

The Anatomy of a Relationship:

A Collection of Essays
on the Evolution of
U.S.-Mexico
Cooperation on
Border
Management





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Edited by Christopher Wilson



About the Collection

The conventional wisdom among those who study the border is that following the terrorist attacks of September 11, 2001, the United States unilaterally imposed significant additional security requirements on the management of the U.S.-Mexico border, and that the measures taken to meet these requirements have made the border more difficult to cross for not only illicit but also licit traffic, including the trade and travel that is the lifeblood of cross-border communities. There is a great deal of truth in this interpretation, but it largely portrays Mexico as a passive receptor of U.S. policy, which could not be further from the truth.

Rather, the increasing relevance of transnational non-state actors posing border and national security threats in the region—especially terrorist groups and organized crime networks—have demanded increased international cooperation to monitor and mitigate the threats. At the same time, the U.S. and Mexican economies have become ever more deeply integrated, causing significant growth in cross-border traffic and making the efficient management of the U.S.-Mexico border a first-order national interest for both countries.

The post-2001 border management framework has pushed away from the traditional understanding of the border as a line in the sand and moved toward an approach that seeks to secure and (in the case of licit travel and commerce) facilitate flows. This focus on transnational flows has expanded the geographic scope of what were traditionally border operations and thus required an internationalization of border management, including the development of partnerships and cooperative methods of border administration. This cooperative approach to managing the security and economic dimensions of the border, which includes both government to government coordination as well as partnerships with businesses and civil society, also strengthened the framework for enhanced cooperation on issues of sustainability and quality of life for residents of the border region.

Mexico historically took a largely hands-off approach to its northern border, with virtually no entry processing required for the majority of travelers and a limited law enforcement focus on the border itself. After September, 2001, the United States sought cooperation from its allies in protecting the homeland, which in the case of Mexico predominately focused on the border. Mexico responded by offering support for U.S. security objectives, but also pressured for the creation of mechanisms to limit the economic and quality of life costs of increased security. More recently, Mexico has reciprocated by pushing for increased U.S. action to stop the southbound flows of weapons and bulk cash being illicitly smuggled into Mexico.

At the U.S.-Mexico border, these changes meant that Mexico necessarily and for the first time fully had a seat at the table in discussions of border management. It took several years for this development to be fully institutionalized, but it was achieved through the formal creation of the Executive Steering Committee (with top-level leadership from both governments) and related binational committees for various aspects of border management in 2010 as part of the 21st Century Border initiative. Similarly, through the Merida Initiative, Mexico and the United States have jointly sought to strengthen public security in the border region, and through the High Level Economic Dialogue aimed to cooperatively strengthen the competitiveness of the regional economy. Cross-border cooperative environmental and resource management, which has roots stretching back more than a century, grew considerably after the signing of the La Paz Agreement in 1983 and the creation of the North American Development Bank in 1994, but it too has reached new heights over the past decade as civil society has increased its cooperation with both governments to be stewards of transborder resources and ecosystems and as the NADBank expanded its operations.

During the past fifteen years, the United States and Mexico have transitioned from largely independent and unconnected approaches to managing the border to the development and implementation of a cooperative

framework. With contributions from government officials and other top experts in the field, this collection of essays explores the development of cooperative approaches to the management of the U.S.-Mexico border. The essays were released individually throughout 2015 and are now published as a volume.

What the essays collected in this volume show us is that an impressive evolution has taken place (and is still underway) in approaches to border management. This involves changes both in the conceptualization of the border and in the level of institutionalization of bilateral border affairs. Together these essays provide a coherent and consistent analysis of the changing U.S.-Mexico border and the development of shared approaches to its administration.

The ideational backdrop for this is set in the first chapter, by Bersin and Huston, which examines the shift in the border paradigm, from being “a line that divides” to a “matter that binds us together.” This shift has been brought about by the stresses and strains of the post-9/11 era, as well as by the urgent need to make flows of commerce and people more efficient. This new understanding of borders as multi-dimensional, involving “both lines and flows,” means that we have to make fundamental modifications in both the way we think about border issues and the way in which we generate solutions to border challenges. The authors point out five fundamental elements of this new paradigm, elements that should define a new relationship for border management:

- Multidimensional borders cannot be secured by a single nation;
- National and economic security is best achieved through international partnerships;
- Security and facilitation are mutually reinforcing objectives;
- Risk management is the key ingredient; and,
- The principles of co-responsibility and joint border management are central.

The second essay, by David Shirk, illustrates this transition in border management through a historical analysis of border affairs, in both security and economic areas. Shirk highlights the factor of intensifying interdependence and globalization as crucial to understanding the evolution of both the reality of life at the border and the opportunities for innovation in border management. The increasing integration of the U.S. and Mexican economies is central to this analysis, and provides a compelling logic for the arguments put forward in the Bersin and Huston essay.

The progressive institutionalization, as well as the “embedding” of border management in the broader bilateral relationship over the past few years provides the focus for Sergio Alcocer’s essay. Writing from an insider’s perspective, Alcocer provides an account that highlights the growing acceptance by policy makers in both countries of the border as an essential element in meaningful discussions over economic, educational, energy, and environmental affairs. This essay also highlights that the unique and deeply integrated nature of the border region requires an approach to binational policy making that recognizes that nature and speaks to the specific challenges and opportunities presented there. What is of fundamental importance here is that the repeated pleas over the years from civil society and academics for inclusion of the border at the highest level of bilateral relations appear to have been heard. The essay, therefore, provides hope that this institutional embedding of the border in the agenda will ensure that it continues to receive attention and be dealt with in the spirit of shared responsibility.

Gerónimo Gutiérrez’s chapter on the North American Development Bank (NADB) shows us how that institution has developed and has acquired new responsibilities and expanded its lending during the twenty or so years of its existence. As the world’s first bank dedicated to environmental issues, the NADB has expanded both its credit facilities and its portfolio to include renewable energy projects. Although the bank remains

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a relatively small player in terms of its financing capacity, and although it faces a complicated future due to congressional debates over its funding, Gutierrez emphasizes the need to focus on the progress that has been made and the important role that the institution will play in a range of new areas, from fighting climate change to strengthening regional competitiveness.

The next essay in this collection moves us from a bilateral institution to bilateral approaches to water management in the border region. Carlos Parra and Carlos Heredia trace the progress that has been made in addressing an issue area that has historically been the source of considerable conflict, both within border communities and between the two countries. The progress described in this chapter is two-fold. First, the two governments have constructed a transboundary framework for resolving disputes, and for allocating water between them. The story of the negotiations over the Rio Bravo/Grande, Rio Colorado, and Tijuana River watersheds emphasizes the importance of the International Boundary and Water Commission (IBWC) as well as the authorities' recognition of the need to remove a thorny issue in the bilateral relationship. Secondly, the authors stress the critical role played by "advocacy coalitions" of civil society groups, and their contributions in terms of local knowledge and expertise, and in generating local support.

This volume concludes with an essay by Christopher Wilson, which examines the impressive progress made in recent years towards border facilitation. The fact that the two federal governments have been able to work effectively towards the twin goals of efficiency and security highlights how far the border paradigm has advanced over the past 15 years since the events of 9/11. Implicit (and sometimes explicit) in this are the notions of a multidimensional border, international partnerships, shared responsibility, and risk management. In these ways, this essay serves to illustrate many of the key arguments of the Bersin and Huston essay. Trusted traveler and shipper programs, pre-inspection and joint inspection, interagency and binational cooperation, and intelligent targeting and risk management approaches are all put forward as evidence of, and arguments for, progress towards a truly 21st century border.

At the end of these essays, it is hoped that the reader will be left with an optimistic vision of border affairs, one that is nonetheless based in the (sometimes harsh) realities of border life, national politics and bilateral affairs. What's more, the five essays provide a conceptually consistent analysis of border relations, demonstrating an impressive consensus among the authors over the nature of the border today and guiding principles for its effective management. This consensus is mirrored among border policy decision-makers in both countries, a factor that greatly facilitates negotiations and joint management.

The Mexico Institute would like to thank each of the contributors for sharing their expertise and experience. They include Assistant Secretary Alan D. Bersin and Michael D. Huston of the U.S. Department of Homeland Security; Sergio M. Alcocer from the Universidad Nacional Autónoma de México; Managing Director Gerónimo Gutiérrez of the North American Development Bank, David A. Shirk from the University of San Diego (and a Wilson Center Global Fellow); Carlos Heredia of El Centro de Investigación y Docencia Económicas; and Carlos de la Parra of El Colegio de la Frontera Norte. Please note that perspectives put forth in these essays are those of the individual authors and not necessarily those of the institutions they represent.

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HOMELAND SECURITY AS A THEORY OF ACTION

THE IMPACT ON U.S.-MEXICO BORDER MANAGEMENT

Alan D. Bersin and Michael D. Huston*

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Introduction

The terrorist attack on 9/11 in effect closed America's borders. The drawbridges were raised, airports and seaports shut down and cross-border traffic at land ports of entry was reduced to a trickle. Defense and security and enforcement became the exclusive orders of the day.

Nowhere else was the impact more devastating than on the U.S.-Mexico Border where every person was completely screened and every vehicle thoroughly searched. Wait times could be measured by days not hours and lines stretched on miles beyond sight.¹

The U.S. reaction generally and particularly on the Southwest Border was understandable, though it remained more instinctive than considered. We had experienced a new vulnerability in our "homeland," a concept that seemed foreign, strange and distant before 9/11. Reflexively we retreated behind our borders and hunkered down behind the boundaries of Fortress America.

