental Provisions Promote Sustainable Development?*, 59 ALB. L. REV. 423, 446 (1995) (reporting that in 1994, sewage line break in Tijuana caused 24 million gallons of untreated sewage to spill into Tijuana River); Joshua A. Cohen, *And the Winners Are . . . Outlook for Industrial Growth*, BUS. MEX., Oct. 1994 (stating that although Mexico has passed bills to increase water distribution, of Mexico's approximately 87 million people, 13 million lack drinking-water services and 27 million live without drainage services), *available in* LEXIS, World Library, ALLWLD File; Damon Darlin, *Maquiladora-ville*, FORBES, May 6, 1996, at 111, 111 (commenting that Tijuana's success in drawing maquiladora manufacturers has overburdened its transportation infrastructure as evidenced by stalled traffic for up to five miles along United States-Mexico border); *cf.* Jane E. Larson, *Free Markets Deep in the Heart of Texas*, 84 GEO. L.J. 179, 183 (1995) (describing how lack of adequate infrastructure in 1,400 Texas Colonias along United States-Mexico border is partly due to lack of regulations governing housing developers).

III. The Political Context

Political decision-makers in Mexico and the United States directly guide the maquiladora industry and, therefore, are highly accountable for the accompanying environmental degradation caused by the maquiladoras. The following factors influence their decision-making process: (1) the often contradicting goals expressed within the Mexican and United States national governments; (2) the interests of local political entities; and (3) the interests of environmental and social action groups attentive to the maquiladora industry. This section surveys these political factors and analyzes their connections to the maquiladora industry.

A. *National Governments*

The national governments of both Mexico and the United States value and cultivate the maquiladora industry, although the industry is more important to and, thus, receives more attention from Mexico. In the United States, however, any significant threat to the continued existence of the maquiladora program vanished in 1994 when the North American Free Trade Agreement (NAFTA)[75] took effect and the Republican Party gained control of the United States Congress.[76] The following discussion considers the various viewpoints that influence the United States and Mexico in their decisions regarding the maquiladora industry.

1. United States

Two competing views vie to be the United States government's official position on the environmental degradation caused by the maquiladora industry. One view rejects any move to regulate the maquiladora industry from the United States side of the border.[77]

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75. North American Free Trade Agreement, *drafted* Aug. 12, 1992, *revised* Sept. 6, 1992, U.S.-Mex.-Can., 32 I.L.M. 289 (pts. 1–3) & 32 I.L.M. 605 (pts. 4–8 & annexes) (entered into force Jan. 1, 1994) [hereinafter NAFTA].

76. *See* J. Jennings Moss, *Elections Hail Aggressive, Conservative Era*, Wash. Times, Nov. 9, 1994, at A15 (reporting Republican takeover of House and Senate in 1994 elections).

77. *See* Tom Barry & Beth Sims, The Challenge of Cross-Border Environmentalism 70–71 (1994) (reporting that United States taxpayers "question why they should foot the bill for pollution caused by United States businesses that have moved to Mexico and profited from lax environmental standards and concessionary tax and tariff policies"); *U.S.-Mexico: Citizens' Group Deplores NAFTA Failures on Border*, Inter Press

This *laissez faire* attitude dominates Washington as Congress grows overtly hostile to environmentalism.[78]

Serv., Jan. 2, 1996 (reporting that "Republican-led U.S. Congress has . . . cut funding for border [environmental] programs"), *available in* Westlaw, ALLNEWS Database. Indeed, the lack of enforcement of environmental laws in Mexico attracts United States companies to the Borderlands. *See* Paulette Stenzel, *Can NAFTA's Environmental Provisions Promote Sustainable Development?*, 59 ALB. L. REV. 423, 467 (1995) (positing that NAFTA may result in "worst case scenario" by increasing number of maquiladoras without Mexican government enforcement of environmental regulations); Santos Gomez, Comment, *Environmental Risks Related to the Maquiladora Industry and Likely Environmental Impact of NAFTA*, 6 LA RAZA L.J. 174, 191 (1993) (opining that because Mexico is lax in enforcing environmental regulations, United States businesses choose to build manufacturing plants on Mexico's side of border). United States law does not require maquiladoras to adhere to American environmental standards as a condition to admitting goods into the United States. *See* Victoria L. Engfer et al., *By-Products of Prosperity: Transborder Hazardous Waste Issues Confronting the Maquiladora Industry*, 28 SAN DIEGO L. REV. 819, 848 (1991) (stating that United States lacks any jurisdiction to enforce Mexico's environmental laws and, as a result, United States maquiladora owners are subject to only limited liability for dumping of hazardous waste); Lawrence J. Rowe, Note, *NAFTA, the Border Area Environmental Program, and Mexico's Border Area: Prescription for Sustainable Development?*, 18 SUFFOLK TRANSNAT'L L. REV. 197, 226 (1995) (wishing NAFTA included provisions to inhibit maquiladora growth and promote investment in cleaner manufacturing processes). One stated purpose of the National Environmental Policy Act (NEPA) is to standardize and "promote efforts which will prevent or eliminate damage to the environment." 42 U.S.C. § 4321 (1994). However, it is questionable whether the NEPA's requirement for environmental impact statements is applicable extraterritorially. *Compare* Natural Resources Defense Council, Inc. v. Nuclear Regulatory Comm'n, 647 F.2d 1345, 1366–67 (D.C. Cir. 1981) (finding that Congress intended NEPA as tool for international cooperation, not extraterritorial application) *with* Greenpeace USA v. Stone, 748 F. Supp. 749, 759 (D. Haw. 1990) (arguing that NEPA could have extraterritorial reach under some circumstances). NAFTA does explicitly provide that parties shall not use relaxation of environmental standards as a means of encouraging foreign investment. NAFTA, *supra* note 75, ch. 11, art. 1114(2), 32 I.L.M. at 1486. The North American Agreement on Environmental Cooperation (Environmental Side Agreement) provides for the suspension of trade benefits to any NAFTA signatory that unreasonably fails to enforce its environmental laws. North American Agreement on Environmental Cooperation, *opened for signature* Sept. 9, 1993, U.S.-Can.-Mex., pt. 5, art. 36, 32 I.L.M. 1480, 1493–94 (entered into force Jan. 1, 1994) [hereinafter Environmental Side Agreement]. Despite Mexico's transgressions on both counts, the United States has done nothing in response. *See Mexico: Its Rule Changes May Harm Environment*, DALLAS MORNING NEWS, Nov. 16, 1995, at A28 (decrying sacrifice of environment for sake of economic gain); *Worldview Mexico: Businesses Defend New Streamlined EIS Rules*, Greenwire, Oct. 31, 1995 (reporting that Mexican businesses defend lowered standards as more realistic and beneficial to businesses), *available in* LEXIS, News Library, GRNWRE File.

78. *See* Tom Kenworthy & Gary Lee, *Divided GOP Falters on Environmental Agenda*, WASH. POST, Nov. 24, 1995, at A1 (studying congressional hostility towards domestic environmental issues and describing efforts to reduce environmental protection legislation); Roberto Rodriguez & Patricia Gonzales, *Talking About Hemisphere Integration*, SALT LAKE TRIB., Oct. 24, 1995, at A11 (mentioning Congress' plans to reduce drastically envi-

An alternative to the *laissez faire* attitude is represented by the recent environmental initiatives between the United States and Mexico, which address wastewater, potable water, and other environmental issues.[79] Specifically, the binational Border Environmental Cooperation Commission (BECC)[80] and the North American Development Bank (NADBank)[81] approved their first infrastructure projects in 1995.[82] Although these two organizations lack the expertise and authority to regulate maquiladora plants, their presence in the Borderlands forms part of a larger panoply of forces designed to discipline deviant practices leading to environmental degradation and clean up damage once it is done.[83] However, any joint, binational effort will be ineffective without the full support of Mexico's government.

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ronmental funds for Borderlands); *cf.* Gregg Zoroya, *He's the Green Movement's Last Great Hope in a Hostile Congress*, L.A. TIMES, Nov. 10, 1995, at E8 (noting Congress's relaxation of Clean Water Act).

79. *See Press Background Material Regarding Visit by Mexican President to the U.S.*, U.S. Newswire, Oct. 10, 1995 (identifying several cooperative programs designed to address pollution in Borderlands), *available in* LEXIS, News Library, USNWR File.

80. *See* Agreement Concerning the Establishment of a Border Environment Cooperation Commission and North American Development Bank, Nov. 16, 18, 1993, U.S.-Mex., ch. 1, art.1, 32 I.L.M. 1545, 1548 [hereinafter BECC/NADBank Agreement] (stating that BECC's primary responsibility is to identify areas along border needing infrastructural improvements); *see also* Ron Mader, *Divided over Development: NAFTA Organizations Set to Improve Border Environment Struggle to Find Their Way*, BUS. MEX., Oct. 1995, at 11, 12 (noting that BECC is required to develop and certify projects that will receive funding from NADBank).

81. *See* BECC/NADBank Agreement, *supra* note 80, ch. 2, art. 1, 32 I.L.M. at 1556–57 (stating that NADBank's purpose is to provide financing for projects approved by BECC); *see also* Jim Mitchell, *Development Bank's Mission Is to Clean up Mexican Border*, DALLAS MORNING NEWS, Mar. 5, 1995, at H2 (explaining that goal of NADBank is to improve border environment by focusing on border environmental problems and by attracting investment).

82. *See* Sandra Dibble, *Two Border Water-Treatment Plants Ok'd*, SAN DIEGO UNION-TRIB., Sept. 29, 1995, at A4 (illustrating cooperative functioning of BECC and NADBank in project selection and funding, and describing approval of two border water-treatment plants).

83. *See* Agreement of Cooperation Between the United States of America and the United Mexican States Regarding Transboundary Shipments of Hazardous Wastes and Hazardous Substances, Nov. 12, 1986, U.S.-Mex., annex III, 26 I.L.M. 15, 25–32 (1987) (spelling out mutual commitment to control movement and disposal of toxic waste); U.S. DEP'T OF STATE DISPATCH, PUB. NO. 21, FACT SHEET: COOPERATION WITH MEXICO—IN OUR NATIONAL INTEREST 425 (1995) (enumerating joint environmental programs agreed to by Mexico and United States).

2. Mexico

On the Mexican side of the border, the interplay of tensions between the desire for economic growth and the protection of the environment reveals some degree of complexity. The Mexican government's position on the maquiladora industry grows increasingly definite,[84] but its stance on the issue of environmental protection is ambivalent.[85] From its origin in 1965 through the mid-1980s, Mexican policy-makers have depicted the maquiladora industry as a necessary evil designed to temporarily assist Mexico's economy, but not as an integral element of a long-term economic strategy.[86] This initial prejudice has been gradually replaced by a more sympathetic attitude for a couple of reasons. First, economic crises have

84. *See* Nick Anderson & Diane Lindquist, *Made in Mexico*, SAN DIEGO UNION-TRIB., Aug. 8, 1995, at C1 (noting involvement of federal government in state program to promote and improve attractiveness of maquiladoras to other Mexican industries); Kevin G. Hall, *Mexican President to Present Six-Year Economic Plan*, FT. WORTH-STAR TELEGRAM, May 31, 1995, at 1 (suggesting that present administration intends to use maquiladora industry to boost Mexican companies' internal sales).

85. *See* Robert Collier, *Cleanup Along Border Still a Dream*, SAN FRANCISCO CHRON., Sept. 26, 1995, at A1 (noting Mexican government's refusal to acknowledge air pollution or accept corrective measures so as to avoid impairing market value of power plant when privatized). *Compare* Andrew Downie, *Mexico Quietly Weakens Key Environmental Rules*, HOUSTON CHRON., Oct. 24, 1995, at 7 (describing relaxation of Mexico's environmental regulations) *with Environment: Environmental Opportunities*, MEX. BUS. MONTHLY, July 1, 1995 (paraphrasing report of United States Consulate affirming Mexican government's commitment to environmental protection), *available in* Westlaw, ALLNEWSPLUS File.