It soon became evident that the costs of "hunker down security," i.e. the impact of closing the borders, would deliver an unacceptable, catastrophically self-defeating blow to our economy. The events of 9/11, accordingly, initiated a wrenching turn in the way Americans viewed globalization and the manner in which their government understood and practiced internal security and external defense. Policymakers were compelled to formulate new theories of action and respond to a dramatically altered threat environment. Specifically, policy makers grappled with the challenge of how to secure the homeland in a world that was increasingly borderless. The evolving policy and operational results may be the lasting legacy of September 11, 2001.²

This paper examines these developments from the perspective of the relationship between Mexico and the United States and their shared management of a common border. Although the emergence of a U.S. homeland security doctrine has significantly affected all trade and travel to and from the United States, it has had special importance for and a distinctive impact on U.S. - Mexico bilateral relations.

“It soon became evident that the costs of ‘hunker down security,’ i.e. the impact of closing the borders, would deliver an unacceptable, catastrophically self-defeating blow to our economy.”

The Border as a Line That Divided Us

The 1,969 mile border between Mexico and the United States is the most frequently crossed border in the world. But the border line (“*La Línea*”) was created by war and fixed in 1848 by the Treaty of Guadalupe

1 See Ken Ellingwood, *Delays Ease at U.S.-Mexican Border: Waits of hours to enter the U.S. after Tuesday's terrorist attacks are reduced, but extra precautions remain*. Los Angeles Times, September 14, 2001; Ken Ellingwood, *Fallout: Post Sept. 11 crackdown chokes northbound traffic, scaring away Mexican customers and leaving many merchants on the U.S. side going bust*, Los Angeles Times, November 26, 2001.

2 The 2014 Quadrennial Homeland Security Review (at p. 14) frames the objective of ensuring Homeland Security as “[a] homeland that is safe, secure, and resilient against terrorism and other hazards, where American interests, aspirations, and way of life can thrive.” See page 14.

Hidalgo which ceded half of Mexico's territory to the United States.³ The line from its genesis therefore was an official embodiment of contention and friction and for Mexicans a matter of injury and insult. For the next 150 years, with growing economic, military, and political imbalance between the United States and Mexico, the border became the single point of parity. At *La Línea*, sovereignty was asserted most aggressively and asymmetry in the bilateral power relationship was most effectively neutralized by Mexico. Mexico and the United States remained equal at the border as nowhere else in their bilateral relationship as a matter of law and practical operation.

If the Nineteenth Century was a time of armed conflict, the Twentieth Century border was (mostly) demilitarized and bilateral relations were tolerable. However, the United States and Mexico officially were not genuinely collaborative or friendly beyond surface appearances. For decades in the Mexican psyche, the border fed into sovereignty concerns and suspicion of U.S. intentions, while at the same time representing economic and social opportunity. Similarly, to the U.S. way of thinking, the border was the line between us and our poor and corrupt southern neighbor, through which crossed a steady flow of reliable labor. As border control became a political issue in the United States, followed by an enormous investment of enforcement resources, the border took on additional significance. Increased U.S. border security efforts to limit migration and crime in the border region clashed with the traditional Mexican view of a "right to migrate."⁴ Notwithstanding the several millions of people (*los fronterizos*) who lived across the line from one another in a "third country" (*el tercer país*) of their own, the border was a location for U.S.-Mexico collision on account of forces and phenomena generated elsewhere. Communities that were once virtually seamless now had a fence that divided them along the international line.

“If the Nineteenth Century was a time of armed conflict, the Twentieth Century border was (mostly) demilitarized and bilateral relations were tolerable. However, the United States and Mexico officially were not genuinely collaborative or friendly beyond surface appearances.”

In short, the United States and Mexico were foreign countries which happened to be neighbors. The border was a no man's land and often a haven for fugitives and outlaws. The borderland itself was a stepchild of national policy in both the Distrito Federal and Washington, D.C. The bilateral relationship often was characterized by finger pointing regarding migration, narcotics, guns and extradition.⁵ For both Mexico and the United States, the border was the line in the sand (or on the river) that separated "us" from "them" and both countries,

3 Officially titled *The Treaty of Peace, Friendship, Limits and Settlement between the United States of America and the Mexican Republic*, the Treaty of Guadalupe-Hidalgo resulted in the United States extending Texas' boundaries to the Rio Grande/Rio Bravo, taking ownership of California, and claiming territory that includes all or part of what is today Arizona, Colorado, Nevada, New Mexico, Utah, and Wyoming.

4 This perspective is generally held throughout Latin America. Proponents suggest that Article 13 of the Universal Declaration of Human Rights (UDHR) provides "the right to leave any country, including his own, and to return to his country." Mexico's immigration law enshrines this basic principle but also requires exit from Mexico occur through recognized ports of entry. It is worth noting, however, that the UDHR is silent as to a parallel right to enter into other countries.

5 For further discussion see Alan D. Bersin, "El Tercer Pais: Reinventing the U.S.-Mexico Border." 48 *Stanford Law Review* 1413, 1995-1996.

operationally and politically, treated it that way. From the Zimmerman Telegram (1917)⁶ through Kiki Camarena (1985)⁷ to Proposition 187 (1994),⁸ the official reality, in sum, was some cooperation but much passive/aggressiveness on both sides with the back story one of significant hostility.

Homeland Security and the Changing Nature and Perception of Borders

A change in the U.S.-Mexico relationship was built upon a fundamentally new vision of homeland security and borders and a new approach to the way in which both countries defined and managed the line of contention that divided them.

Borders traditionally have been viewed as lines in the sand (and on a map) demarcating the edges of sovereign states (or empires) under the so-called Westphalian system.⁹ However, the process of globalization, and the impact of massive transnational flows of labor, capital, people, goods, ideas, images, data and electrons, called this view into question. Seeing borders as the primary line of defense to “keep dangerous people and things out” and away from national territory appeared antiquated and anachronistic. With the events of 9/11, and then in the aftermath of the so-called “Underwear Bomber” on Christmas Day 2009 and Al Qaeda in the Arabian Peninsula’s 2010 Printer Cartridge Plot from Yemen, it became clear that threats to homeland security invariably involve an extraterritorial factor or dimension that larger border walls simply cannot address.¹⁰ The new vision of homeland security requires enlarging the concept of borders to encompass the intense and often instantaneous “borderless” flows that cross border lines entering and exiting the nation continuously on a 24/7/365 basis.

Rather than a one dimensional view of borders solely as lines between countries, the new border paradigm links jurisdictional lines to the flows of people, goods, ideas, and so forth toward and across them,¹¹ rendering the

6 Boghardt, Thomas. *The Zimmerman Telegram: Intelligence, Diplomacy, and America’s Entry into World War I* (2012); see also John F. Chalkley. “Zach Lamar Cobb: El Paso Collector of Customs and Intelligence During the Mexican Revolution, 1913-1918.” *Southwestern Studies*, No. 103, 1998.

7 Drug Enforcement Administration agent Enrique S. “Kiki” Camarena, while undercover in Mexico, was abducted, tortured and murdered. Although suspected responsible individuals were quickly identified and apprehended by Mexican enforcement agencies, the relationship between the United States and Mexico authorities was such that extradition of those suspects never occurred. The political climate that stymied cooperation on this high-profile incident spoke to a relationship between the two countries that was more problematic than either preferred to admit. The release from prison, through court order, in 2013, of Rafael Caro Quintero, a key suspect in the Camarena murder, reflected both the matter’s continuing sensitivity as well as the dramatic changes that had taken place in the bilateral relationship. See also, *DEA Observes 25th Anniversary of Death of Special Agent Enrique “Kiki” Camarena*, U.S. Drug Enforcement Administration, <http://www.dea.gov/divisions/hq/2010/pr030410p.html>

8 Proposition 187 was an anti-Mexican immigrant initiative passed by California voters in 1994 but enjoined from taking effect through a federal court ruling that was upheld upon appeal.

9 Henry Kissinger, *World Order: Reflections on the Character of Nations and the Course of History* (2014); see also Leo Gross, *The Peace of Westphalia*, *The American Journal of International Law* 42 (1948).

10 Mark Mazzetti & Scott Shane, *Evidence Mounts for Taliban Role in Bomb Plot*, *New York Times* (May 5, 2010), <http://www.nytimes.com/2010/05/06/nyregion/06bomb.html>; Erika Solomon & Phil Steward, *Al Qaeda Yemen Wing Claims Parcel Plot, UPS Crash*, *Reuters* (November 5, 2010), <http://ca.reuters.com/article/topNews/idCATRE6A44PU20101105>

11 This concept is examined in detail in: Alan D. Bersin, “Lines and Flows: The Beginning and End of Borders,” *Brooklyn Journal of International Law*, vol. 37, no. 2 (2012)

border multi-dimensional. The border begins where airplanes take off and where cargo is laden into a ship's hold, not only at the boundaries of political borders themselves. The task of securing the flows of goods and people toward the homeland therefore must begin abroad. We enlist time and space in support of the mission by identifying high risks and mitigating them as far away geographically from the homeland and as early before arrival at the border as possible.

This new approach has created space for the United States and Mexico to “redefine the border problem” such that previously insurmountable differences and long-held positions could be swept aside in the face of a new set of realities. The key catalyst was the new reality of growing economic interdependence.

North American Free Trade Agreement / Tratado de Libre Comercio de América del Norte—A Game Changer

The North American Free Trade Agreement (NAFTA) / Tratado de Libre Comercio de América del Norte (TLCAN) has been an extraordinary catalyst for intensive globalization in North America. U.S.-Mexico trade for goods and services has expanded six fold, increasing from \$80 billion annually in 1993 to more than \$500 billion today. This amounts to \$1.3 billion in cross-border trade daily or more than \$1 million dollars a minute. Mexico has become the third largest trading partner of the United States and its second largest export market. Mexico purchases more from the United States than Brazil, Russia, India and China combined and twice as much as China alone. Mexican trade with the United States, imports and exports (\$294.2 billion and \$240.3 billion respectively in 2014),¹² is greater than our trade with Japan, Germany and the United Kingdom combined. The cross-border economy in the ten contiguous Mexican and U.S. border states amounts to the fourth largest economy in the world.

The movement of people, legally and illegally, between the two countries is equally striking. One in ten individuals living in the United States today is of Mexican origin and approximately ten percent of the people born in Mexico are residing in the United States. Twenty one million U.S. tourists visit Mexico annually and Mexico ranks second in number of visits (14.3 million) to the United States. Bilateral foreign direct investment between the two countries significantly exceeds \$100 billion. More than 6 million jobs in the United States are generated by trade and tourism with Mexico.¹³

The concomitant impact of regionalization through NAFTA/TLCAN on Mexico has been transformational. Mexico's gross domestic product has doubled from \$510 billion to \$1.178 trillion in 2014. It is the twelfth largest economy in the world today and is expected to become the fifth largest by 2050.¹⁴ By any measure, just under 50 percent of Mexicans are middle class. Life expectancy has increased from 72 to 77 years. The fertility rate has dropped from 3.1 to 2.2 births per woman. Per capita income has doubled from \$8,469 to \$16,734.

12 From the U.S. Census Bureau, Foreign Trade, see <https://www.census.gov/foreign-trade/balance/c2010.html>

13 These statistical measures are drawn from a presentation prepared by Simon Rosenberg at the New Policy Institute in 2014.

14 Goldman Sachs, “The N-11: More Than an Acronym,” Global Economics Paper No. 153, March, 2007, available at <http://www.chicagobooth.edu/-/media/E60BDCEB6C5245E59B7ADA7C6B1B6F2B.pdf>.

The poverty rate has dropped from 69 percent to 52 percent.¹⁵ Moreover, and remarkably after 70 years of single party rule, Mexico has peacefully transitioned its politics into a genuine multiparty democracy with honest elections and a robust assertive civic culture.

The cumulative effect of these flows (and changes) is that the United States and Mexico host an increasingly integrated economy and a shared production platform. Half of all trade between the two is intra-industry, involving multiple border crossings prior to final assembly and sale. This economic and fiscal reality in turn has highlighted fragmented border management as an artifact of history that regionalization/globalization requires transcending. Networks are acknowledged as the organizational route to effective and efficient operation. Collaboration is key. The relevant partnerships reside within the government, with the private (stakeholder) sector and with cross-border authorities in Mexico and the United States. A premium is placed on operational coordination to reduce transaction costs in order to enhance overall regional economic competitiveness; on data harmonization to facilitate information sharing and common risk assessments; on consultation to build a more coherent and efficient border crossing infrastructure; and on coordinated enforcement at and between the ports of entry. This movement from merely bilateral border relations toward genuinely transnational relationships has gained traction in Mexico and the United States. The revised logic of interaction has converted the vicious cycles of the past into virtuous circles of mutual benefit for the future.¹⁶

The Border as a Matter that Binds Us Together

Homeland security as an enterprise and theory of action has furnished a solid framework for designing a strong and sustainable economic competitiveness and security relationship between Mexico and the United States. Our bilateral/binational efforts and policies increasingly are guided by what legal scholar Bayless Manning characterized (in the 1970's) as an “intermestic” lens that is simultaneously international and domestic in focus.¹⁷ This perspective recognizes that the distinctions between domestic and international issues become more blurred as a borderless globalization proceeds. Nowhere is this better reflected than in the region along the Mexico-U.S. land border. Remarkable progress has been made and institutionalized such that a return to the unsatisfactory condition that once characterized both bilateral relations and the border is neither feasible nor desirable from the standpoint of either government. Each has come to recognize that the other is critical to domestic citizen security as well as economic prosperity in its own country. The days of rampant institutional mistrust are squarely in the past and the future between Mexico and the United States, as a result, is not what it used to be.¹⁸

15 William Booth and Nick Miroff, “Despite Economic Progress, Mexico Remains Far From Rich,” *Miami-Herald International Edition*, December 21, 2012; Luis De La Calle and Luis Rubio, *Mexico: A Middle Class Society—Poor No More, Developed Not Yet* (Washington, DC: Woodrow Wilson Center Mexico Institute, 2012); Shannon K. O’Neil, “Mexico Makes It: A Transformed Society, Economy, and Government,” *Foreign Affairs*, March/April 2013; Shannon K. O’Neil, *Two Nations Indivisible: Mexico, the United States and the Road Ahead* (Oxford, UK: Oxford University Press, 2013)

16 The impact of NAFTA on the U.S. and Mexican economies and the importance of our increasingly interconnected economic network is discussed in Alan D. Bersin, “Cross-Border Economies: A Blueprint for North American Competitiveness,” *William J. Perry Center for Hemispheric Defense Studies: Regional Insights*, 2013 Edition, No. 3 (October)

17 Bayless Manning, *The Congress, The Executive and Intermestic Affairs: Three Proposals*, 55 *Foreign Affairs* 306, 309 (1977).

18 A striking illustration of the changing relationship between the United States and Mexico are the recent amendments to Mexico’s Firearms and Explosives Law allowing foreign customs and immigration officials to carry officially-issued firearms in Mexico as part of cargo and immigration pre-inspection programs, a step that was unthinkable 10 years ago.

“Each has come to recognize that the other is critical to domestic citizen security as well as economic prosperity in its own country.”

Viewing borders as both “lines and flows” brings with it dramatic changes in how a government secures the homeland. With respect to the U.S.-Mexico relationship, there are at least five interconnected and overlapping outgrowths of this new paradigm that have been critical in helping usher in a new and unprecedented era of collaboration and coordination:

1. *Multi-dimensional borders cannot be secured by a single nation*— because flows cross international boundaries endlessly and often instantaneously, securing those flows requires cross-government coordination. From this perspective, points of entry (airports, seaports and land ports) are the last not the first line of defense for national sovereignties. The homeland security mission is intrinsically transnational. In this sense, securing “the homeland” becomes securing “our homelands” with both the U.S. and Mexican governments having a very significant stake in the degree to which cross-border flows are secure.
2. *National and economic security is best achieved through international partnerships*—With the global flow of goods and people serving as a primary variable and key driver for a country’s national and economic security and prosperity, each country has an imperative to secure and speed lawful global flow and guard against illicit ones. Enhanced security and facilitation of global flows are best accomplished from a global perspective through close international partnerships.

“In this sense, securing ‘the homeland’ becomes securing ‘our homelands’ with both the U.S. and Mexican governments having a very significant stake in the degree to which cross-border flows are secure.”

3. *Security and facilitation are mutually reinforcing objectives*—Conventional wisdom in the past held that an increase in either security or facilitation came at the cost of the other. The new paradigm recognizes that the more secure a given flow is, the faster it should be permitted to move across international boundaries. Coupling and integrating security and facilitation into a single process provides both a rationale and a desired outcome for collaborative efforts to manage cross-border flows.¹⁹
4. *Risk Management is the key ingredient*— Homeland security is functionally accomplished through assessing, analyzing, and comparing risk, then prioritizing actions to “maximize the use of ... limited resources.”²⁰ This risk-based approach de-emphasizes “thick” borders, framing instead an approach that factors in all available

¹⁹ The old dichotomy between security and trade facilitation is a false one. They are not mutually exclusive variables but rather involve the same process. By identifying high risk and low risk goods and travelers, we effectively can mitigate the threat posed by the former while expediting the movement of the latter without compromising security. Expediting lawful trade and travel is a security regime because it permits us to focus on those persons and goods in the border flow about which there is derogatory information or about which there is inadequate information to make a judgment regarding the degree of risk they embody. Risk management and traffic segmentation programs allow governments to best leverage limited enforcement resources. Meta data (“Big Data”) and analytic targeting are elements essential to this process of risk evaluation and traffic management, as data is converted into useable and actionable information. Information sharing, accordingly, has become critical to the cross-border enterprise.

²⁰ See page 15 of the 2014 Quadrennial Homeland Security Review, accessible at <http://www.dhs.gov/sites/default/files/publications/2014-qhsr-final-508.pdf>.

information (e.g. origin, route, and destination) and then deploys resources against those risks that pose the greatest threat or about which we know the least. This approach permits us to maximize the potential effect of enforcement resources at any particular level of deployment.

5. *The principles of co-responsibility and joint border management are central*— In the same way that traditional borders neutralized asymmetry, the recognition and acknowledgement of global flows, similarly levels the international playing field. These global flows become a “commons” of sorts because the international community is equally invested in the secure and speedy movement of lawful global flows and the detection and interdiction of dangerous and/or criminally-generated cargo. Effective management requires cooperation and is built on the premise of joint responsibility exercised initially bilaterally and ultimately through multilateral accords.

This new approach combined with the geographic proximity of the two countries and emergence of a North American trade bloc, as a result of NAFTA/TLC, materially altered the political calculus of Mexico and the United States. To be sure, the creation of DHS and an unprecedented focus on the U.S.-Mexico border generated internal, practical challenges in both countries. Indeed the “homeland security perspective” provided not only a new and viable framework for collaboration, but also an imperative for it that has been undeniable. For the first time in our bilateral history, borders are viewed primarily as opportunities for coordination and cooperation rather than defensive perimeters and occasions for conflict. They have become locations for problem solving rather than finger pointing. The focus has shifted decisively from a “border line” stretching east to west that separates us, to the enormous flows north to south and south to north which link us and are shaping our nations as they unite our countries.