86. *See* Cheryl Schecter & David Brill, Jr., *Maquiladoras: Will the Program Continue?*, 23 ST. MARY'S L.J. 697, 701 (1992) (noting that in the beginning, the maquiladora industry's purpose was to develop specific border areas only). Initially, Mexico placed stringent controls on foreign investment in the maquiladora program, although Mexico later relaxed foreign investment restrictions to encourage the growth of employment opportunities and to bring other economic benefits to the Borderlands. Sandra F. Mavigilia, *Mexico's Guidelines for Foreign Investment: The Selective Promotion of Necessary Industries*, 80 AM. J. INT'L L. 281, 286–89 (1986). The foreign investment restrictions were considered necessary to prevent excessive United States political and economic influence. Matilde K. Stephenson, *Mexico's Maquiladora Program: Challenges and Prospects*, 22 ST. MARY'S L.J. 589, 595 (1991). In the 1980s, the economic contributions of the maquiladora industry clearly extended beyond the Borderlands. *See* Victoria L. Engfer et al., *By-Products of Prosperity; Transborder Hazardous Waste Issues Confronting the Maquiladora Industry*, 28 SAN DIEGO L. REV. 819, 822–23 (1991) (naming maquiladora industry as Mexico's second largest generator of foreign currency); Cheryl Schecter & David Brill, Jr., *Maquiladoras: Will the Program Continue?*, 23 ST. MARY'S L.J. 697, 699–700 (1992) (citing statistics on maquiladora exports equal to 25% of all Mexican exports and employment levels of 15% of total manufacturing sector labor force).

either continued or been replaced by new emergencies.[87] Second, the ideology of Mexico's political elites has evolved into a position similar to that of the private sector.[88] Hence, the maquiladora industry is now a "priority sector" of the economy; it is prized, nurtured, and protected.[89]

Consequently, the maquiladora industry has become an integral element of Mexico's long-term economic strategy.[90] As Mexico's

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87. *See* Roberto Salinas-León, *Who's Watching over Mexico?: Problems and Prospects for 1996*, BUS. MEX., Special Edition 1996, at 34, 34 (characterizing Mexico's economic crisis of 1995 as worst in 50 years and noting that economy runs in "vicious cycle of inflation-devaluation-inflation"); *see also* Leslie Crawford, *The Americas: A Hot Property Goes Cold: Mexican Resorts Lie Uncompleted As Property Developers Lick Their Wounds After Peso Crisis*, FIN. TIMES, May 21, 1996, at 7 (describing how peso devaluation, massive unregulated construction, and overzealous predictions of demand for vacation resorts has combined to create many half-finished buildings and decaying hotel foundations along Mexico's Pacific coast), *available in* LEXIS, World Library, ALLWLD File; Claudia Fernandez, *Who Survived, Who'll Thrive in Mexican Textile Market*, BUS. MEX., May 1995, at 8, 10 (commenting on how Mexico's current economic crisis has affected wool industry because exchange rates influence worth of raw materials on international market). In early 1996, Mexico was slowly recovering from its 1995 economic crisis. *See Mexico Yet to Recover from Crisis*, U.P.I., May 17, 1996 (reporting that Mexico's gross national product for first quarter of 1996 stands at 1% below same quarter in 1995), *available in* LEXIS, World Library, ALLWLD File.

88. *See* Jorge A. Vargas, *NAFTA, the Chiapas Rebellion, and the Emergence of Mexican Ethnic Law*, 25 CAL. W. INT'L L.J. 1, 13 (1994) (concluding that NAFTA was designed to benefit Mexico's business and political elites and that it failed to consider needs and interests of indigenous people in Mexico); Michael Stott, *Mexico Pact Pleases Business but Not the Poor*, Reuters World Serv., Oct. 30, 1995 (commenting agreement between Mexico's industrial elite and Mexico's government to give companies tax incentives to encourage companies to hire more employees), *available in* LEXIS, News Library, REUWLD File; *see also* Lucy Conger, *Power to the Plutocrats*, INSTITUTIONAL INVESTOR, Feb. 28, 1995 (predicting that devaluation of peso will increase influence of industrial elite by "weeding out" weaker companies and forcing Mexico's government to rely on big business to lift country out of present economic crisis), *available in* LEXIS, World Library, ALLWLD File.

89. *See* Sherri M. Durand, *American Maquiladoras: Are They Exploiting Mexico's Working Poor?*, 3 KAN. J.L. & PUB. POL'Y 128, 132–33 (1994) (describing Mexico's economic dependence on maquiladora industry).

90. *See* Victoria L. Engfer et al., *By-Products of Prosperity: Transborder Hazardous Waste Issues Confronting the Maquiladora Industry*, 28 SAN DIEGO L. REV. 819, 819 (1991) (noting that "[t]he maquiladora program is one of the most significant developments in the United States and Mexican economies in the past thirty years"); Rudolfo Villalobos & Bruce B. Barshop, *Social Infrastructure Needs of the Maquiladora Industry: A Proposal for United States Corporate Contributions*, 22 ST. MARY'S L.J. 701, 705 (1991) (stating that "[f]or over twenty years the maquiladora program has been an integral part of Mexico's efforts to promote capital for formation, employment and industrialization"). *But see* Kevin G. Hall, *Boom Goes on: Industry Still Pouring Development onto Mexican Border*, CHI. TRIB., June 18, 1995, at A7 (indicating Mexico's desire to decrease reliance upon

most recent economic crisis took its agonizing toll, the maquiladora industry proved to be one of the few areas of the Mexican economy which enjoyed growth.[91] In 1994, the industry earned Mexico nearly $6 billion in foreign exchange, which is well above tourism earnings, and approaches petroleum export earnings of $7 billion.[92] With over 500,000 workers, the assembly plants accounted for twenty-three percent of employment in Mexico's manufacturing sector by 1995.[93]

Given the maquiladora industry's economic influence, the Mexican government is quick to discipline local forces that might threaten it.[94] In the 1990s, for instance, the Mexican government jailed a Matamoros labor leader and rebuked a PANista[95] official

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maquiladoras that use almost entirely United States materials for production). Notably, in 2001, maquiladoras will lose their favored status that "allows them to import components duty-free and pay levies only or the value added to products." *Id.* In other words, after 2001, the Mexican government will treat the maquiladoras just like any other manufacturing operation. *Id.*

91. *See Manufacturing/Maquila: Maquiladora Employment up 9%*, MEX. BUS. MONTHLY, May 1, 1995 (comparing recent rise in manufacturing employment to nationwide expectation of losing 500,000 nonmanufacturing jobs), *available in* Westlaw, ALLNEWSPLUS Database.

92. Lucinda Vargas, Address at the 1995 Mexico Finance and Investment Conference (May 1995); *cf. Manufacturing/Maquila: Maquiladora Industry Overview*, MEX. BUS. MONTHLY, Jan. 1, 1995 (noting maquiladora industry's injection of $5.5 billion into Mexican economy), *available in* Westlaw, ALLNEWSPLUS Database.

93. *See Manufacturing/Maquila: Maquiladora Industry Overview*, MEX. BUS. MONTHLY, Jan. 1, 1995 (noting that 23% of Mexican manufacturing jobs are in maquiladora industry), *available in* Westlaw, ALLNEWSPLUS Database.

94. *See* Sherri M. Durand, *American Maquiladoras: Are They Exploiting Mexico's Working Poor?*, 3 KAN. J.L. & PUB. POL'Y 128, 132 (1994) (describing how Mexican Secretary of Labor halted strike at General Motors-owned maquiladora by "declar[ing] the strike illegal, shutt[ing] down the plant, and fir[ing] 2,000 workers" and then cutting wages of remaining workers by 45%); Joel Williams, *Boss Man of the Border: Don Agapito, Mexican Labor Leader*, Associated Press, May 2, 1990 (describing Mexican government's attempts to discipline local labor leader who was outspoken critic of maquiladora program), *available in* Westlaw, ALLNEWS Database; *see also* James Pinkerton & Dudley Althaus, *Living on the Edge*, HOUSTON CHRON., Oct. 17, 1993, at A1 (insinuating drainage of tax revenues away from Borderlands with little or no re-investment is government's political tool for control of opposition to maquiladora industry). *See generally* Juanita Darling, *Mexico Seen Expertly Silencing Voices of Dissent in Latin America: Rights Activists, Others Say Government Tactics Range from Obvious to Subtle*, L.A. TIMES, July 30, 1995, at A4 (describing means used by government to silence opposition to maquiladora industry, including assassination of political and business rivals).

95. *See* Carlos Hamann, *New Juárez Major Head Vibrant City*, DALLAS MORN. NEWS, Nov. 18, 1995, at 43A (describing members of *Partido Acción Nacional* [National Action Party] (PAN) as PANistas); Hugo Martinez McNaught, *In Baja California, Historic*

in Ciudad Juárez for criticizing the maquiladora industry.[96] Such events illustrate the complex nature of Mexico's attitude toward the pollution problem on the border. Because of the economic importance of the maquiladora industry and its effect on the decision-making process, an analysis of the Mexican central government's position on the environmental degradation of the Borderlands must consider both the willingness and capacity of Mexico's government to enforce environmental regulations.

a. The Willingness of Mexico's Government to Promote Environmental Regulation

Mexico's willingness to address environmental problems is the more difficult analytical component of the mix. Mexican authorities enacted various environmental reforms during the NAFTA debates.[97] As a whole, these recent measures are substantial and may demonstrate Mexico's commitment to environmental protection.[98] On the other hand, environmentalists continue to question the sincerity Mexico's policy reforms.[99]

Changes, SAN FRANCISCO EXAMINER, Dec. 13, 1995, at A33 (describing PANista as opposing political party to long-standing majority party, PRI).

96. *See* Todd Mason, *NAFTA Is Worth the Risk Despite Mexican Union Woes*, FORT WORTH STAR-TELEGRAM, Oct. 21, 1993, at 1 (Business) (implying that close ties between Mexico's largest labor union and ruling political party lead to complicity in censure of dissenting labor leader in Matamoros); James Pinkerton, *Labor "Don" Under Siege*, HOUSTON CHRON., Mar. 29, 1992, at A1 (describing persecution of outspoken Matamoros union boss over union-supported strikes against maquiladoras); Maggie Rivas, *Border Labor Leader's Arrest Questioned*, DALLAS MORNING NEWS, Feb. 23, 1992, at A41 (linking arrest of labor leader to planned maquiladora strikes); *see also* Gerald Volgenau, *Automakers Set up Shop in Mexico*, L.A. DAILY NEWS, Apr. 26, 1992, at B1 (noting reduced settlement and rapid close of labor negotiations after arrest of union boss).

97. *See* Stephen P. Mumme, *Mexican Environmental Reform and NAFTA*, N. AM. OUTLOOK, Mar. 1994, at 90, 90–91 (describing how Salinas administration sent message of environmental reform by creating new environmental agency during United States debate on NAFTA).

98. *Id.* at 90.

99. *Id.* at 91; *see* Andrew Downie, *Mexico Quietly Weakens Key Environmental Rules*, HOUSTON CHRON., Oct. 24, 1995, at 7 (expressing environmentalists' surprise over Mexico's easing of environmental regulations); Tod Robberson, *Mexican Community Teed off by Golf-Course Plan*, SEATTLE TIMES, Sept. 17, 1995, at A1 (quoting prominent environmentalist's observation that "[t]his is proof that Mexico's ecology is for sale to the highest bidder"). *See generally* Randy L. Loftis, *Fields of Fortune: In Mexico, Conserving Nature Often Involves Cashing in on It*, DALLAS MORNING NEWS, Sept. 24, 1995, at J1 (discussing various projects and plans combining conservation and economic gain).

In light of continuing environmental concerns, the economic crisis of the mid-1990s is relevant to Mexico's desire to enforce these new reforms. The political feasibility of environmental projects is inversely related to the condition of the Mexican economy. Difficult economic times are unfavorable for environmentalists. A former director of Mexico's National University's Ocean Science Institute stated: "You cannot worry more about the monarch butterfly than people who don't have enough to eat. We have to develop our own regulations and standards."[100] Moreover, because NAFTA does not compel trinational standardization of environmental regulations, Mexico enjoys flexibility in moving toward less rigorous standards.[101] Indeed, President Ernesto Zedillo did exactly that in May 1995 when he announced plans to discontinue environmental and public health impact statements for small businesses.[102]

b. The Capacity of Mexico's Government to Promote Environmental Regulation

Beyond the uncertain willingness of the Mexican government to regulate the maquiladora industry, the nation's capacity to promote environmental regulations is clearly lacking.[103] Nevertheless, Mexico has achieved some success in upgrading its capacity to en-

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100. Sallie Hughes, *Between a Rock and Hard Place*, MEX. BUS., May 1995, at 18, 18.

101. *See* Environmental Side Agreement, *supra* note 77, pt. 1, art. 2, 32 I.L.M. at 1483 (excluding application of extraterritorial laws or legal actions in extraterritorial courts); *see also* Steve Charnovitz, *The North American Free Trade Agreement*, L. & POL'Y INT'L BUS., Sept. 22, 1994, at 1 (criticizing NAFTA's ineffectual approach to addressing environmental concerns).