A New Relationship in Pursuit of a Twenty-First Century Border

The concerted reshaping of the U.S.-Mexico bilateral relationship, begun through the Merida Initiative in 2006, was deepened and institutionalized by *The Twenty-First Century Border Management Declaration* in 2010 and the creation of the U.S.-Mexico High Level Economic Dialogue in 2013. These developments substantially recast the strategic partnership between the U.S. and Mexico as one based on the assumption of shared responsibility and the joint management of common issues. The homeland security doctrines of risk management and traffic segmentation have emerged to govern our shared approach to securing and expediting lawful flows of persons and goods across the common border, to mitigate threats that could disrupt the system and to confront illicit markets that use and exploit the system. The focus of the new border risk management regime is to deconstruct beforehand, through advance data sharing, the flows that cross sovereign borders rather than wait to interact with people and goods for the first time at official ports of entry.

This new approach is embodied within the Twenty-First Century Border framework and in a series of bilateral arrangements entered into by the Department of Homeland Security and the *Secretaría de Gobernación* (Secretariat of Government, or SEGOB) and *Secretaría de Hacienda y Crédito Público* (Secretariat of Finance and Public Credit, or SHCP). These arrangements provide for concrete plans, programs and initiatives that implement the overall vision and the significant policy changes it requires. Sustained by regular engagement at senior levels of government and a framework for reporting and accountability, the reinvented bilateral

relationship includes: coordinated patrolling of the U.S.-Mexico border; the development of mutually recognized “trusted trader and traveler” programs; information sharing and the conduct of joint targeting against airline and (much) cargo manifest data; the conduct of joint investigations to interdict and disrupt and dismantle transnational criminal organizations; the integration and harmonization of manifest data requirements; cooperation regarding repatriation and migration management; consultation regarding law enforcement use of force at the border; and the development of shared priorities and common public private partnership approaches to border infrastructure development. The support of the *Secretaría de Relaciones Exteriores* (Secretariat of External Relations or SRE) and the U.S. Department of State has mediated the transformation.

DHS’s success in engaging Mexican counterparts is attributable to the missions and goals of DHS dovetailing with Mexican security and economic priorities. The missions and goals draw on the relative strengths of Mexican counterparts and reframe issues (like border security) in such a way that no longer triggers sovereignty concerns or other sensitivities that previously stymied the relationship. And even in areas where some tension remains—for instance the politics surrounding unlawful migration—successes in other areas have created good will that can then be leveraged to overcome thorny issues when they arise. As the case of Mexico demonstrates, “homeland security” as an enterprise and theory of action has proven to be a solid foundation for building mutually beneficial and sustainable economic competitiveness and security relationships.

Our Combined Future is North America

This paper has analyzed the ways in which a fundamentally different view of the border, fostered by the development of a homeland security theory of action, has provided the foundation upon which the United States and Mexico could redefine their previously acrimonious and unproductive bilateral relationship. Moreover, it suggests that the homeland security perspective can be a catalyst in the further development of the North American economic and security perimeter. Indeed, *The Twenty-First Century Border Declaration*, is mirrored in U.S.-Canada relations by the *Beyond the Border Declaration* of President Obama and Prime Minister Harper in 2011, followed by an Action Plan a year later, that embodies many programs similar to those initiated between the United States and Mexico.

“Although the American Century may indeed be drawing to a close, it appears to be doing so in the context of a North American Century that is just beginning.”

North America has emerged as an economic and security powerhouse in its own right, consisting of a half billion people and 25 percent of global GDP. Trilateral commerce has increased 265 percent since the start of NAFTA, reaching a record level of \$1.1 trillion dollars in 2013. The clear dynamic is for current parallel bilateral approaches (U.S.-Canada, Mexico-U.S., and Canada-Mexico) to be superseded in part, as appropriate, over time²¹ by trinational conceptions and tripartite associations. Advancement to this next level of progress requires further integration of production and commercial platforms (as contrasted with the shared sovereignty approach of the European Union); and recent North American Leaders Summit agendas appear to be moving in this direction with all deliberate speed. This integration holds out in addition the promise of furnishing a viable framework for Mexico, Canada and the United States to address their continental and perimeter security as well as the problems of security and economic development that exist in Central America’s Northern Triangle countries.²² The Homeland Security principles that have revolutionized security and trade relationships in North America will both mediate and accelerate this expansion of integration and better position the North American community to compete successfully in the world market. Although the American Century may indeed be drawing to a close, it appears to be doing so in the context of a North American Century that is just beginning.

21 Shannon K. O’Neil et al, *North America: Time for a New Focus*, Council on Foreign Relations Task Force Report (2014)

22 Avoiding the consequences of not doing so offers a powerful incentive to begin this work of a generation or more (as it has unfolded in Mexico) although the long-term benefits of integrating Central America (and the island countries of the Caribbean) economically into North America are self-evident.

AN OVERVIEW OF U.S.- MEXICO BORDER RELATIONS

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Introduction

Since the mid-19th century, the U.S.-Mexico border has been many things to many people: a frontier, a scar, a line, a liability, a threat, and an opportunity. Depending on one's vantage and frame of reference, the border is any or all of these at once. Perhaps above all, the border is emblematic of the U.S.-Mexico relationship, which has changed dramatically over the span of more than a century and a half. This essay provides an analysis of the evolution of U.S.-Mexico border relations, with a broad overview that divides the history of the relationship into five distinct periods corresponding to different modes of interaction seen in borderlands throughout the world.

Understanding U.S.-Mexico Border Security Relations

A Framework

The U.S.-Mexico border is among the most iconic and widely studied interstate boundaries in the world. Like the Berlin Wall, the Straits of Gibraltar, the Korean Demilitarized Zone, the India-Pakistan border, and the Triple Frontier of South America, the U.S.-Mexico border is a powerful symbol of history and politics. As in these other border systems, or "border regimes," the U.S.-Mexico border region has been shaped by the historical evolution of the two adjoining countries and their relationships to one another.

To understand the nature of the U.S.-Mexico border relationship today, it is useful to draw on a comparative framework that helps to understand the fundamental nature of borders, such as the one developed two decades ago by University of Arizona professor Oscar Martínez in his 1994 book *Border People*. Martínez's typology characterizes the different types of relationships found in borderlands as follows:¹

- 1) *Alienated borderlands*: Borders that suffer from significant political and territorial conflicts between two or more neighboring states, which may still be in a process of nation-building and military expansionism.
- 2) *Coexistent borderlands*: Borders between neighboring states that generally recognize and respect each other's sovereignty, and where cordial international relationships develop.
- 3) *Interdependent borderlands*: Borders between neighboring nation-states that recognize the mutual benefits to be gained through bi-national cooperation, and achieve significant openness in cross-border relations.²
- 4) *Integrated borderlands*: Borders between neighboring nation-states that have surrendered a significant degree of sovereignty in favor of gains from trade, economies of scale, and greater social, cultural, legal, and political assimilation.

1 See Table 1. *Typology of Border Relationships from State Formation to Greater Regional Integration* on Page 23.

2 For example, when there is relative parity between neighboring states, a kind of "security community" may develop. This opens the possibility of strategic cooperation in mutual defense, and reduces the need to mobilize the state's coercive forces at its borders. Emanuel Adler and Michael N. Barnett, *Security Communities*. (Cambridge, U.K. ; New York: Cambridge University Press, 1998); Alex J. Bellamy, *Security Communities and Their Neighbours Regional Fortresses or Global Integrators?* (Houndmills, Basingstoke, Hampshire; New York: Palgrave Macmillan, 2004).

“The U.S.-Mexico border is a powerful symbol of history and politics.”

While not necessarily a linear progression, Martínez contends that there has tended to be progress over time across different countries border relationships as they go through a prolonged period of adjustment and accommodation. For Martínez, and others who study integration, economic processes and trade relations are a key driver of the process of integration, as the nationalist impulses that give rise to borders in the first place are overcome by the power of markets.³

It might be noted that politics and culture are important, as well. For example, the sudden democratization of Eastern European countries had enormous consequences for their border relationships with the West. Likewise, a country’s changing demographic makeup, perhaps through increased immigration, may lead to newfound societal tolerance and possibly improved attitudes toward a neighboring country, albeit over the course time.

What is also key to understand is that borders are a reflection of the nation-state itself, and not solely reflective of the relationships between countries. That is, a nation-state’s evolution and internal transformations greatly affect its borders and border relationships. On the one hand, the progression of states toward greater coexistence, interdependence, and even integration reflects the maturation of those states, both politically and economically. On the other hand, such progress is not inevitable, as border relationships can deteriorate, sometimes quickly, if there are sudden changes within either state it can affect the inter-state relationship.

As I discuss below, the history of the U.S.-Mexico border relationship has shown tremendous progress in this regard, as both countries have experienced significant and positive changes that have facilitated greater cross-border interdependence and even a certain degree of integration. However, there have been—and may well be in the future—setbacks that can negatively affect U.S.-Mexico border relations, and the state of the border. Nonetheless, in the post-9/11 era, both the United States and Mexico have opportunities for continued development as nation-states in ways that are likely to improve the overall U.S.-Mexico relationship, facilitating continued progress toward greater cross-border cooperation and integration.

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3 Developed mostly in the European context—and with a backdrop of Soviet integration and the development of NATO—Jacob Viner (1950), Jan Tinbergen (1954), Ernst Haas (1958), Bela Balassa (1961), Joseph Nye (1971) also propose theories of broader economic, political, and security integration. Generally speaking, these follow a progression along the lines of Martínez’s framework for U.S.-Mexico border relations.

Alienation and Conflict

The U.S.-Mexico Border in the Mid-19th Century

Like many nation-state boundaries around the world, the U.S.-Mexico border was born out of competition and conflict. After a prolonged struggle from 1810 to 1821, Mexico finally succeeded in gaining its independence from Spain. Ironically, Spain and the United States had just signed the Adams-Onís Treaty of 1819, ceding Florida to the United States after its annexation in 1810 and finalizing the border between the United States and the insurgent colony of New Spain. After independence, Mexico ratified the Adams-Onís Treaty under the Treaty of Limits in 1828. Still, there were border tensions that lingered for the next two decades, leading eventually to the annexation of Texas by the United States in 1836 and the loss of additional Mexican territory through the U.S.-Mexico War of 1846-48.