102. Brandan M. Case, *Zedillo Announces Support for Small Business*, EL FINANCIERO (International), May 15–21, 1995, at 3; *see Mexico Launches Council to Spur Small Businesses*, Reuter News Serv., May 9, 1995 (reporting that Mexico justified new policy as necessary to economy and characterized elimination of public health impact statements as no threat to environment), *available in* LEXIS, World Library, TXTLNE File.

103. *See* Michael S. Feeley & Elizabeth Knier, *Environmental Consideration of the Emerging United States-Mexico Free Trade Agreement*, 2 DUKE J. COMP. & INT'L L. 259, 284 (1992) (noting that Mexico, because of its rapidly expanding, impoverished population, must balance environmental concerns with economic concerns, with environment usually suffering as result); Farah Khakee, *The North American Free Trade Agreement: The Need to Protect Transboundary Water Resources*, 16 FORDHAM INT'L L.J. 848, 848 (1993) (noting that Mexico, "suffer[ing] from an enormous foreign debt, the inability to acquire additional loans, an escalating population, and a high unemployment rate," often sacrifices costly environmental enforcement for economic growth).

force environmental laws in recent years.[104] For example, the number of environmental field inspectors increased substantially during President Carlos Salinas de Gortari's six-year presidential term from 1988 to 1994.[105] This inspection program, however, is grossly under-funded, and the "numbers of [field inspectors] are a fraction of what is necessary to police environmental practices nationwide."[106] In the Borderlands, funding "scarcely cover[s] salaries, much less operating expenses, for those handling inspections, data analysis, and enforcement."[107]

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104. *See* Nicolas Kublicki, *The Greening of Free Trade: NAFTA, Mexican Environmental Law and Debt Exchanges for Mexican Environmental Infrastructure Development*, 19 COLUM. J. ENVTL. L. 59, 90–92 (1994) (citing improvements in inspections of maquiladoras and levels of sanctions imposed since 1988).

105. Figures on the number of inspectors vary, but all agree that the increase is substantial. *See, e.g.*, Raymond B. Ludwiszewski, *"Green" Language in the NAFTA: Reconciling Free Trade and Environmental Protection*, 27 INT'L LAW. 691, 701 (1993) (trumpeting four-fold increase in number of environmental inspectors in Borderlands to total of 200); Michael J. Kelly, Comment, *Environmental Implications of the North American Free Trade Agreement*, 3 IND. INT'L & COMP. L. REV. 361, 378 (1993) (calculating total number of environmental inspectors throughout Mexico to be 255); James Sheehan, *Clinton's Plans for NAFTA Deal*, WASH. TIMES, Jan. 18, 1993, at E4 (declaring that number of border-region inspectors quadrupled to 200 by 1992). Until 1991, the number of environmental inspectors in the entire nation was incredibly small compared to the volume of industry. Stephen Zamora, *The Americanization of Mexican Law: Non-Trade Issues in the North American Free Trade Agreement*, 24 LAW & POL'Y INT'L BUS. 391, 423 (1993); *see Mexico's Environmental Laws and Enforcement*, MEX. TRADE & L. REP., Mar. 1992, at 9, 12 (stating that until 1991, only 101 inspectors operated in Mexico); *see also* Paulette L. Stenzel, *Can NAFTA's Environmental Promote Sustainable Development?*, 59 ALB. L. REV. 423, 452 (1995) (commenting on increase of number of inspectors from 109 nationwide to 200 in Borderlands alone). Of the 109 inspectors nationwide in 1991, only 19 were assigned to the border region. Mary Tiemann, *The Impact Environmental Issues on NAFTA Implementation*, MEX. TRADE & L. REP., Feb. 1993, at 10, 15. Before 1992, only a handful of inspectors were responsible for areas encompassing hundreds of maquiladoras. *See, e.g.*, John Altomare, Comment, *Stemming the Flow: The Role of International Environmental Law in Seeking a Solution to the Sewage Treatment Crisis at the Tijuana-San Diego Border Region*, 21 CAL. W. INT'L L.J. 361, 402 (1990) (asserting that Tijuana region had only 7 inspectors to enforce Mexican law in over 450 factories); James A. Funt, Comment, *The North American Free Trade Agreement and the Integrated Environmental Border Plan: Feasible Solutions to U.S.-Mexico Border Pollution?*, 12 TEMP. ENVTL. L. & TECH. 77, 90 (1993) (noting that only five inspectors oversaw 400 maquiladoras in 1988); Mary Farquharson, *Cleaning up the Border*, BUS. MEX., Aug. 1991 (finding that only three inspectors were assigned to check emissions from nearly 700 plants in Tijuana area), *available in* LEXIS, NEWS Library, BUSMEX File.

106. Stephen P. Mumme, *Mexican Environmental Reform and NAFTA*, N. AM. OUTLOOK, Mar. 1994, at 91, 91–92.

107. *Id.* at 92.

B. *Local Political Context*

1. Binational Commercialism

In addition to strong national government support, the maquiladora industry enjoys significant local support from a binational commercial class on both sides of the United States-Mexico border.[108] On the United States side, local business elites have united with a newly evolved "transnational capitalist class" to support the maquiladora industry.[109] United States merchants continue to grow prosperous as the Borderland population expands and increasing numbers of Mexicans cross the border to shop.[110] One study has estimated that sixty to seventy-five percent of maquiladora wages earned in Mexico during the 1970s were spent in the United States.[111] It is no surprise then that Arizona merchants worked with the local maquiladora association and United States Immigration and Naturalization Service officials to institute a spe-

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108. *See* Leslie Sklair, *The Maquila Industry and the Creation of a Transnational Class in the United States Border Region* (noting that many citizens from U.S and Mexico support maquiladora industry because of personal economic gain), *in* CHANGING BOUNDARIES IN THE AMERICAS: NEW PERSPECTIVES ON THE U.S.-MEXICAN, CENTRAL AMERICAN, AND SOUTH AMERICAN BORDERS 69, 76 (Lawrence A. Herzog ed., 1992).

109. *See id.* at 77 (using term "transnational capitalist class" to describe middle-class business executives living in Borderlands who create "capitalist industrial culture").

110. *See* Rebecca Morales & Jesús Tamayo-Sánchez, *Urbanization and Development of the United States-Mexico Border* (describing how as maquiladora workers began earning consistent income, they started purchasing items on United States side of border), *in* CHANGING BOUNDARIES IN THE AMERICAS: NEW PERSPECTIVES ON THE U.S.-MEXICAN, CENTRAL AMERICAN, AND SOUTH AMERICAN BORDERS 49, 63 (Lawrence A. Herzog ed., 1992); Leslie Sklair, *The Maquila Industry and the Creation of a Transnational Capitalist Class* (stating that any decline in value of peso has profound effects on maquila workers because many workers cross border to purchase household goods in United States), *in* CHANGING BOUNDARIES IN THE AMERICA: NEW PERSPECTIVES ON THE U.S.-MEXICAN, CENTRAL AMERICAN, AND SOUTH AMERICAN BORDERS 69, 76 (Lawrence A. Herzog ed., 1992). *But cf.* Barbara Ferry, *El Paso's Downtown Suites with the Peso*, CHRISTIAN SCI. MONITOR, Nov. 16, 1993, at 3 (describing business decline in El Paso stores that cater to Mexican shoppers from Ciudad Juárez); Frank Kliuko & Frank Green, *The Green Season in South Bay, Shoppers Mob the Malls—but Will It Continue?*, SAN DIEGO UNION-TRIB., Nov. 25, 1995, at A1 (noting that devaluation of peso has caused Mexican shoppers to reduce spending in San Diego stores); Jane Seaberry, *Texas Economy Losing Steam, Fed. Says; Beige Book Cites Sluggishness in Retail Sales, Peso Devaluation*, DALLAS MORNING NEWS, Sept. 14, 1995, at D1 (noting that fewer Mexican shoppers have been frequenting malls in Houston and Dallas because of peso devaluation).

111. Rebecca Morales & Jesús Tamayo-Sánchez, *Urbanization and Development of the United States-Mexico Border*, *in* CHANGING BOUNDARIES IN THE AMERICAS: NEW PERSPECTIVES ON THE U.S.-MEXICAN, CENTRAL AMERICAN, AND SOUTH AMERICAN BORDERS 49, 63 (Lawrence A. Herzog ed., 1992).

cial program to distribute "shopping cards" to Mexican maquiladora workers.[112]

The Borderlands transnational capitalist class is a product of the maquiladora industry.[113] Members include an assortment of entrepreneurs, developers, executives, managers, bankers and brokers who work in or service the maquiladora industry.[114] These capitalists owe their livelihoods to the assembly plants, and they support the maquiladora industry on the local, national, and international level. Although mostly comprised of Americans, this transnational capitalist class also includes small Mexican commercial groups whose members nonetheless exercise significant political influence in the Borderlands.[115] These elites are wealthy and well-educated in a socio-economic and political culture character-

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112. *See* William H. Carlile, *Business Immigration Blur the Line in Nogales*, ARIZ. REPUBLIC, Jan. 8, 1995, at F1 (sketching interdependent relationships among Arizona merchants, migrants, maquiladoras and Border Patrol); Steve Meissner, *Kolbe Rallies Opponents of Border-Crossing Fee*, ARIZ. DAILY STAR, Feb. 5, 1995, at B1 (discussing opposition of Arizona Congressman, businesses and maquiladora associations to charging Mexicans fees for travel from Mexico into Arizona); *see also Hearing of the Immigration and Refugee Affairs Subcommittee of the Senate Judiciary Committee*, Fed. News Serv. Washington Package, June 15, 1994 (describing statements of former United States Senator Dennis Deconcini from Arizona, concerning border-crossing cards for maquiladora workers), *available in* Westlaw, ALLNEWSPLUS Database.

113. *See* Leslie Sklair, *The Maquila Industry and the Creation of a Transnational Class in the U.S.-Mexico Border Region* (concluding that maquiladora industry stimulated growth of transnational capitalist class), *in* CHANGING BOUNDARIES IN THE AMERICAS: NEW PERSPECTIVES ON THE U.S.-MEXICAN, CENTRAL AMERICAN, AND SOUTH AMERICAN BORDERS 69, 79 (Lawrence A. Herzog ed., 1992); *see also* Joel Simon, *On Mexican Border, Economic Boom Fizzles*, SAN FRANCISCO CHRON., Mar. 24, 1995, at A12 (describing United States border merchants' dependency on customers from maquiladoras).

114. *See* Leslie Sklair, *The Maquila Industry and the Creation of a Transnational Capitalist Class* (detailing how maquiladora industry created "new bourgeoisie" that provides services to maquiladoras and often uses state-owned facilities at favorable rates), *in* CHANGING BOUNDARIES IN THE AMERICAS: NEW PERSPECTIVES ON THE U.S.-MEXICAN, CENTRAL AMERICAN, AND SOUTH AMERICAN BORDERS 69, 77 (Lawrence A. Herzog ed., 1992); *cf.* Jeff D. Opdyke, *On the Border, Banker vs. Banker*, WALL ST. J., Nov. 17, 1993, at T1 (attributing significant portion of maquiladora trade growth in Borderlands to Laredo banks and regional wealth).

115. *See* Leslie Sklair, *The Maquila Industry and the Creation of a Transnational Class* (detailing how group of Mexican entrepreneurs formed company, purchased land, and established industrial park), *in* CHANGING BOUNDARIES IN THE AMERICAS: NEW PERSPECTIVES ON THE U.S.-MEXICAN, CENTRAL AMERICAN, AND SOUTH AMERICAN BORDERS 69, 79 (Lawrence A. Herzog ed., 1992).

ized by political authoritarianism, poverty, and low levels of political mobilization.[116]

2. Mexico

State and local governments in Mexico strongly support the maquiladoras because of the influence of both the local elites connected to the maquiladora industry and the semiauthoritarian nature of the political system.[117] Mexican state and local governments exhibit the same hierarchical characteristics of the entire Mexican political system. Accordingly, state governors are closely aligned with the president, and they adhere to the policies dictated by the central Mexican government.[118] The same norms also define the relationship between the state governor and the local *presidente municipal*.[119] Therefore, state and local governmental relations with the maquiladora industry generally reflect the national position. In fact, given the influence of the local elites and the significance of the maquiladora industry in the local economies, local governments may even be more supportive and less critical.[120]

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116. *See id.* (describing Mexican transnational capitalist class as "ruling" low-wage laborers in maquiladora program).

117. *See* RODERIC A. CAMP, POLITICS IN MEXICO 10 (1993) (characterizing Mexico's political system as "semiauthoritarian" meaning "a hybrid of political liberalism and authoritarianism"). Mexico's system is different from other authoritarian governments in that Mexico permits citizens greater participation in the decision-making process and experiences frequent changes in leadership. *Id.* at 11. Additionally, the Mexican government has been substantially influenced by multi-national firms since the 1960s. JOHN J. BAILEY, GOVERNING MEXICO: THE STATECRAFT OF CRISIS MANAGEMENT 12 (1988).

118. RODERIC A. CAMP, POLITICS IN MEXICO 132 (1993). Overall decision-making power in Mexico lies with the President and executive branch. *Id.* at 143.

119. *See id.* at 28 (explaining that Mexican state governments control economic resources within region and take role of solving problems because local officials lack initiative to do so).

120. *See* L. Diane Schenke et al., *Report of the Committee on the Environment*, 26 URB. LAW. 713, 719 (1994) (finding local governments' cooperation in environmental reform rooted in fears of industry curtailment as sanction for noncompliance); Gary Lee, *At Border: NAFTA's Environmental Promise Is Murky*, WASH. POST, Nov. 15, 1993, at A1 (reporting that maquiladora that dumped acid waste which resulted in acid burn to child was punished by local officials merely with big words and slap on wrist); Dan Soreson, *Border Area Lucky After Leak*, TUCSON CITIZEN, Feb. 18, 1994, at 1A (inferring from anonymous police officer's statement that illicit dumping practices are tacitly ignored by local authorities). *But see* Maggie Rivas, *Juárez Finding Success in Battling Pollution*, DALLAS MORNING NEWS, Mar. 13, 1994, at A45 (attributing cleanup success to backing of local government and noting federal government's permissive attitude toward maquiladoras' environmental regulation violations).

One study, for example, reported that forty-five percent of the workforce in Nogales, Sonora is directly or indirectly employed by the maquiladora industry.[121]

Unlike the elite transnational capitalist class of merchants, the general local population plays a negligible role in the balance of political forces. Authoritarianism runs deep in the political culture of Mexico for several reasons.[122] First, the *Partido Revolucionaro Institutional* [Institutional Revolutionary Party] (PRI) exercises significant political influence over the Mexican population.[123] Second, almost half the population is below the legal voting age of eighteen,[124] and many potential voters do not participate in elections. For example, in the 1989 elections, nearly forty-six percent of the local population did not register, and of registered voters,

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121. *See* TOM BARRY ET AL., CROSSING THE LINE: IMMIGRANTS, ECONOMIC INTEGRATION, AND DRUG ENFORCEMENT ON THE U.S.-MEXICO BORDER 87 (1994) (citing survey demonstrating economic success brought to northern Mexico by maquiladora industry).

122. *See* JOHN J. BAILEY, GOVERNING MEXICO: THE STATECRAFT OF CRISIS MANAGEMENT 124 (1988) (stating that authoritarianism has been framework for Mexican politics since mid-1960s); Mark Fineman, *Critics of Mexico Economy Bare Their Anger*, L.A. TIMES, Nov. 16, 1995, at 6 (noting that authoritarianism tradition pre-dates Mexican Revolution); David G. Smith, *TV Teaches the Masses the Power of a Vote*, SAN DIEGO UNION-TRIB., Oct. 6, 1995, at A2 (acknowledging 66-year history of authoritarianism by ruling party). *But see Text of English Translation of Remarks by President Zedillo of Mexico in State of Nation Report*, U.S. Newswire, Sept. 1, 1995 (reporting Mexican president's pledge to reform past authoritarian practices), *available in* Westlaw, ALLNEWSPLUS Database.

123. *See* JOHN J. BAILEY, GOVERNING MEXICO: THE STATECRAFT OF CRISIS MANAGEMENT 89 (1988) (touting dominance of PRI over other political parties and stating that PRI receives 70% of votes and has won every presidential race in last 57 years); John Rice, *Key Elections in Two States Test PRI's Lock on Power in Mexico*, Associated Press, May 29, 1995 (doubting that even election fraud, corruption and organized opposition can dislodge PRI's grip on power), *available in* Westlaw, ALLNEWSPLUS Database; Tod Robberson, *Mexican Community Teed Off by Golf-Course Plan*, SEATTLE TIMES, Sept. 17, 1995, at A1 (discussing strength of PRI in local government); David G. Smith, *TV Teaches the Masses the Power of a Vote*, SAN DIEGO UNION-TRIB., Oct. 6, 1995, at A2 (identifying PRI as long-standing ruler of Mexico's federal government). *See generally* RODERIC A. CAMP, POLITICS IN MEXICO 64 (1993) (stating that two-thirds of Mexico's citizenry do not belong to any political party, but most of these people belong to professional groups or unions and are therefore counted as PRI followers).

124. *See Mexico-Medical Disposables*, MARKET REP., July 31, 1995 (confirming that 51% of Mexican population was under 20 years of age as of 1990), *available in* LEXIS, Market Library, MKTRPT File.

over forty-five percent failed to vote.[125] Particularly in the burgeoning Borderland cities, many potential voters are transients with no interest in the local political or physical environment.[126]

3. United States

On the United States side of the border, the political force of the local populations is a bit stronger, but still not very significant. Mexican-Americans comprise the majority of the population in the Borderlands on the United States side of the border.[127] In general,

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125. *See* RODERIC A. CAMP, POLITICS IN MEXICO 63 (1993) (stating that 45.7% of Mexican citizens did not register to vote in 1989, and of registered voters, 45.6% did not vote).

126. *See id.* (detailing how economic disparity between United States and Mexico causes Mexicans to feel inferior to United States in political realm and to become uninterested in participating in political process).

127. *See* Rodolfo O. De La Garza & Claudio Vargas, *The Mexican-Origin Population of the United States As a Political Force in the Borderlands: From Paisanos to Pochos to Potential Political Allies* (stating that in 1980, 8.74 million people of Mexican-origin lived in United States, mostly in Borderlands region), *in* CHANGING BOUNDARIES IN THE AMERICAS: NEW PERSPECTIVES ON THE U.S.-MEXICAN, CENTRAL AMERICAN, AND SOUTH AMERICAN BORDERS 89, 102 (Lawrence A. Herzog ed., 1992); Lawrence A. Herzog, *Changing Boundaries in the Americas: An Overview* (remarking that California and Texas are "the two most heavily populated Mexican American states in the United States"), *in* CHANGING BOUNDARIES IN THE AMERICAS: NEW PERSPECTIVES ON THE U.S.-MEXICAN, CENTRAL AMERICAN, AND SOUTH AMERICAN BORDERS 3, 11 (Lawrence A. Herzog ed., 1992); Xavier C. Vasquez, *The North American Free Trade Agreement and Environmental Racism*, 34 HARV. INT'L L.J. 357, 372 (1993) (noting that "the United States has a large Mexican-American population living along the United States-Mexican border"); Teri Bailey, *Texas Attorneys Appeal; LULAC Lawsuit Reaches State High Court*, DAILY TEXAN, Oct. 14, 1992, at 1 (noting that 55% of Texas-Mexico border population is Mexican-American); William Celis III, *College Bias Ruling Due in Texas*, NEWS & OBSERVER (Raleigh, N.C.), Dec. 8, 1991, at J2 (noting that students in public universities near Texas-Mexico border are "largely Hispanic"); Robert P. Laurence, *'Chicano!' Uneven, but Its Message Vital*, SAN DIEGO UNION & TRIB., May 3, 1996, at E1 (stating that there is "substantial Mexican-American population" in border city of San Diego); Murray Morgan, *History Rich in Tales of U.S.-Mexico Border*, MORNING NEWS TRIB. (Tacoma, Wash.), Jan. 16, 1994 (book review) (noting that Mexican-American officials are starting to take control of Texas border towns "now that the Hispanic-mestizo majority are beginning to wield the power of the ballot"); James Pinkerton, *Border Areas Slighted in Education, Jurors Told*, HOUSTON CHRON., Oct. 3, 1991, at A21 (reporting that Texas official told jury that Mexican-Americans became majority in Texas border region from 1970 to 1980); Louis Trager, *Two Big Frogs in a Huge Pond; California, Texas Rich with Customers for New Company*, SAN FRANCISCO EXAMINER, Apr. 2, 1996, at E1 (noting that "California and Texas both have huge Mexican and Mexican-American populations with strong ties to the old country"); *Health in South Texas Finally Gets Attention*, SAN ANTONIO LIGHT, Oct. 11, 1989, at B4 (noting that Mexican-Americans comprise "57 percent of the 2.25 million people living in South Texas"); *Anti-Immigrant Sentiment on Rise in Southern Texas* (National Public Radio

they are poor and uneducated,[128] which are not the socio-economic makings of effective political participants. Most residents of the United States Borderlands rank relatively poorer than their fellow countrymen.[129] For instance, Mexican-Americans in the Lower Rio Grande Valley in Texas consistently rank amongst the poorest people in the country.[130] Borderlanders are also relatively uneducated. A recent survey showed Mexican-Americans advancing beyond the high school level at only one-half the rate of Anglo-Americans.[131]

Thus, it is not surprising that poverty stricken, poorly educated Mexican-Americans, particularly in the Borderlands, do not mobilize politically or demonstrate much interest in environmental issues.[132] Only forty-nine percent of Mexican-Americans voted in the 1988 presidential election, compared with seventy percent of Anglo-Americans.[133] Furthermore, given their relative poverty, Mexican-Americans in general do not place much emphasis on the

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broadcast, Aug. 30, 1993) (statement of Bob Edwards) (noting that overwhelming majority of population in border city of Brownsville, Texas is Mexican-American), *available in* Westlaw, ALLNEWSPLUS Database.

128. *See* Leslie Sklair, *The Maquila Industry and the Creation of a Transnational Class in the United States-Mexico Border Region* (remarking that wealthy communities in Mexico exist right across border from very poor communities in United States), *in* CHANGING BOUNDARIES IN THE AMERICAS: NEW PERSPECTIVES ON THE U.S.-MEXICAN, CENTRAL AMERICAN, AND SOUTH AMERICAN BORDERS 69, 70 (Lawrence A. Herzog ed., 1992).

129. *See* Irasema Coronado, *Legal Solutions vs. Environmental Realities: The Case of the United States-Mexico Border Region*, 10 CONN. J. INT'L L. 281, 294 (1995) (describing border area in United States as poor in comparison with rest of country).

130. *See* Mercedes L. De Uriarte, *Clinton Missed Chance to Touch Texas Latinos*, HOUSTON CHRON., Nov. 1, 1995, at 23 (noting that poorest Mexican-Americans nationwide live in Texas).

131. *See* RODOLFO O. DE LA GARZA ET AL., LATINO VOICES 53 (1992) (noting that approximately 10% of Mexicans pursue education beyond high school compared to 20% of Caucasians); *see also* Mercedes L. De Uriarte, *Clinton Missed Chance to Touch Texas Latinos*, HOUSTON CHRON., Nov. 1, 1995, at 23 (asserting that over 45% of Mexican-American children in Texas drop out of school and less than 50,000 Latinos nationwide receive bachelors' degrees); *cf.* Leonel Sanchez, *Latino Boys See What They Can Aspire To*, SAN DIEGO UNION-TRIB., May 7, 1995, at B2 (citing study showing 61% of Latinos aged 18 to 24 graduate from high school, as compared to 75% for African-Americans and 83% for Caucasians).

132. *See* Katherine Ellison, *The Ugly Abyss*, MONTREAL GAZETTE, Dec. 10, 1994, at B3 (implying that impoverished people have more immediately pressing concerns than environmental degradation); *cf.* Reuben S. Villegas, *Jobs vs. Environment Is a Delicate Balance*, ROCKY MOUNTAIN NEWS, Apr. 3, 1994, at N6 (asserting that wealthier Hispanics are highly interested in environmental conservation, even at cost of employment of masses).

133. RODOLFO O. DE LA GARZA ET AL., LATINO VOICES 124 (1992).

environment.[134] For example, in a list of eight public policy areas, Mexican-Americans ranked "improving the environment" below the median and behind socio-economic priorities like crime control, drug prevention, public education, health care, and child care services.[135]

C. *Environmental and Social Action Groups*

Along with national governments and local political forces, environmental and social action groups also play a role in guiding the development of the maquiladora industry.[136] While the missions of social action groups remain clearly defined, an analysis of their political capabilities implies a degree of uncertainty. Granted, environmentalists possess more influence today than they did a generation ago when Rachel Carson launched the movement with the 1962 publication of *Silent Spring*,[137] but they may not be as powerful as they were in the early 1990s. Their part-time collaborators in the labor union movement unquestionably wane in power.[138] As previously noted, the Republican Party's victory in the 1994 elections presaged political attitudes less sympathetic to environmentalists' political designs.[139] A similar re-evaluation may well be underway in Mexico. Therefore, the overall influence of the environmentalists in the national political arena appears to be declin-

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134. *See id.* at 90 (citing study showing that only 64.9% of Mexican-Americans polled supported increase government spending to improve environment).