For many years following that conflict, the border was a kind of scar that festered from neglect and often became a source of irritation for both countries. With the U.S. expansion westward, many Mexicans now found themselves living in U.S.-held territories and subject to the confiscation of their private property and severe discriminatory treatment, including hundreds of lynchings of Mexicans and Mexican Americans that stretched from the mid-1800s into the early 20th century, mainly along the border.⁴ The loss of the country's northern territories to the United States has often provoked a sense of indignity and resentment among Mexicans.

“...in contemporary U.S.-Mexico relations it is essential to bear in mind Mexican sensitivities and sensibilities about U.S. impositions on Mexico and Mexican Americans' sentiments about the harms and indignities they have suffered historically.”

Thus, in contemporary U.S.-Mexico relations it is essential to bear in mind Mexican sensitivities and sensibilities about U.S. impositions on Mexico, as well as Mexican Americans' sentiments about the harms and indignities they have suffered historically. That said, even in the 19th century there were important periods of rapprochement and direct collaboration between the two countries. Notably, the United States provided support to the Liberal forces led by Mexican President Benito Juárez against Conservatives supported by the French in Mexico's mid-century civil war, or War of Reform (1857–1861).⁵ Meanwhile, as President Lincoln dealt with the U.S. Civil War (1861-1865), Mexico's efforts to repel the French prevented Emperor Napoleon III from offering stronger support to U.S. confederate rebels.

4 William D. Carrigan and Clive Webb, “Forgotten Dead: Mob Violence Against Mexicans in the United States, 1848-1928,” New York: Oxford University Press, 2013.

5 For example, in the Battle of Antón Lizardo in 1860, the United States deployed the USS Saratoga and two steamers to thwart the forces of Conservative naval commander Tomas Marín from taking the port of Veracruz. Later, after the conclusion of the U.S. Civil War and Lincoln's assassination, Andrew Johnson continued to provide Mexico with vital support that helped to defeat the Conservatives and restore control under Juárez's Liberal government.

Despite its strategic importance for both countries, during this period, the U.S.-Mexico border was of little economic or political importance in either country. Sparsely populated, hot, and arid, the border region was a rugged landscape with relatively few human settlements. Economic activity in the border region was centered on ranching, small-scale agriculture, and mining, where possible. Given the limited trade and commerce between the two countries—and the virtual absence of transportation infrastructure—most of the border region was not particularly vital to either nation’s economy. In this sense, the U.S.-Mexico border would change dramatically in the next phase of the relationship.

Toward Coexistence

From the late 19th century and through the mid-20th century, U.S.-Mexico relations entered into a period of more stable coexistence and cooperation, albeit amid times of enormous turbulence in both countries. During this time, the two countries hosted the first international summit between a U.S. and Mexican head of state, as President William Taft (1909-1913) met with President Porfirio Díaz Mori (1876-1910) on the border in El Paso-Ciudad Juárez in 1909. For nearly three decades, Díaz had welcomed increased trade and investment from the United States, as well as Europe, and pushed forward an ambitious agenda to open and modernize Mexico. Under Díaz’s government, U.S. companies became heavily invested in the country, particularly in mining and manufacturing, laying the foundations of future economic cooperation.

However, at the same time, there was considerable discontent and unrest among labor and agrarian interests in both the United States and Mexico. As a result of their dissatisfaction, there were a series of violent outbreaks in both countries during this period, including labor strikes, riots, and serious political violence: the assassination of U.S. President McKinley in 1901 and a massive social revolution in Mexico from 1910-1917. The Mexican Revolution, in particular, had major consequences for people living along the border, since it became an important theater of conflict and activities for Mexican revolutionaries.

The early 1900s were also a time of great concern in the United States over the border and the problem of immigration, though not necessarily Mexican migration per se. In 1915, primarily as a result of newfound concerns about the large tide of immigrants—particularly Asians—accumulating in the Western and Southwestern portion of the country, the United States first began to attempt to regulate and control its border with Mexico through mounted patrols. The foundations of the modern U.S. border security apparatus, most notably, the U.S. Border Patrol founded in 1924, were developed during this period.

Arguably, because power changed hands multiple times over the course of the Mexican revolution, true coexistence between the two countries was not possible until after hostilities died down. The United States was sufficiently sensitive about its relationship with Mexico that, in late February 1917, the revelation of the Zimmerman Telegraph—a clandestine communique in which Germany promised to enable Mexico “to reconquer the lost territory in Texas, New Mexico, and Arizona”—helped trigger U.S. involvement in World War I a few weeks later.⁶ The United States delayed recognizing Mexico’s new government, and did so only after the country’s new revolutionary leaders pledged to respect the right of U.S. oil companies under the 1923 Bucareli Agreement. A little more than a decade later, a new government in Mexico discarded the agreement

6 U.S. National Archive, “Zimmermann Telegram - Decoded Message,” Record Group 59: General Records of the Department of State, 1756 – 1979, Identifier Number 302022, Washington, D.C.: National Archives and Records Administration, 1917.

and began to expropriate international oil companies, prompting significant tensions with the United States and Great Britain. The Depression Era of the 1930s also sparked a major backlash against Mexicans and Mexican Americans in the Southwestern corridor of the United States, as half a million people—including hundreds of thousands of U.S. citizens of Mexican American descent—were forcibly removed in the Mexican Repatriation.⁷

World War II helped to bring the countries closer together, dramatically transforming the U.S.-Mexico border region, and in some ways helped to improve the circumstances of Mexican Americans. During the war, despite domestic ambivalence and a desire to charter a neutral course, Mexico joined the United States and other Allied Powers in declaring war on the Axis Alliance. Cross-border trade in oil and metals supported the U.S. war effort, thousands of Mexicans joined the U.S. Armed Forces, and Mexico sent over 300 pilots and aircrew to the Pacific.⁸ Along the Western border, Mexico and the United States established posts to guard against a possible Japanese attack, with many of these historic lookout stations along the U.S. border installation remaining intact even today at Border Field State Park, California.

The impact of World War II on the border region was enormous. Building on Depression-era works projects—like the Hoover Dam—the United States poured enormous federal resources into the development of its military capabilities in the southwest to support combat efforts in the Pacific. Meanwhile, to help address manpower shortages during the war years, hundreds of thousands of Mexicans were recruited to come to the United States through the Bracero Program, a temporary guest worker program that lasted from 1945 into the early 1960s. The termination of the Bracero Program in 1964 was accompanied by a major shift in U.S. immigration policy. The U.S. Congress approved the Family Reunification Act, which radically changed the criteria for immigration to the United States by emphasizing family connections as a basis for residency and citizenship. Without special provisions to accommodate Mexican laborers, tens of thousands of Braceros began the exodus back to Mexico via the border.

The return of many Braceros, led Mexico to develop the Border Industrialization Program that fostered the so-called *maquiladora* or in-bond industry, which imported foreign components for assembly and export back to the United States. The special form of “in-bond” manufacturing enticed producers, allowing the duty-free import of unassembled parts, and taxing only the value added by relatively inexpensive Mexican labor. In recent years, more than 3,000 firms in the maquiladora sector make up a \$120 billion industry (accounting for nearly half of the nation’s exports) that provides jobs for over 1.6 million Mexican workers (over 137,500 in Tijuana, or roughly a third of the city’s workforce), and over six billion dollars in annual wages (with approximately \$1.2 billion in Baja California).

7 Kevin R. Johnson, “The Forgotten Repatriation of Persons of Mexican Ancestry and Lessons for the War on Terror,” Volume 26 Issue 1, *Pace Law Review*, Fall 2005.

8 The 201st Fighter Air Squadron was formed in the wake of a German attack on Mexican oil tankers bound for the United States. The 201st joined the U.S. 58th Fighter Group in the Pacific in 1945, helping to liberate the Philippines from the Japanese. Several members of the 201st died in their service to the war effort. See: Enrique Sandoval Castarrica, *Historia Oficial de la Fuerza Aerea Expedicionaria Mexicana*, Mexico City, 1945; “The Saga of the Aztec Eagles,” *Los Angeles Times Magazine*, July 25, 2004; and Anthony J. Kupferer, *No Glamour. No Glory! The Story of the 58th Fighter Group of World War II*. Taylor Publishing Company: Texas, 1989.

These developments set the stage for deeper economic and social integration along the border, and between the two countries. Tensions remained. Mexico found itself playing a supporting role during the Cold War, which made many Mexicans uncomfortable in the era of anti-U.S. sentiment that pervaded throughout Latin America following the Cuban Revolution. Also, discrimination and abuse toward Mexicans and Mexican Americans remained a serious problem in United States, as it does today. But over the course of the Cold War era, the degree of tension that had been seen between Mexico and the United States in the late 19th and early 20th century softened considerably, or at least manifested more sporadically, as the two countries moved toward greater interdependence.

Age of Interdependence

The Globalization of the U.S.-Mexico Border

Over the last quarter of the 20th century and into the present, the United States and Mexico developed a much more symbiotic relationship, which manifested most immediately and most prominently along the border. The growth and transformation of the U.S. Southwest and Northern Mexico were among the most significant internal developments that either country has experienced in the postwar era. Massive population growth, urbanization, and industrial development have turned sparse, arid deserts into dynamic cities and regions of industry and commerce. This era also brought new and ever greater enforcement on the movement of immigrant labor and the trafficking of illicit drugs, both with enormous consequences for the border region.

“Over the last quarter of the 20th century and into the present, the United States and Mexico developed a much more symbiotic relationship, which manifested most immediately and most prominently along the border.”

The economic integration of Mexico and the United States during the last quarter of the 20th century was remarkable, and was driven by both international economic forces (e.g., fluctuating interest rates, foreign capital investment, and expanded trade flows) and domestic policies in both countries (e.g., deficit spending, deregulation, and severe currency devaluations). Whether viewed from a Keynesian or a neoliberal perspective, the post-war era was marked by an emphasis on the need for international economic cooperation. The foundation provided by the Bretton Woods System created stability for growth and commerce from the late 1940s to the early 1970s. In this context, both Mexico and the United States enjoyed remarkable economic growth and increasing trade. However, the 1970s also brought a period of economic crisis, and a turning point that led to massive changes in the economic policies of both countries over the course of the 1980s and 1990s. As the U.S. economy sputtered in the face of the oil crisis and stagflation, the Mexican economy stumbled under the weight of a massive debt crisis and runaway inflation.

Both sets of crises led to an era of unprecedented market liberalization—of currency, of industry, and of trade—that dramatically transformed the two economies and brought them closer together. While the Reagan, Bush, and Clinton administrations moved to reduce the role of government in the U.S. economy, Mexican presidents Miguel de la Madrid, Carlos Salinas, and Ernesto Zedillo similarly withdrew the hand of the state from the economy, opening the two markets in ways that created unprecedented opportunities for cross-border commerce. By 1994, Mexico joined with the United States and Canada to form the North American Free Trade

Agreement, still the world's largest trading bloc after more than two decades. Meanwhile, with more than \$500 billion in cross-border commerce by 2014, Mexico is now the third largest trading partner of the United States and the second most important destination for U.S. exports.⁹

Amid this era of economic restructuring and growth, there were major difficulties for ordinary people. During the 1980s, free market reforms and deregulation shuttered businesses, laid off workers, drove farmers from their fields, and increased the weight of debt on U.S. and Mexican households. Moreover, in both countries, the deregulation of markets added insult to these difficulties thanks to a new era of corporate cronyism and corruption, whether in the Savings and Loan scandals of the United States or in the privatization of government-run industries in Mexico. Also, in the early 1990s, both countries suffered the effects of a serious recession and—especially, in Mexico's case—a severe currency devaluation that dramatically reduced the household budgets of ordinary people. These problems would have profound implications for both countries, especially along the border.

These economic changes unleashed a massive wave of migration from Mexico to the United States that created newfound tensions between the two countries and placed particular strains on the border. Mexican migrants are drawn to the United States by the lure of jobs, but limits on the number of U.S. visas for temporary employment lead hundreds of thousands of Mexicans to enter the country without proper documentation. Beginning in the 1990s, illegal immigration from Mexico gave rise to a series of concentrated border enforcement initiatives, from Operation “Hold the Line” (also called the Blockade) in Texas to Operation “Gatekeeper” in San Diego. These enforcement efforts, while successful in lowering unauthorized immigration through urban areas, have contributed to higher death tolls for migrants who are pushed to greater extremes – crossing the border in the deserts and mountains—in their effort to find jobs on the U.S. side of the border. In recent years, U.S. border authorities also have been severely criticized for the use of lethal force against Mexican nationals crossing the border, and even several incidents in which Border Patrol agents have fired into Mexico, killing individuals south of the line.

“...enforcement efforts, while successful in lowering unauthorized immigration through urban areas, have contributed to higher death tolls for migrants who are pushed to greater extremes – crossing the border in the deserts and mountains in their effort to find jobs on the U.S. side of the border.”

The net results of the increased U.S. border enforcement of the past few decades are questionable. The introduction of concentrated border enforcement in the United States has definitely created greater operational control of key corridors along the border, and has contributed to a change in undocumented migration patterns. However, concentrated border enforcement efforts have not necessarily provided sufficient deterrents to stop or reduce the flow of migration, which tends to rise or fall predominantly based on economic trends. Indeed, the rate of undocumented Mexican migration into the United States—as measured by proxy through the number of apprehensions along the Southwest Border—increased with the demand for jobs in the strong economy of the late 1990s and through most of the mid-2000s. In the late 2000s, however, migration ebbed significantly due

⁹ In 2015, only Canada and China had a larger total volume of trade with the United States, and only Canada surpassed Mexico in the consumption of U.S. exports. U.S. Department of Commerce.

to the global economic downturn and shifting demographic patterns in Mexico, most importantly a declining birth rate and a gradually shrinking younger population. What is clear is that Mexican migration is one of the major cross-border challenges that has accompanied the era of globalization.

Meanwhile, both countries' opening to the global economy also extended the invisible hand of capitalism to a diversified network of illicit entrepreneurs, producers, and innovators. In the new global economy, black markets thrived. Indeed, for young people aged eighteen to thirty, drug trafficking and dealing offer opportunities for a disenfranchised generation at a time of stagnant economic growth.¹⁰ Mexico's rise as a drug trafficking conduit to the United States during the 1980s created lucrative new employment opportunities for pilots, drivers, and logistics experts; lookouts (*halcones*), enforcers, and professional hit men; accountants and financial experts; and top-level cartel executives in the drug trade.¹¹ Meanwhile, drug dealing similarly proliferated in the streets and bedroom communities of cities throughout the United States, with networks of both gangs and college dorm room dealers providing access to the lucrative U.S. domestic market for illicit drugs. Between these two mostly separate organized crime networks was a common obstacle: the border.

Thus, the escalation of U.S. and Mexican counter-drug efforts, beginning in the 1970s, was arguably one of the most important developments along the border—and in the bilateral relationship—during the last quarter of the 20th century. The proliferation of the so-called War on Drugs led to both greater cooperation and newfound tensions between the two countries, particularly along the border. On the one hand, the drug war brought unprecedented forms and levels of cooperation in law enforcement and security, including the increased use of extradition, mutual legal assistance, and cross-border prosecutions. In March 2007, Presidents Bush and Calderón agreed to dramatically expand U.S.-Mexico counter-drug cooperation at a bilateral summit in Mérida, Yucatán that led to the announcement a multi-year package of U.S. aid to help fund Mexican and Central American counter-narcotics initiatives. That aid package, known as the Merida Initiative, provided assistance to the Mexican military and domestic law enforcement in efforts to combat narco-trafficking and organized crime with greater information sharing, new equipment, technology, and training for surveillance, aerial transport, land and sea interdiction, and border security.¹²

“In short, the forces of late-20th century globalization – both positive and negative – have manifested perhaps nowhere as strongly as the U.S.-Mexico border.”

10 In Mexico, such individuals are often referred to as the *ni-ni's* because they are neither enrolled in school nor formally employed (*ni estudian, ni trabajan*). A report released by the Organization for Economic Cooperation and Development (OECD) cites that there are over seven million ni-ni's nationwide, 38% of which are women, though some sources put the former number as high as ten million. Eugenia Jiménez, “OCDE: México ocupa tercer sitio en ninis.” Milenio. September 13, 2011.

11 Today, Mexican authorities estimate that there are perhaps 450,000 individuals who rely in some significant way on drug-trafficking as a source of income, and official estimates suggest that drug-trafficking activities now account for 2 to 3 percent of Mexico's more than \$1 trillion GDP. U.S. government estimates of the total profits from these activities are between \$19 billion and \$39 billion, while the Mexican government has long estimated drug profits to be around \$11 billion to \$12 billion annually; these range from 1 to 3 percent of Mexico's \$1.4 trillion GDP. A recent Rand study provides the most careful estimate available to date, placing annual Mexican drug profits from the United States, not including other revenues, at around \$6–7 billion or half a percent of GDP. See Howard Campbell, *Drug War Zone* (Austin, 2009) and Kilmer et al. (2010).

12 “Merida Initiative to Combat Illicit Narcotics and Reduce Organized Crime Authorization Act of 2008,” H.R.6028.

President Barack Obama continued to support Mexico's counter-drug efforts "beyond Mérida" by expanding the framework of the Mérida Initiative to include four supporting components. These four "pillars" of U.S.-Mexico security collaboration included: (1) more intense bi-national collaboration to combat organized crime groups, (2) greater assistance to strengthen the judicial sector, (3) more effective interdiction efforts through 21st century border controls, and (4) new social programs to revitalize Mexican communities affected by crime and violence (with a particular focus on Mexican border communities).¹³ At the same time, the Obama administration pledged to increase its efforts to address the U.S.-side drivers of Mexico's drug violence, with new funding to reduce illicit drug consumption and to combat illegal arms trafficking from the United States. Reflecting continued U.S. concerns about Mexico's violence, the Obama administration also deployed additional manpower and funds to the U.S.-Mexican border in an attempt to stave off possible "spillover" violence.

The articulation of a new, shared framework for U.S.-Mexico cooperation is viewed by many as an achievement in itself. For many years, U.S. and Mexican security cooperation floundered because of mutual suspicions and a lack of agreement on basic principles.¹⁴ Working in an intense, sustained, and bilateral manner to implement the Mérida Initiative, authorities from both countries have identified shared priorities, strategies, and avenues for cooperation. According to former-Calderón administration security advisor Sigrid Artz, "the Mérida Initiative has become an umbrella for increased information sharing, data inter-operability, and the use of common systems, such as fusion centers, that create platforms for information sharing, whether through SIUs [Sensitive Intelligence Units] or BEST [Border Enforcement Security Task Force] teams."¹⁵

Meanwhile, U.S.-Mexico cooperation under the Mérida Initiative has also been criticized for having slow and bureaucratic processes for transferring aid, for a lack of effective cross-border and inter-agency coordination (including major scandals over clandestine U.S. programs to track guns and money in Mexico), and for an insufficient emphasis on monitoring performance indicators and measuring program effectiveness. At the same time, the power of organized crime and problems of corruption have often proved overwhelming for both U.S. and Mexican authorities.¹⁶ Meanwhile, as the drug war has progressed, the toll on both countries has grown. Hundreds of thousands of young men, disproportionately of African American and Latino descent, wound up

13 U.S. Library of Congress, Congressional Research Service, U.S.-Mexican Security Cooperation: The Mérida Initiative and Beyond, by Clare Ribando Seelke and Kristin Finklea, R41349 (February 2016).