135. *Id.*

136. *See* Gregory Gross, *U.S. Firms Withhold Data on River Toxics*, SAN DIEGO UNION-TRIB., Nov. 21, 1994, at A3 (identifying Mexican and American citizen groups concerned about maquiladora pollution); Ed Ivey, *Southern Corridor: Putting the Puzzle Together*, N.M. BUS. J., July 1, 1994, at 47, 47 (warning of formations of alliances by Mexican health and environmental associations to police maquiladoras).

137. RACHEL CARSON, SILENT SPRING (1962).

138. *See infra* notes 163–68 and accompanying text.

139. *See* Richard J. Rogers, Note, *New York City's Fair Share Criteria and the Courts: An Attempt to Equitably Redistribute the Benefits and Burdens Associated with Municipal Facilities*, 12 N.Y.L. SCH. J. HUM. RTS. 193, 242 n.239 (1994) (stating that Republican-controlled Congress is unlikely to support Environmental Equal Rights Act designed to alleviate "environmental burdens placed on poor, minority-populated communities"); Joel L. Silverman, Note, *The "Giant Sucking Sound" Revisited: A Blueprint to Prevent Pollution Havens by Extending NAFTA's Unheralded "Eco-Dumping" Provisions to the New World Trade Organization*, 24 GA. J. INT'L & COMP. L. 347, 376 (1994) (noting that "many Republican members of Congress are hostile towards environmental restraints on trade").

ing.[140] Thus, the political power of social action groups varies according to time, place, and purpose.

Environmentalism defined the socio-political movement of the 1980s and the early 1990s in the United States. During the 1980s, the United States environmental movement greatly increased in power as it multiplied its membership, financial resources, and political influence.[141] Although behind its United States counterpart across the board, the Mexican movement evolved at about the same time.[142] Both movements attracted young, idealistic, and enthusiastic members. The maquiladora industry finally received scrutiny from United States environmentalists when attention turned toward the Borderlands in the early 1990s as NAFTA went into negotiation.[143]

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140. *See* Hugh Dellios, *Environmental Groups Now on List of Endangered Species*, CHI. TRIB., Apr. 16, 1995, at C3 (reporting that "[a]t a time federal environmental laws are under withering assault in Washington, the professional defenders of the nation's air and water find their influence diminished and their message ignored"); *see also* Ken Ward, Jr., *Environmentalists Brace for Industry-Backed Bills*, CHARLESTON GAZETTE, Jan. 10, 1995 (noting that Republican Congress is now more apt to scrutinize "new and existing environmental standards"), *available in* Westlaw, ALLNEWS Database.

141. *See* MARK SAGOFF, THE ECONOMY OF THE EARTH 154 (1988) (distinguishing ecology movement of 1960s and 1970s from environmentalism of 1980s); *see also* Frederick H. Lowe, *Environment Group Charges Stepan with Mexican Polluting*, CHI. SUN-TIMES, Feb. 29, 1992, at 32 (evidencing ability of environmentalists to pressure maquiladora engaged in illegal dumping); Michael Parrish, *Business Taking Different View of Environment Policy*, L.A. TIMES, Dec. 31, 1989, at 1 (describing influence of environmental movement).

142. *See* TOM BARRY & BETH SIMS, THE CHALLENGE OF CROSS-BORDER ENVIRONMENTALISM 73 (1994) (explaining that in early 1980s, environmental awareness increased in Mexico and resulted in new joint programs with EPA and Mexico's environmental agency to work on environmental problems); *cf.* Mary E. Kelly, *The North American Experience Managing International Transboundary Water Resources: The International Joint Commission and International Boundary and Water Commission (Part 2)*, 33 NAT. RESOURCES J. 299, 300 (1993) (concluding that because of lack of funding for local environmental groups in Mexico, such groups must depend on binational organizations like Arizona's Border Ecology Project and Texas Center for Policy Studies).

143. *See* Barbara J. Bramble & Gareth Poltel, *Non-Governmental Organizations and the Making of U.S. International Environmental Policy*, C990 A.L.I.-A.B.A. 407, 409–10 (1995) (describing increased involvement of nongovernmental organizations (NGOs) that built strong environmental coalitions to press for NAFTA reforms), *available in* Westlaw, ALI-ABA Database; Robert F. Housman, *The Treatment of Labor and Environmental Issues in Future Western Hemisphere Trade Liberalization Efforts*, 10 CONN. J. INT'L L. 301, 304–05 (1995) (detailing strong reaction from environmental groups when President George Bush announced negotiations with Mexico to form free trade agreement that ultimately resulted in NAFTA); *see also* Kirk Kennedy, *Deconstructing Protectionism: Assessing the Case for a Protectionist American Trade Policy*, 28 CASE W. RES. J. INT'L L. 197, 208–10 (1996) (book review) (stating that environmental debates that occurred during

Although not as powerful nationally as during the early 1990s, environmental and other social action groups are still alive and well in the Borderlands. In fact, they stand more influential in that region than at any time since the mid-nineteenth century when the boundary line came into being. Their considerable public relations and mobilization skills contributed significantly to encouraging the Clinton administration to negotiate an environmental side agreement to NAFTA in 1993.[144] Reflecting larger trends that apply to a continuum of cultural, social, economic, and political initiatives, these groups, especially the environmentalists, have spawned a growing focus on the Borderlands issues in both Mexico and the United States.[145] Thus, environmental mobilization is certainly the most visible of the new movements in Borderlands politics.[146]

The most provocative manifestation of these trends centers on the growth of binational environmental and human rights organizations in the Borderlands.[147] Although binational cooperation

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NAFTA negotiations demonstrate that "radical environmentalism" may impede international free trade).

144. *See* Barbara J. Bramble & Gareth Porter, *Non-Governmental Organizations and the Making of U.S. International Environmental Policy*, C990 A.L.I.-A.B.A. 407, 407 (1995) (describing President Bush as "compelled" to address environmental concerns in light of NAFTA), *available in* Westlaw, ALI-ABA Database; Kevin J. Madonna, *The Wolf in North America: Defining International Ecosystems vs. Defining International Boundaries*, 10 J. LAND USE & ENVTL. L. 305, 333 (1995) (affirming that environmental groups' pressure compelled drafting of environmental side agreement to NAFTA); Peggy Abrahamson, *Border Cleanup Plan Criticized*, AM. METAL MKT., Mar. 3, 1992, at 4 (noting threat of NAFTA derailment due to environmentalist opposition), *available in* Westlaw, AMMTLMKT Database; *see also* Colin Crawford, *Some Thoughts on the North American Free Trade Agreement, Political Stability and Environmental Equity*, 20 BROOK J. INT'L L. 585, 596 (1995) (explaining extreme need to address environmental issues in NAFTA agreement).

145. *See* Irasema Coronado, *Legal Solutions vs. Environmental Realties: The Case of the United States-Mexico Border Region*, 10 CONN. J. INT'L L. 281, 282–83 (1995) (emphasizing focus of various parties on environmental problems in border region); Peter M. Emerson & Mary G. Wallace, *Mexico's Environment Ignored*, SAN ANTONIO EXPRESS-NEWS, Apr. 4, 1995, at A1 (mentioning need for public involvement to resolve border problems and for creation of nongovernmental groups); *see also* Kenneth A. Manastel, *Ten Paradoxes of Environmental Law*, 27 LOY. L.A. L. REV. 917, 925 (1994) (reciting poll results showing increased support from public for environmental protection).

146. *See* Kal Raustiala, *The Political Implications of the Enforcement Provisions of the NAFTA Environmental Side Agreement: The CEC As a Model for Future Accords*, 25 ENVTL. L. 31, 31 (1995) (discussing profound political influence of environmental interest groups during NAFTA negotiations).

147. *See* David C. Warner, *Health Issues at U.S.-Mexico Border*, 265 JAMA 242, 244–46 (1991) (identifying several human rights organizations that address border environ-

among environmentalists began in the early 1980s, NAFTA prompted several groups to become involved by focusing attention on the environmental degradation of the Borderlands, thus sparking the formation of national and Borderlands organizations aimed at international environmental cooperation.[148] A complete catalog of these binational organizations is beyond the scope of this Article, but a brief listing of several cross-border environmental organizations emphasizes the point.[149] The Texas Center for Policy Studies has joined with *Bioconservación*, located in Monterrey, Nuevo Léon, to pursue the Binational Project on the Environment.[150] The research and policy-oriented *Centro Internacional de Recursos Transtfrontorizos* [International Transboundary Resources Center] at the University of New Mexico School of Law works with Mexican colleagues to promote discussion of border environmental issues.[151] In Arizona, the Border Ecology Project assumes a leading role in the binational *Red Fronteriza de Salud y Ambiente* [Border Health and Environment Network].[152] Finally, in California, the San Diego Environmental Health Coalition coop-

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mental problems and proposing solutions to serious health problems caused by pollution on United States-Mexico border).

148. *See* David Phinney, *Environmentalists Attack GOP Policies; Petitions Bear 1.2 Million Signatures*, SAN FRANCISCO EXAMINER, Nov. 2, 1995, at A10 (discussing recent environmental mobilization campaign urging stronger environmental policies and regulations and increased spending to preserve natural resources); *see also* Paul L. Allen, *Environmental Efforts Span U.S.-Mexico Border; Prescott College Honors Three Arizona Women for Leadership*, TUCSON CITIZEN, Oct. 19, 1994, at C2 (recognizing individual efforts to create support and awareness of border environmental issues through research and teaching programs).

149. *See* TOM BARRY & BETH SIMS, THE CHALLENGE OF CROSS-BORDER ENVIRONMENTALISM app. at 119 (1994) (listing most active border environmental organizations). *See generally* Edward J. Williams, A Void of International Solidarity: The United States and Mexican Labor Movements and the North American Free Trade Agreement 12–14 (1994) (unpublished manuscript on file with author) (providing comprehensive list of environmental organizations).

150. Telephone Interview with Mary E. Kelly, Director of the Texas Center for Policy Studies (Mar. 14, 1996); *see* Peter M. Emerson & Mary G. Wallace, *Mexico's Environment Ignored*, SAN ANTONIO EXPRESS-NEWS, Apr. 4, 1995, at A1 (discussing Texas Center for Policy Studies and stating that its goal is to identify border issues and to report findings to government decision-makers).

151. Telephone Interview with Delia Rojas-Uriste, Program Coordinator of The International Transboundary Resources Center (Mar. 14, 1996).

152. *See* Laura Brooks, *Border Link Puts Focus on Pollution: Binational Network Teams up for Research*, ARIZ. DAILY STAR, Oct. 31, 1994, at B1 (noting that Border Health and Environment Network is a coalition of non-profit groups, researchers, and activists on both sides of the Arizona-Mexico border). The Border Ecology Project, headed by Dick

erates with the Tijuana-based *Comite Ciudadano Pro Restauración del Canon del Padre* on a series of environmental issues.[153]

Environmentalists engage in numerous activities on both sides of the international boundary line. For example, they collect data and monitor air and water standards.[154] In addition, enviromentalists support community right-to-know initiatives and lobby nationally and transnationally.[155] Environmental groups also generate funds for local environmental remediation.[156] Many of these initiatives directly relate to the region's maquiladora industry.

Public health advocates, labor unions, social action groups, and human rights activists also affect the maquiladora program in the Borderlands. Public health advocates, for instance, frequently work closely with environmentalists to find solutions for environmental health problems caused by overpopulation and maqui-

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Kamp, is one of several member groups cooperating in the Border Health and Environment Network, colloquially referred to as "La Red." *Id.*

153. Telephone Interview with Leticia Ayala, Office Manager of Environmental Health Coalition (Mar. 12, 1996).

154. *See Protecting the Environment in North American Free Trade Agreement Negotiations: Hearing Before the Subcomm. on Regulations, Business Opportunities, and Energy of the Comm. on Small Business, House of Representatives*, 102 Cong., 1st Sess. 113, 117–18 (1991) (statement of Dick Kamp, Director, Border Ecology Project) (describing Border Ecology Project's efforts to monitor water pollution in Nogales, Sonora and its discovery of chemical solvents in groundwater); *see also* TOM BARRY & BETH SIMS, THE CHALLENGE OF CROSS-BORDER ENVIRONMENTALISM 70–71 (1994) (explaining how environmental activist organizations share part of responsibility of monitoring pollution in border communities with state and federal governments); *Two-Nation Network Fights Pollution*, ARIZ. REPUBLIC, Nov. 14, 1994, at B2 (detailing formation of Border Ecology Project, a binational network group dedicated to data collection and dissemination on environmental issues).

155. *See* TOM BARRY & BETH SIMS, THE CHALLENGE OF CROSS-BORDER ENVIRONMENTALISM 101 (1994) (stating that environmentalists want public participation in trade negotiations and right-to-know initiatives for workers and communities affected by border investment); Laura Brooks, *Border Link Puts Focus on Pollution; Binational Network Teams up for Research*, ARIZ. DAILY STAR, Oct. 31, 1994, at B1 (explaining network created between several organizations to promote communication and express right-to-know initiative by dispersing data to those without access to such information).

156. *See* Diane Lundquist, *Ecology on Border Targeted*, SAN DIEGO UNION-TRIB., June 4, 1992, at E1 (describing foundation created to raise funds from private sector to help solve environmental problems on border); *see also* Susan Duerksen, *U.S. Mexico Weigh Joint Battle Against Disease*, SAN DIEGO UNION-TRIB., Oct. 15, 1994, at C1 (reporting encouragement by doctors' organizations to create binational commission to address health problems on border).

ladora pollution.[157] The newly minted United States-Mexico Border Health Foundation reflects significant success in the health field.[158]

United States labor organizations also have a vital interest in, and impact on, the maquiladora industry. United States labor unions and their allies have opposed the expansion of the maquiladora industry since its inception in 1965.[159] Unions, however, have lost significant political clout over the years because of decreased membership and negative public opinion.[160] NAFTA is only the most recent in a series of humiliating defeats for organized labor in the United States.[161] Nevertheless, organized labor is ac-

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157. *See* Susan Duerksen, *Cure Sought for Border Health Risks: U.S. and Mexico Target Shared Problem*, SAN DIEGO UNION-TRIB., June 7, 1995, at B3 (discussing cooperative efforts to research and find solutions for health problems on border and develop treatment programs); *see also A Binational Disgrace: Only Cooperation Can Clean up the New River*, SAN DIEGO UNION-TRIB., Nov. 27, 1994, at G2 (identifying governmental and private corporations efforts to clean up industrial pollution in border area caused by maquiladora industry); *cf.* Anna Chisman, *On Drug Abuse Prevention and the Control of Illicit Drugs*, AMERICAS, Mar–.Apr. 1994, at 57, 57 (describing cooperation between Mexico and United States in treating drug abuse in binational border cities).

158. *See* Cheryl Clark, *California Acts to Prevent Disease Disaster at Border*, SAN DIEGO UNION-TRIB., Oct. 20, 1992, at B1 (noting that United States-Mexico Border Health Organization operates in conjunction with Pan American Health Organization, which is part of the United Nations).

159. *See* Sherri M. Durand, *American Maquiladoras: Are They Exploiting Mexico's Working Poor?*, 3 KAN. J.L. & PUB. POL'Y 128, 130–31 (1994) (stating that most opposition to maquiladora operations comes from organized labor groups). Collectively, these labor groups assert the following arguments in opposition to the maquiladora industry: (1) United States companies pay Mexican workers much less than what they would pay for labor in the United States; (2) the maquiladora system "undermine[s] the social fabric of Mexican society" by hiring mostly women and leaving men unemployed; (3) maquiladoras fail to provide clean, safe working environments; and (4) companies are able to exploit maquiladora workers because complicated procedures governing the right to strike, combined with the influence of corrupt government officials, make carrying out an effective strike virtually impossible. *Id.* at 131–32.

160. *See* Aaron Bernstein, *A New Deal at the AFL-CIO?*, BUS. WEEK, Oct 30, 1995, at 119, 119 (questioning chances for political recovery of "Big Labor"); Frank Swoboda, *Tough Talk Heralds New Era for Labor*, HOUSTON CHRON., Oct. 30, 1995, at 1 (reporting AFL-CIO's president's search for bright prospects despite employees' low interest in unions as workplace representatives); *Challenger Wins Top Job at AFL-CIO*, BALT. SUN, Oct. 26, 1995, at A1 (referring to union's descent in status from "political powerhouse" to "political patsy").

161. *See* Stanley Holmes, *Business*, SEATTLE TIMES, Oct. 15, 1995, at F1 (listing major defeats for national labor movement); Wendy Koch, *Labor Unions Have Little to Cheer About on Labor Day*, SALT LAKE TRIB., Sept. 4, 1994, at A7 (describing how labor unions bemoan loss of support and influence in Congress); *Blue-Collar Blues: Labor Unions'*

tive in the Borderlands. Frustrated by its inability to defeat NAFTA, the American Federation of Labor/Congress of Industrial Organizations (AFL/CIO) has launched a campaign to organize the maquiladoras in the Borderlands.[162] This group works with the *Frente Autentico del Trabajo* [Authentic Workers Front] (FAT), a small, independent Mexican labor movement.[163] While not directly focused upon environmental issues, the AFL-CIO and FAT have focused public attention on the activities of the maquiladoras.[164]

Of the several social action groups concerned with the maquiladora program, the binational Coalition for Justice in the Maquiladoras (CJM) is by far the most significant. The CJM is a coalition of unions, religious groups, human rights activists, public health interest groups, and environmentalists.[165] It utilizes a broad strategy

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Political Decline Continues, COLUM. DISPATCH, Oct. 7, 1994, at A8 (reviewing significant setbacks for labor unions from 1992 to 1994, including passage of NAFTA).

162. *See* Mary McGuin & Kim Moody, *Labor Goes Global; Free Trade Politics*, PROGRESSIVE, Mar. 1993, at 24, 24 (reporting on AFL-CIO's efforts to organize Mexican labor in light of NAFTA).

163. *See id.* (describing cooperative effort to organize labor in border region between AFL-CIO and FAT); *see also* John Pearson & Geri Smith, *Which Side (of the Border) Are You on? Well, Both*, BUS. WEEK, Apr. 4, 1994, at 50, 50 (noting significance of collaboration between the FAT and United States organized labor in organizing maquiladoras). FAT's political independence represents an exception among Mexican organized labor organizations because the majority of Mexican unions are tied to the Mexican government and dominated by the PRI. *See* Andrea Dabrowski & Linda Robinson, *Reaching the South*, U.S. NEWS &. WORLD REP., Mar. 1, 1993, at 43, 44 (noting strong historical connection between PRI and Mexican labor unions); Juan Forrero, *Tijuana Workers Reject Independent Union*, SAN DIEGO UNION-TRIB., Dec. 16, 1993, at B3 (asserting that most Mexican labor unions have government ties and require federal government approval to go on strike). FAT was one of the few Mexican labor unions that did not endorse NAFTA. *See* Mary McGuin & Kim Moody, *Labor Goes Global; Free Trade Politics*, PROGRESSIVE, Mar. 1993, at 24, 24 (stating that FAT, which has no ties to PRI or Mexican government, joined forces with United States Teamsters Union and opposed pro-NAFTA stance of Mexican President Carlos Salinas de Gortari and PRI-dominated Congress).

164. *See Unions Rap General Electric, Honeywell Plants*, SACRAMENTO BEE, Feb. 15, 1994, at C9 (reporting that Teamsters Union and United Electrical, Radio and Machine Workers Union filed petitions on behalf of GE and Honeywell maquiladora workers who were fired for attempting to organize); *cf. AFL-CIO Speaks out on Free Trade*, BUS. MEX., May 1991 (commenting on AFL-CIO's long-time commitment to calling attention to labor exploitation in maquiladoras), *available in* LEXIS, News Library, BUSMEX File.

165. *See AFL-CIO Speaks out on Free Trade*, BUS. MEX., May 1991 (describing CJM as coalition of more than 50 labor, environment, community, and religious groups), *available in* LEXIS, News Library, BUSMEX File; John Pearson & Geri Smith, *Which Side (of the Border) Are You on? Well, Both*, BUS. WK., Apr. 4, 1994, at 50 (noting that International Ladies' Garment Workers Union aided in establishment of CJM to improve, among other things, health and safety conditions in border plants).

that includes picketing and demonstrations, letter-writing campaigns, lobbying and testifying before legislative and administrative bodies, and organizing stockholders of companies active in the maquiladora program.[166] The CJM concentrates on implementing new policies governing maquiladora working conditions, safety standards, and environmental protection.[167]

Binational human rights advocates also play a role in the coalition of forces that affect the maquiladora industry. Of the several organizations, the best known is the American Friends Service Committee (AFSC) and its Mexican counterpart, the *Casa de los Amigos*.[168] Among other projects, the AFSC organized the *Comités de Apoyo*, a support committee for maquiladora workers in the lower Rio Grande Valley cities of Reynosa and Matamo-

166. *See* David Bacon, *After NAFTA, Environmental*, ACTION MAGAZINE, Sept. 22, 1995, at 33, 33 (detailing various actions taken by CJM on behalf of maquiladora workers); Jeremy Brecher, *Global Village or Global Pillage? After NAFTA; North American Free Trade Agreement; Commodities*, NATION, Dec. 6, 1993, at 685, 685 (describing CJM's "corporate campaign" technique for pressuring maquiladora corporations into abiding by labor and environmental standards); *see also Labor-Government, Sony Criticized for Violating Workers' Rights*, MEX. BUS. MONTHLY, Dec. 1, 1995 (describing CJM's cooperation with United States unions and social action groups in supporting Mexican workers who charged Mexican government and Sony with conspiring to violate Mexican workers' rights), *available in* Westlaw, ALLNEWS Database; *Sony Workers Attacked by Police*, MEX. BUS. MONTHLY, June 1, 1994 (commenting on CJM's monitoring of suppression of Mexican Sony employee activity in Nuevo Laredo), *available in* Westlaw, ALLNEWS Database.

167. *See* Simon Billenness, *Beyond South Africa: New Frontiers in Corporate Responsibility*, BUS. & SOC'Y REV., June 22, 1993, at 28, 28 (commenting on standards of conduct which CJM developed for maquiladora industry in "response to appalling workplace conditions, low wages, and environmental degradation"); Jeremy Brecher, *Global Village or Global Pillage? After NAFTA; North American Free Trade Agreement; Commodities*, NATION, Dec. 6, 1993, at 685, 685 (discussing CJM's proposed environmental standards for maquiladora industry); Jorge G. Castañeda & Carlos Heredia, *The Wrong Free-Trade Deal? North American Free Trade Agreement*, WORLD PRESS REV., Mar. 1993, at 14, 17 (describing code of conduct developed by CJM for maquiladora industry).

168. *See* PR Newswire, Sept. 23, 1985 (commenting on AFSC's assistance to Mexican families during 1985 earthquake in Mexico City), *available in* LEXIS, News Library, PRNEWS File. The AFSC has been involved in social development in Mexico since 1939. *Id.* The *Casa de los Amigos* is a Mexican Quaker organization with which the AFSC has a close working relationship. *Id.*

ros.[169] The *Comités de Apoyo* also assists the maquiladora workers in their efforts to organize.[170]

Public health, labor, social action, and human rights advocates have not always centered their attention on the issues addressed in this Article, but they have contributed to some social change in the Borderlands. Like environmentalist groups, these advocates act as a countervailing power to the significant influence wielded by the maquiladora industry in the Borderlands.[171] In this sense, they are part of a larger political movement operating in the Borderlands to counter the environmental degradation perpetrated by maquiladoras.

IV. THE FUTURE OF THE BORDER ENVIRONMENT

This heightened awareness of the maquiladora plants' contribution to environmental degradation has spurred several changes in the maquiladora program and in the Borderlands.[172] As a result, the maquildora industry polices itself more effectively than in years past. Furthermore, meaningful infrastructural improvements are

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169. *See* Cecile H. White, *Hands Across the Border/Connecting Christians and Cultures*, HOUSTON CHRON., May 15, 1993, (Religion), at 1 (describing AFSC's assistance to workers in lower Rio Grande Valley).

170. *See* Robert Bryce, *Mexican Unions Struggle in a Tough Post-NAFTA World*, CHRISTIAN SCI. MONITOR, Dec. 22, 1993, (Economy), at 7 (explaining the difficulties AFSC organizers face from anti-union government); Shawn Foster, *Workers' Rights a Borderline Issue in Mexican Towns*, CHI. TRIB., Nov. 14, 1993, at 1 (discussing AFSC's attempts to educate workers about their right to organize).

171. *See* Paul E. Brink, *Women Workers Target Mexico's "Maquiladoras"*, KANSAS CITY STAR, July 1, 1993, at C5 (describing one activist's work bringing abuses to attention of United States congressional delegations).