14 John Bailey and Roy Godson, *Organized Crime and Democratic Governability: Mexico and the U.S.-Mexican Borderlands*, (Pittsburgh: University Press, 2000); John Bailey and Jorge Chabat, *Transnational Crime and Public Security: Challenges to Mexico and the United States*, (San Diego: University of California San Diego, 2002); John Bailey, "Combating Organized Crime and Drug Trafficking in Mexico: What are Mexican and U.S. Strategies? Are they working?", ed. Eric L. Olson, David A. Shirk and Andrew Selee, *Shared Responsibility: U.S.-Mexico Policy Options for Confronting Organized Crime* (Wilson Center-University of California San Diego, 2010).

15 Sigrid Artz, "U.S.-Mexico Security Collaboration: Intelligence Sharing and Law Enforcement Cooperation", ed. Eric L. Olson, David A. Shirk and Andrew Selee, *Shared Responsibility: U.S.-Mexico Policy Options for Confronting Organized Crime* (Wilson Center-University of California San Diego, 2010).

16 A number of high profile setbacks that have seriously undermined U.S.-Mexican collaboration over the past two decades including the torture and murder of DEA Agent Enrique Camarena and his Mexican pilot, Alfredo Zavala Avelar in 1985, the arrest of Mexican Drug Tsar Jesus Gutiérrez Rebollo on corruption charges in 1997, the defection of members of a crack Mexican military outfit to form the "Zetas" in 2001, the release of Rafael Caro Quintero in 2014, and the escape of Joaquín "El Chapo" Guzman from a maximum security prison in 2015.

behind bars on charges of possession or dealing drugs. In Mexico, a disproportionate number of young men between the ages of twenty and thirty-five were the primary casualties of the country's recent wave of organized crime-related violence, which has killed tens of thousands over the last decade.

“Neither country can go it alone: trans-border problems require trans-border solutions.”

In short, the forces of late-20th century globalization—both positive and negative—have manifested perhaps nowhere as strongly as along the U.S.-Mexico border. Border relations have transformed from merely coexistent to increasingly integrated and interdependent. At the same time, the contemporary security challenges posed by interdependence are necessarily more complex as a result of the difficulties of processing increased volumes of goods and people, the conflicting desire to facilitate commerce while also identifying and reducing potential threats, and the difficulties of attempting to solve problems at the border rather than at their point of origin. Neither country can go it alone: trans-border problems require trans-border solutions.

Conclusion

Toward Integration? The Challenges of Post 9-11 Border Management

What remains to be seen is whether the United States and Mexico will continue to become more interdependent to the point of what Martinez called the “integration” stage of cross-border relations. This prospect was made more difficult to imagine by terrorist attacks of September 11, 2001. The 9/11 attacks created a moment of national crisis and provoked an intense state of alarm within the United States, with significant implications for the management of both the U.S.-Mexican and U.S.-Canadian borders. The new security context necessitated a reexamination of existing practices and mechanisms for cross-border collaboration in law enforcement and security. Indeed, the massive restructuring of 22 federal agencies and programs—with over 180,000 government employees and an expansive and still evolving mandate for border management—under the Department of Homeland Security was the largest bureaucratic reorganization in the United States since the creation of the Department of Defense in the aftermath of World War II.

Still, in a testament to the overarching impetus toward cooperation in North America, officials from all three countries have attempted—with mixed success—to mitigate the degree to which post-9/11 border concerns have restricted trade and interactions through the border. What is clear at present, at least, is that the United States and Mexico currently have the basis for continued improvements in collaboration under existing bilateral agreements and emerging administrative structure.

Table 1. Typology of Border Relationships from State Formation to Greater Regional Integration

Adapted from Martinez (1998).

	Nascent	Alienated	Coexistent	Interdependent	Integrated
<i>Characteristics of the state</i>	Inchoate or emerging states based on topography and/or national affinity. Possible separation or emersion from imperialist arrangements.	One more political entities in the early stages of nation-state formation, or regime transformation.	Consolidated nation-state with strong expression of nationalist identity and state sovereignty.	Well-established nation-state with significant potential gains from cooperation with other states.	Nation-state sovereignty and national identity superseded by higher level political affiliations
<i>Nature of relationship between neighboring states</i>	Relations are still forming, as nation-states establish sovereignty, forge individual national identities, and consolidate territorial control.	Relations between neighboring nation-states are characterized by serious political conflicts (nationalist, religious, cultural, ethnic, or ideological).	Nation-states generally recognize and respect each other's sovereignty, lingering tensions and antagonisms between states are significantly reduced, and cordial international relationships develop.	Nation-states recognize mutual benefits of relationship, and are able to identify and realize significant areas of cooperation.	Separate nation-states recognize mutual benefits of surrendering sovereignty in favor of gains from trade, economies of scale, and greater social, political, and cultural assimilation.
<i>Border policy context</i>	Frontiers are poorly defined and therefore subject to either expansion or annexation.	Heavy militarization of nation-state borders and rigid controls over cross-border traffic and trade.	Reduced militarization of nation-state borders and greater interaction across borders, with significant controls remaining.	Significant areas of cooperation and openness in border controls, with possible tensions in areas of asymmetry.	Fading or dissolution of previously existing border controls, and transference of "border" functions to external perimeter of integrated states.
<i>Historical examples</i>	U.S.-Spain/Mexico borders (1789-1848)	U.S.-Mexico border (1848-1876)	U.S.-Mexico border (1876-1964)	U.S.-Mexico border (1964-present)	United States (1789-present)
<i>Contemporary examples</i>	Eritrea-Ethiopia border	Israel-Palestine border Iraq-Saudi Arabia border	Bolivia-Chile border	U.S.-Canada border	European Union

MANAGING THE MEXICO- U.S. BORDER

WORKING FOR A MORE
INTEGRATED AND COMPETITIVE
NORTH AMERICA

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The border between Mexico and the United States is one of the most dynamic in the world. The United States and Mexican border states together represent the world's 4th largest economy, see more than \$500 billion dollars per year in bilateral trade; and house 56 crossing points where nearly 300,000 vehicle crossings take place on a daily basis.¹ Mexico and the United States share a border that stretches more than 3,140 kilometers, with approximately 14 million inhabitants in six Mexican states (Baja California, Sonora, Chihuahua, Coahuila, Tamaulipas and Nuevo León) and four U.S. states (California, Arizona, New Mexico and Texas) living within 100 kilometers of that border. Since the signing of the North American Free Trade Agreement (NAFTA) just over twenty years ago, the relationship between our two countries has improved dramatically. The \$81 billion dollars in U.S.–Mexico trade in 1993 has grown to nearly \$534 billion dollars in 2014, a 556 percent increase.²

The unprecedented level of cooperation between Mexico and the United States is a fact; our countries share an interdependent system in which nearly 6 million jobs in the United States depend directly on trade with Mexico. It is also a fact that Mexico is the third largest trading partner of the United States and its second largest export destination.³ Similarly, the United States represents Mexico's largest export destination; 79.6 percent of Mexican exports are sent to the United States, accounting for \$180 billion dollars in trade.⁴

Beyond its asymmetries and challenges, the border region is destined to be vibrant and spark prosperity, extending its benefits to other parts of North America. It is in our national interest to ensure that a positive border relationship is preserved. Mexico's *Plan Nacional de Desarrollo* 2013-2018 highlights that Mexican border states have higher competitiveness and infrastructure development than the rest of the country (except for Distrito Federal, Morelos, Colima and Baja California Sur). It is our responsibility to replicate those conditions—growth, competitiveness, development—in the rest of Mexico.

Our countries have always had a complex and intertwined relationship and have established different and successful mechanisms to manage border matters. At present, the level of cooperation between Mexico and the United States on border issues is the highest testament of the maturity and strength of the bilateral relationship. Positive synergies are now in place, our common values and cultural ties are nowhere more visible than at our shared border, benefitting both societies.

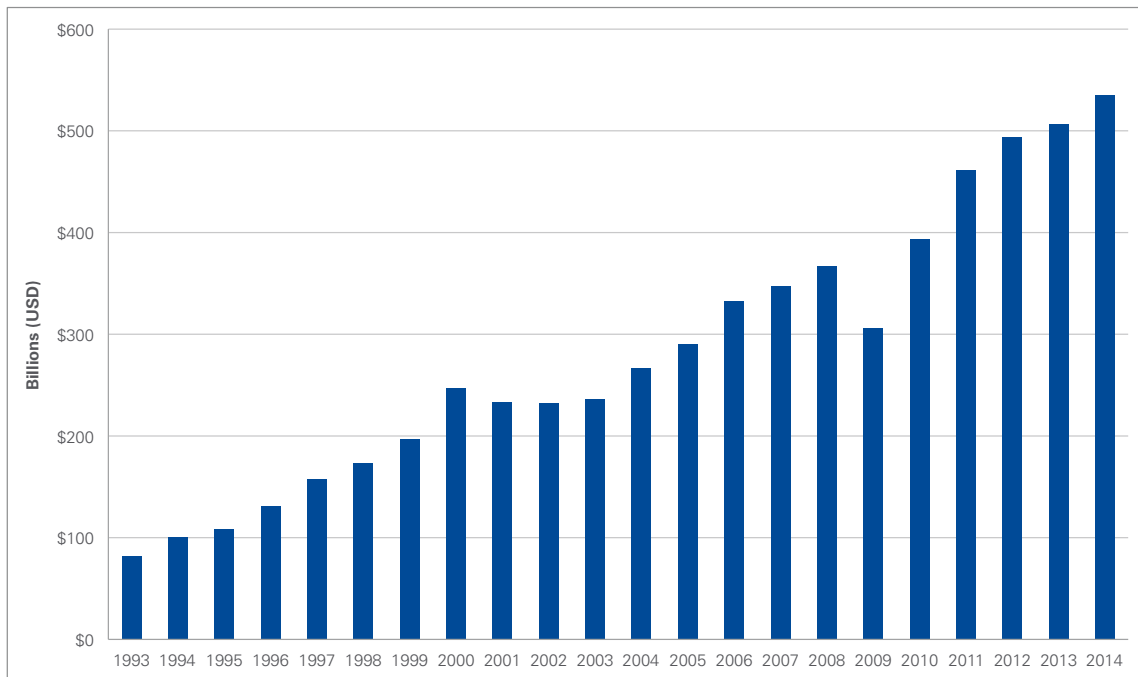
1 "Frontera," Secretaría de Relaciones Exteriores, <http://mex-eua.sre.gob.mx/index.php/frontera>.