172. *See* Edward M. Ranger, *Environmental Aspects of Building a Facility in Northern Mexico*, C990 A.L.I.-A.B.A. 497, 541 (1995) (announcing creation of new Mexican federal ministry devoted to environmental matters), *available in* Westlaw, ALI-ABA Database; Veronica Flores, *Mexico Takes Steps to Conquer Toxic Waste Despite Regulations, Polluting Industrial Slip Through the Cracks*, SAN ANTONIO LIGHT, July 7, 1992, at A5 (reporting that Mexican environmental agency was working to tighten environmental standards in border region); Joan O'Brien, *Political Solutions: U. of U. at Forefront of Research into Problems of Border Pollution: U. Scientists Seek Solutions*, SALT LAKE TRIB., Oct. 26, 1995, at C1 (noting that EPA has begun investing millions of dollars into border pollution research). *But see The Border Trade Alliance Blueprint Deserves Attention, Funds*, SAN ANTONIO LIGHT, Feb. 12, 1992, at D4 (arguing that "Washington and Mexico City have had a tendency to take the border for granted, except during times when immigration or drug trafficking get national attention").

being built in the Borderlands, with the promise of more to come.[173]

Perhaps due to closer scrutiny from both the public and private sectors, the maquiladora industry has become more environmentally responsible in the 1990s. The area-wide Border Trade Alliance (BTA) has taken a leading role in educating and encouraging industry to improve its environmental policies and programs, including the disposal of hazardous wastes.[174] In addition, local maquiladora associations have exerted pressure on their members to pursue more responsible environmental practices.[175]

These positive advances are due in part to more effective education, though the need remains for greater attention to the issue of workers' safety.[176] During the 1980s, many plant managers were both ignorant of the consequences of their actions and unaware of the legal norms governing the use and disposal of waste materials.[177] However, Dick Kamp, a leading Borderlands environ-

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173. *See U.S.-Mexico Agency Making Project Loans*, ENGINEERING NEWS-RECORD, Oct. 16, 1995, at 18 (announcing first infrastructure projects approved by BECC for NADBank funding).

174. *See The Border Trade Alliance Blueprint Deserves Attention, Funds*, SAN ANTONIO LIGHT, Feb. 21, 1992, at D4 (citing with approval BTA's attempts to improve quality of life along United States-Mexico border); *Border Trade Alliance Convenes in Washington*, D.C., PR Newswire, May 19, 1988 (describing broad range of BTA's activities in border region), *available in* LEXIS, News Library, PRNEWS File.

175. *See* U.S. GEN. ACCOUNTING. OFF., PUB. NO. GAO/NSSAD-91-227, REPORT TO THE CHAIRMAN, COMMITTEE ON COMMERCE, SCIENCE AND TRANSPORTATION, U.S. SENATE, U.S.-MEXICO TRADE: INFORMATION ON ENVIRONMENTAL REGULATIONS AND ENFORCEMENT 6–8 (1991) (citing agreements reached by Mexican government and maquiladora groups to assure environmental compliance); *Trade Pact Spurs Northern Mexico Firms to Work to Clean up Their Act, Image*, DALLAS MORNING NEWS, Oct. 19, 1992, at A22 (noting that maquiladora association created audit team to voluntarily conduct environmental inspections of plants).

176. *See* Diana G. Erwin, *Tijuana's Grim Factory Life Battled by Union Activist*, SACRAMENTO BEE, Feb. 28, 1995, at A2 (excoriating maquiladora employers' brutal disregard for worker health and safety that results in gross uncompensated injuries); Chris Kraul & Evelyn Iritani, *Asia, Mexico Learn to Work Together*, L.A. TIMES, May 29, 1995, at D1 (reporting that Hyundai maquiladora workers were engaged in hazardous welding and riveting jobs despite lack of adequate eye and ear protection); *Worker Health and Safety at Eight U.S.-Owned Maquiladora Auto Parts Plants*, MEX. TRADE & L. REP., Jan. 1994, at 7, 25–27 (documenting extensive health and safety hazards coupled with ineffective or absent worker training).

177. *See* Sonia Nazario, *Boom and Despair: Mexican Border Towns Are a Magnet for Foreign Factories, Workers and Abysmal Living Conditions*, WALL ST. J., Sept. 22, 1989, at R26 (reporting that 1988 plant survey showed none had ever been inspected). These unenforced legal norms grew out of an agreement between the United States and Mexico in

mentalist, reports that this is changing, at least in Agua Prieta, Sonora, due to informational seminars with local maquiladora associations.[178] Educational programs on the handling of hazardous waste have also improved the capabilities of the United States Customs Service and its Mexican counterpart, the *Aduana Fronteriza.*[179]

Another factor that has contributed to the recent positive changes is the response of companies to educational advances and to the need for more responsible environmental practices. Maquiladoras have begun training workers in the use of protective clothing and safer work habits.[180] In addition, more companies are returning their hazardous waste to the United States, as required by Mexican law,[181] and treatment facilities for hazardous waste are

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1987. *See* REVIEW OF U.S.-MEXICO ENVIRONMENTAL ISSUES: EXECUTIVE SUMMARY 11–12 (1992) (referring to 1986 amendment to 1983 agreement between United States and Mexico to enforce current domestic laws regarding hazardous waste disposal).

178. *See* Laura Brooks, *Border Link Puts Focus on Pollution*, ARIZ. DAILY STAR, Oct. 31, 1994, at B1 (describing Dick Kamp's work in educating maquiladora owners and workers in Agua Prieta).

179. The way in which hazardous waste is processed at maquiladora plants directly affects the efficiency of the United States Customs Service in allowing trucks filled with hazardous waste to enter the United States. *See* Elizabeth C. Rose, Comment, *Transboundary Harm: Hazardous Waste Management Problems and Mexico's Maquiladoras*, 23 INT'L LAW. 223, 240–41 (1989) (explaining that after raw materials are imported into Mexico, under both United States and Mexican environmental regulations, maquiladora owners must ship hazardous wastes back to United States).

180. *See Worker Health and Safety at Eight U.S.-Owned Maquiladora Auto Parts Plants*, MEX. TRADE & L. REP., Jan. 1994, at 7, 24 (noting that "[s]even out of the eight plants visited by [United States General Accounting Office] had designated personnel with safety and health responsibility and had implemented or partially implemented several hazard-specific safety and health programs"); *see also* Lauren Coleman-Lochner, *A Good Year at Becton; Warmer Than Springtime; Shareholders Applaud Double-Digit Profit Growth*, RECORD (N.J.), Feb. 14, 1996, at B1 (announcing Becton Dickinson's proposal to establish clear health and safety regulations at its maquiladoras).

181. *See* Ley General del Equilibrio Ecologico y la Protecion del Ambiente, D.O., Jan. 28, 1988, art. 153 (requiring hazardous waste generated by materials admitted in-bond to be returned to country of origin); *see also* Scott C. Fulton & Lawrence I. Sperling, *The Network of Environmental Enforcement and Compliance Cooperation in North America and the Western Hemisphere*, 30 INT'L LAW. 111, 121 (1996) (noting voluntary efforts by several industries to improve new, binational hazardous waste tracking system). *See generally* LaRue Corbin et al., *The Environment, Free Trade, and Hazardous Waste: A Study of the U.S.-Mexico Border Environmental Problems in the Light of Free Trade*, 1 TEX. WESLEYAN L. REV. 183, 188–98 (1994) (examining current laws and regulatory schemes regarding United States-Mexico hazardous waste traffic).

being built on both sides of the border.[182] In an important initiative, for example, General Motors is currently installing water treatment facilities in its thirty-five plants in Mexico, more than half of which are in the Borderlands.[183]

New, environmentally sound industrial parks also directly affect the issue of hazardous waste. The first efforts to introduce these "eco-industrial parks" to the Borderlands are presently underway.[184] Eco-industrial parks should affect the Borderlands in two significant ways. First, most of the new facilities under construction provide processing mechanisms for many types of waste material.[185] Second, eco-industrial parks have rules and regulations that

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182. *See* Ron Mader, *Divided over Development: NAFTA Organizations Set to Improve Border Environment Struggle to Find Their Way*, BUS. MEX., Oct. 1995, at 11, 11 (indicating that plants designed to process hazardous wastes will be built on both sides of United States-Mexico border). Mexico definitely needs more hazardous waste facilities. *See* Patrick M. Raher, *Mexico: Investment and the Environment*, C90 A.L.I.-A.B.A. 565, 571 (1995) (noting that Mexico has capacity to manage only one-third of its 5.1 million tons of hazardous waste created each year), *available in* Westlaw, ALI-ABA Database.

183. *See* Reid A. Middleton, Comment, *NAFTA and the Environmental Side Agreement: Fusing Economic Development with Ecological Responsibility*, 31 SAN DIEGO L. REV. 1025, 1054 (1994) (stating that General Motors (GM) plans to build several wastewater treatment plants for 31 maquiladoras). Since the early 1990s, GM has built several treatment facilities at its non-United States plants. *See While Clean Water Beckons to Thirsty Foreign Investors*, Mex. Serv., Sept. 23, 1994 (noting GM's opening of wastewater treatment facility at Guanajato maquiladora), *available in* Westlaw, ALLNEWSPLUS Database; *see also* Scott Pendleton, *NAFTA Boom Is Threatening Border Ecology*, CHRISTIAN SCI. MONITOR, July 14, 1993, at 9 (describing GM's installation of facilities in Matamoros as progress in drive for environmental cleanup); *cf. GM to Clean up Waste Water*, WINDSOR STAR (Canada), Apr. 21, 1993, at A5 (announcing plans for installation of wastewater treatment system at Canadian GM plant).

184. *See Eco-Industrial Parks Balance Environmental, Manufacturing Concerns*, BUILDING DESIGN & CONSTRUCTION, Mar. 1, 1995, at 9 (identifying Brownsville, Texas and Matamoros, Mexico as site for EPA study of costs and benefits of a border region industrial park); *Environment Secretariat Addresses Water Pollution, Duck Deaths*, ENV'T WATCH LATIN AM., Mar. 1995 (evidencing Mexican government's interest in new means of waste control), *available in* LEXIS, News Library, CURNWS File; *EPA Starts $36-Million Effort to Aid Promising Technology*, FED. TECH. REP., Feb. 3, 1994, at 1 (declaring EPA commitment to joint environmental-industrial experimental projects including construction of prototype eco-industrial park in Borderlands), *available in* LEXIS, News Library, FEDTEC File; *Southland Preview: The Business Week Ahead*, L.A. TIMES, May 1, 1995, at D2 (noting eco-industrial park development targeted for Borderlands).

185. *See* Richard Spaulding, *Ecological Industrial Park Blossoms Along Border*, SAN DIEGO DAILY TRANSCRIPT, May 9, 1995 (stating that in eco-industrial parks, "[w]ater, energy for heating and cooling, chemicals and organic materials flow from one company to another in a pattern of inter-company reuse and recycling"), *available in* Westlaw, ALLNEWSPLUS Database; *Eco-Industrial Parks Balance Environmental, Manufacturing Concerns*, BUILDING DESIGN & CONSTRUCTION, Mar. 1, 1995, at 9 (describing eco-indus-

provide a context for peer re-enforcement of legal and informal norms governing environmentally correct conduct.[186]

Expanded enforcement also plays an important role in improving the Borderlands environment. While still far short of the personnel needed for frequent and effective enforcement, the number of border inspectors in Mexico has increased significantly.[187] Trained by the United States Environmental Protection Agency (EPA), these inspectors are more competent than their predeces-

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trial park as system in which "wastes and inputs of member businesses are matched through materials exchange networks or direct in-park physical exchanges," resulting in minimization of waste at its source); *Southland Preview: The Business Week Ahead*, L.A. TIMES, May 1, 1995, at D2 (noting that companies participating in eco-industrial parks "exchange and reuse waste and materials"); *Will Eco-Industrial Parks Help Move Business Toward Sustainability?*, BUS. & ENV'T, Feb. 1995 (describing eco-industrial park as "an industrial ecosystem in which companies in close proximity minimize the use of energy and materials and turn each other's process wastes into raw materials"), *available in* Westlaw, ALLNEWSPLUS Database.

186. *See* Richard Spaulding, *Ecological Industrial Park Blossoms Along the Border*, SAN DIEGO DAILY TRANSCRIPT, May 9, 1995, at 1 (contending that eco-industrial parks are cooperative effort in which participating companies exist in "symbiotic harmony" to reduce pollution and save money); *Eco-Industrial Parks Balance Environmental, Manufacturing Concerns*, BUILDING DESIGN & CONSTRUCTION, Mar. 1, 1995, at 9 (noting that private research company is developing fieldbook outlining "the environmental and management technologies required; the types of businesses to be included; a framework for linking the operations of various park companies; and a model for evaluating economic benefits of an [eco-industrial park]"). At present, some maquiladoras are clustered in older industrial parks in cities such Tijuana and Matamoras, yet living conditions are abysmal. *See, e.g.*, Anthony DePalma, *Mexicans Have Own Worries About NAFTA*, CHI. TRIB., Nov. 16, 1993, at 1 (presenting bleak picture of ammonia-laden air, filthy, rutted streets and roaming pigs in Matamoros industrial-park area); Polly Ghazi, *America's Deadly Borders*, THE GUARDIAN (London), Dec. 12, 1993, at O16 (scorning corporate tolerance of polluted conditions and refusal to reveal chemical output, despite "bitter, acrid smell" of air hanging over Mexico's industrial parks); Nancy Nusser & Ralph K.M. Haurwitz, *The Border: Unkept Promises-Birth Defects Blamed on Industrial Pollution*, AUSTIN AMERICAN-STATESMAN, Dec. 17, 1995, at A12 (illustrating toxic tide of chemicals flowing regularly into residents' yards); Anne Marie Welsh, *Political Comedy Looks at Economy in Unequal World*, SAN DIEGO UNION-TRIB., Nov. 18, 1993, at E1 (discussing near 100% contamination level of drinking water as result of run-off from industrial park's maquiladora operations). The eco-industrial park may someday offer a solution to the problem of satisfying the interests of both environmentalists and businesses in the Borderlands. *See* Richard Spaulding, *Ecological Industrial Park Blossoms Along the Border*, SAN DIEGO DAILY TRANSCRIPT, May 9, 1995, at 1 (noting that major growth area for eco-industrial parks will be along United States-Mexico border); *see also Eco-Industrial Parks Balance Environmental, Manufacturing Concerns*, BUILDING DESIGN & CONSTRUCTION, Mar. 1, 1995, at 9 (explaining that eco-industrial parks are designed to prevent pollution while at same time achieving economic efficiency).

187. TOM BARRY & BETH SIMS, THE CHALLENGE OF CROSS-BORDER ENVIRONMENTALISM 61 (1994); *supra* note 109.

sors,[188] and maquiladora plant inspections are becoming more frequent.[189] These practices represent a significant change from the past.[190]

New infrastructure in the Borderlands also forms part of the equation. While not directly germane to the issue of hazardous waste, new wastewater treatment plants are under construction in San Diego, on the United States side, and in Nuevo Laredo, Mexico.[191] These new treatment plants should ease the burden on existing, inadequate facilities, and help alleviate the health problems

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188. *See* Joseph G. Block & Andrew R. Herrep, *The Environmental Aspects of NAFTA and Their Relevance to Possible Free Trade Agreements Between the United States and Caribbean Nations*, 14 VA. ENVTL. L.J. 1, 35 (1994) (commenting on increase of enforcement capacity after EPA training of Mexico's border inspection force); *Discussion After the Speeches of Stanley M. Spracker and J. Christopher Thomas*, 20 CAN.-U.S. L.J. 245, 245–46 (1994) (discussing EPA's commitment towards cooperative training efforts with Mexico); *see also* James M. Strock, *Environmental Criminal Enforcement Priorities for the 1990's*, 59 GEO. WASH. L. REV. 916, 932 n.77 (1991) (identifying EPA programs designed to assist in training of foreign environmental inspectors). *See generally* Peter J. Fontaine, *EPA's Multimedia Enforcement Strategy: The Struggle to Close the Environmental Compliance Circle*, 18 COLUM. J. ENVTL. L. 31 *passim* (1993) (detailing ambitious project for monitoring and enforcing compliance with environmental protection laws).

189. *See U.S.-Mexico Border: Border Environmental Plan Final Draft Slated for Mid-December, Official Says*, Int'l Envtl. Daily (BNA) (Nov. 30, 1995) (describing plans for escalation of maquiladora inspections between 1996 and 2000), *available in* Westlaw, BNA-IED Database; *U.S.-Mexico Border: Proper Cargo Identification Highlighted with Opening of New Border Export Facility*, Int'l Envtl. Daily (BNA) (Sept. 26, 1994) (reporting that citizens' complaints as well as enforcement agency's focus on specific industries led to inspections of maquiladoras), *available in* Westlaw, BNA-IED Database.

190. *See, e.g.*, Tim Golden, *Mexico Forced to Clean up Environment*, SAN FRANCISCO CHRON., Aug. 18, 1993, at A9 (studying inadequacy of factory inspections and failure of Mexican government to pay inspectors for over five months); Sonia Nazario, *Boom and Despair-Mexican Border Towns Are a Magnet for Foreign Factories, Workers and Abysmal Living Conditions*, WALL ST. J., Sept. 22, 1989, at R26 (finding that Mexico's fiscal crises of 1980s left numerous maquiladoras free of inspection); Richard Price, *Nightmare on the Border*, USA TODAY, Oct. 27, 1993, at A1 (noting Mexican businessman's cynical comment, "I never had a problem I couldn't solve with a hundred-dollar bill."); *see also* Gary Lee, *At Border: NAFTA's Environmental Promise Is Murky*, WASH. POST, Nov. 15, 1993, at A1 (criticizing rapid reopening of factory despite careless disposal of acid waste causing injury to child).

191. *See* John Altomare, Comment, *Stemming the Flow: The Role of International Environmental Law in Seeking a Solution to the Sewage Treatment Crisis at the Tijuana-San Diego Border Region*, 21 CAL. W. INT'L L.J. 361, 410 (1990) (discussing strategies to fund sewage treatment plants in Mexico); Ron Mader, *Divided over Development: NAFTA Organizations Set to Improve Border Environment Struggle to Find Their Way*, BUS. MEX., Oct. 1995, at 11, 11 (listing proposals for potential wastewater treatment plants to be funded by BECC in Ciudad Juárez, Chihuahua; Ensenada, Baja California Norte; El Paso, Texas; and Brawley, California).

resulting from the discharge of raw sewage into ditches and rivers.[192]

Finally, new financial institutions offer additional promise of effective environmental management and cleanup in the Borderlands. Although BECC and NADBank's basic funding of $3 billion and additional leverage funding of $6 billion remain a trifle uncertain, these institutions indicate progress[193] compared with the scarcity of financial resources for environmental programs that existed in the 1980s and early 1990s.[194] Moreover, the economic crisis has caused the Mexican government to levy substantial taxes on

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192. *See* Nicolas Kublicki, *The Greening of Free Trade: NAFTA, Mexican Environmental Law, and Debt Exchanges for Mexican Environmental Infrastructure Development*, 19 COLUM. J. ENVTL. L. 59, 64 (1994) (asserting that development of strong environmental infrastructure is only way to protect health of citizens); Alejandro Sobarzo, *NAFTA and Human Rights in Mexico*, 27 U.C. DAVIS L. REV. 865, 881 (1994) (commenting on objectives of Integrated Environmental Border Plan under which United States and Mexico agree to dredge sewer systems, process hazardous waste, and build sanitary landfills to strengthen infrastructure and alleviate dangerous environmental conditions on border); *see also* Alberto A Bustani & Patrick W. Mackay, *NAFTA: Reflections on Environmental Issues During the First Year*, 12 ARIZ. J. INT'L & COMP. L. 543, 553 (1995) (warning that wastewater treatment facilities need to be constructed to promote sustainable development in accordance with NAFTA).

193. *See* Ron Mader, *Divided over Development: NAFTA Organizations Set to Improve Border Environment Struggle to Find Their Way*, BUS. MEX., Oct. 1995, at 12, 12 (reporting that NADBank's Deputy Manager Victor Miramontes' responded to critics who stated that bank's slow movement will jeopardize its changes for survival by stating, "Don't worry. We're here for the long term."); *see also North American Development Bank Moving Closer to Funding Projects*, DALLAS MORN. NEWS, Dec. 19, 1995, at D15 (calculating NADBank capitalization as at least $3 billion by end of 1998). *But see* Pamela Hartman, *NAFTA Doesn't Slow Border Pollution: As Mexico's Economy Crumbles, Money Dwindles to Enforce Its Environmental Laws*, TUCSON CITIZEN, Jan. 18, 1996, at A6 (implying that funds for approved Borderlands environmental projects were not disbursed); *Border Conditions Worse with NAFTA, Groups Says*, DALLAS MORN. NEWS, Jan. 2, 1996, at D7 (questioning ability of NADBank to fund proposals).

194. *See* Irasema Coronado, *Legal Solutions vs. Environmental Realities: The Case of the United States-Mexico Border Region*, 10 CONN. J. INT'L L. 281, 284 (1995) (linking Mexico's economic woes to lack of resources for environmental protection); Robert F. Housman, *The Treatment of Labor and Environmental Issues in Future Western Hemisphere Trade Liberalization Efforts*, 10 CONN. J. INT'L L. 301, 324 (1995) (speculating whether funding problems for environmental improvements were caused by uncertainty over what needed to be funded). Although the United States and Mexico made several environment-related treaties before the early 1990s, financial resources do not appear to have been a consideration until 1992's Integrated Border Environmental Plan. *See* Edward M. Ranger, *Environmental Aspects of Building a Facility in Northern Mexico*, C990 A.L.I.-A.B.A. 497, 560–62 (1995) (tracing agreements made since 1944 of which only one provides for financial backing), *available in* Westlaw, ALI-ABA Database.

the maquiladora industry for the first time.[195] In 1995, the Mexican government enacted regulations to implement 1994 legislation levying corporate income and asset taxes on the maquiladora industry.[196] Arguably, some of those funds can be returned to the Borderlands communities that house the maquiladoras.[197]

V. CONCLUSION

Two major contradictory trends will influence the maquiladora industry's contribution to environmental degradation in the Borderlands on the eve of the twenty-first century. On the one hand, free trade agreements, Mexico's economic crisis, and accompanying wage depression invite another round of significant growth for the industry. Additional maquiladora plants threaten the Borderlands environment with more waste material. The accompanying environmental degradation will likely be further intensified by the lax environmental enforcement that results from a Mexican government unwilling or incapable of fully supporting its own environmental laws and from the strong support the maquiladora industry enjoys from local business elites.

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195. *See* Chris Kraul, *Tax Hike for Border Plants Causes Uproar*, L.A. TIMES, Apr. 7, 1995, at D1 (commenting on former favorable tax treatment and debatable effects of new quintupled tax aimed at raising money to help Mexican government out of deep financial crisis).

196. *See id.* (quoting Mexican finance ministry spokeswoman as acknowledging that although tax legislation was passed in 1989, it was never enforced in maquiladora region); *see also* Jerry Kramer, *Maquiladora Operators Assail Mexican Tax Plan, Nation to Collect Levy on U.S. Assembly Plants*, ARIZ. REP., Feb. 3, 1995, at D1 (reporting that Mexico's corporate income tax applies to maquiladora industry as of January 1, 1996).

197. *Cf.* Sam Dillon, *Ciudad Juárez Journal: At U.S. Door, Huddled Masses Yearn for Better Pay*, N.Y. TIMES, Dec. 4, 1995, at A4 (noting that "[b]ecause most Juárez residents have little to give, and the maquiladoras are required to give little, the city raises only meager tax revenues" for infrastructure need); Jerry Kramer, *Maquiladora Operators Assail Mexican Tax Plan, Nation to Collect Levy on U.S. Assembly Plants*, ARIZ. REP., Feb. 3, 1995, at D1 (stating that tax will require maquiladoras that are Mexican corporations to report transactions with United States companies, thus, requiring maquiladora owners that pay more taxes to Mexico); *Trade Deal Worsened Environment, Health Along Border, Group Says*, Int'l Trade Daily (BNA) (Jan. 5, 1996) (noting Public Citizen report which stated that several infrastructure projects along border were halted because of Mexican economic crisis, and recommended that "tax be levied on North American trade to fund environmental clean up"), *available in* LEXIS, News Library, BNAITD File. *But cf. Mexico Announces Tax Hikes As Part of Economic Austerity Plan*, Int'l Bus. & Fin. Daily (BNA) (Mar. 13, 1995) (reporting Mexican government official's remark that new "revenue-collection measure[s] . . . will be accompanied by public spending cuts and hefty tariff hikes in public services and products"), *available in* LEXIS, News Library, BNAIBF File.

On the other hand, the mid-1990s present a more mature Borderlands scenario than the mid-1980s, when undisciplined dumping ravaged the region. NAFTA has mobilized potent political opposition to random waste dumping. Environmentalists have already convinced the governments to negotiate a side agreement to NAFTA specifically addressing environmental protection. Furthermore, private companies appear to be more responsible. Finally, other political, social, and financial organizations and institutions are present in the Borderlands. These groups promise to manifest permanent vigilance and undertake ongoing policies and programs to repair the damage of the past and avoid the depredations of the future.