2 "Trade in goods with Mexico," U.S. Census Bureau, last revised April 3, 2015
<http://www.census.gov/foreign-trade/balance/c2010.html>.

3 "Top Trading Partners – April 2015," U.S. Census Bureau, last revised March 11, 2015,
<http://www.census.gov/foreign-trade/statistics/highlights/toppartners.html#exports>.

4 "Reporte sobre comercio e inversión, Agosto-Septiembre 2014," ProMexico, 2014, – <http://www.promexico.gob.mx/documentos/reportes-com-inv/reportes-comercio-inversion-agosto-septiembre-2014.pdf>.

Figure 1. Total U.S. Trade with Mexico, 1993-2014.



Source: U.S. Census Bureau.

This essay aims to offer a holistic approach and view of the border region. It focuses on the key aspects that comprise it, and also explains the mechanisms established by Mexico and the United States, describing the strong collaboration that has been accomplished by both countries.

“Positive synergies are now in place, our common values and cultural ties are nowhere more visible than at our shared border, benefitting both societies.”

Policy Development

North America Leaders’ Summit

Established in 2005, the North America Leaders’ Summit (NALS) was created to strengthen political participation and economic cooperation in North America. In February 2014, the NALS, held in Toluca, Mexico, helped facilitate negotiations where both countries agreed to leverage existing bilateral border mechanisms, with a vision that recognizes them as an outstanding factor for regional cooperation. This agreement will enhance secure movement of goods across North America, promote trilateral exchanges on logistic corridors and regional development, and establish a North American Transportation Plan that will streamline procedures and harmonize customs data requirements for traders and visitors.

This mechanism acknowledges the competitiveness of the region and seeks to establish strategies and implement collaborative actions to increase such competitiveness. These efforts are focused on key areas such as science and technology, education, energy and environment. Collectively, there are plans to promote joint research in

national laboratories and universities, engaging with private and public sectors. Other goals include supporting academic exchange and educational mobility in order to contribute to mutual understanding between societies and cultures. In energy, our priority is to develop secure, affordable, clean and reliable supplies that boost economic growth and support sustainable development in the region. Environmentally, there has been strong cooperation to protect the region's biodiversity and address environmental challenges such as climate change.

To leverage ongoing efforts to enhance secure movement of goods throughout the region and across borders, Mexico and the United States have established the North American Transportation Plan that is starting with a regional freight plan and will build on current initiatives. Additionally, the establishment of a North American Trusted Traveler Program, which comprises Global Entry, SENTRI and *Viajero Confiable* programs, will expedite the movement of people in the region.

21st Century Border Management Initiative

In May 2010, Mexico and the United States reaffirmed the importance of our shared border by issuing a Joint Declaration on 21st Century Border Management. This initiative seeks to develop an efficient border in which commerce and trade, as key components of bilateral cooperation and prosperity in the 21st century, are improved. The initiative also created the Executive Steering Committee (ESC), which is comprised of three subcommittees: infrastructure, secure flows, and security and law enforcement. In December 2014, ESC met in Washington, D.C. for its Seventh Policy Meeting to review the progress of ongoing actions and set the agenda for 2015.

Border infrastructure projects promoted by the ESC have improved the lives of millions of people by making it easier to cross the border for legitimate trade and travel. The progress made through these efforts is evident: in the San Diego-Tijuana region, for example, Mexico and the United States opened 25 extra lanes and 47 inspection booths which helped reduce wait times from 3 hours to only 30 minutes; during some times of the day, wait times can be as little as 10 minutes. At the border between Texas and Tamaulipas, the Veterans-Tomates International Bridge opened a second lane, doubling its capacity and improving safety by separating trucks from cars. The Nogales-Mariposa crossing between Arizona and Sonora, the primary entry point for Mexican produce, saw the completion of a major renovation and expansion on the U.S. side, which doubled its northbound capacity.

“Border infrastructure projects promoted by the Executive Steering Committee have improved the lives of millions of people by making it easier to cross the border for legitimate trade and travel.”

Looking forward, the 2015 Infrastructure Subcommittee action plan proposes to continue binational coordination on a broad range of border projects. Among relevant projects, the completion of the New Mexico–Chihuahua Regional Border Master Plan, reviewing the North American Development Bank's border infrastructure study, and exploring public-private partnerships and other innovative financing mechanisms are examples of joint work and collaboration. In 2015, the Infrastructure Subcommittee will seek to increase engagement with stakeholders, including industry and trade groups, civil society, and others to improve their communication about vital border projects.

The Secure Flows Subcommittee worked to facilitate the secure movement of people and goods across our border. During 2014, derived from joint efforts through the U.S.-Mexico Customs Bilateral Strategic Plan and other bilateral mechanisms, it reported relevant achievements, including a significant milestone with the signing of a Mutual Recognition Agreement between Mexico's Tax Administration Service (SAT) and U.S. Customs and Border Protection (CBP). Through this agreement, both agencies recognize each other's Secure Supply Chain Programs, "*Nuevo Esquema de Empresas Certificadas*" or NEEC (acronym in Spanish) and the U.S. "*Customs-Trade Partnership against Terrorism*" or C-TPAT. This, in turn, creates a unified posture that facilitates trade, benefiting participants from both countries with fewer inspections at customs, joint validation processes, common security standards, and most importantly with reduced crossing and processing times by granting access to FAST and Express lanes, which translates to reduced transaction costs.⁵ Currently, 41 percent of Mexican exports (in terms of value) to the United States belong to CTPAT/NEEC exporters. This amount is larger than all of the U.S. imports from Germany or from France and the United Kingdom combined.

Also, in the framework of this Subcommittee, the United States and Mexico established ten wait time pilots to measure commercial and passenger vehicle travel times in order to manage traffic flows more effectively. This new bilateral framework will enhance trade by reducing crossing times for trucks, developing programs to analyze processing times at the border and integrating binational strategies to solve common problems. The Subcommittee also worked to promote both countries' trusted traveler programs, *Viajero Confiable* in Mexico and *Global Entry* in the United States, in order to expedite the flow of travelers, tourists, and business people between both countries. Additionally, there was significant progress on lane segmentation at the border, which speeds crossing times for trusted travelers and traders. The newly approved laws on firearms in Mexico will allow preclearance processes becoming the core elements for border management and policies and will increase efficiency.

For its part, the Security and Law Enforcement Subcommittee has been working to develop and ensure better practices along the border. It has continued to collaborate and join efforts in training programs for the Mexican Federal Police. It has also held technical meetings to better understand the challenges and opportunities in the region. These actions are designed to strengthen our collaboration to fight criminal trafficking networks and to develop a joint understanding of current dangers.

“One of the main objectives while managing the border is to improve the quality of life of the millions of inhabitants of the region.”

One of the main objectives while managing the border is to improve the quality of life of the millions of inhabitants of the region. Therefore, an important step was taken at the last meeting of the ESC with the establishment of a new working group on “Sustainability and Quality of Life,” both key elements to change the traditional narrative about the border. This working group will seek a balanced interaction of three main components: economics, society and environment. It will address topics such as environmental conservation, natural resources management, renewable energies and their interaction with economic activities, as well as access to education, culture, health and recreational facilities.

⁵ “U.S., Mexico Sign Mutual Recognition Arrangement,” U.S. Customs and Border Protection, October 17, 2014 <http://www.cbp.gov/newsroom/national-media-release/2014-10-17-000000/us-mexico-sign-mutual-recognition-arrangement>.

Infrastructure

Mexico-U.S. Binational Bridges & Border Crossing Group

This Binational Group was established in 1983, with the goal of coordinating exchanges of technical and policy information, as well as facilitating processes for new border crossings. One of the main objectives of the Group is to achieve a dynamic border region based on modern ports of entry and up-to-date technology that allows meeting current and future demand.

“One of the main objectives of the Group is to achieve a dynamic border region based on modern ports of entry and up-to-date technology that allows meeting current and future demand.”

This Group is co-chaired by the Ministry of Foreign Affairs of Mexico (SRE) and the U.S. Department of State. Other federal agencies of both countries with an interest in border crossings participate as well; among them is the Ministry of Communications and Transport (SCT), the Tax Administration Service (SAT) and the Institute of Management and Appraisal of Domestic Goods (INDAABIN), among others, on the Mexican side, as well as U.S. Customs and Border Protection (CBP), the Department of Homeland Security (DHS), the General Services Administration (GSA), the U.S. Coast Guard, the Animal Plant Health Inspection Service (APHIS), the Food and Drug Administration (FDA), the Federal Highway Administration (FHWA), the Federal Railroad Administration (FRA), the International Boundary and Water Commission (IBWC), as well as the respective departments of transportation and border authorities of the Border States on the U.S. side.⁶ The vast number of participating agencies on both sides echoes the importance both countries place on a jointly managed border.

In its more than 30 years of existence, the Group has evolved and expanded its targets. In addition to its original goals, nowadays it has extended its reach to include clusters of industries and human capital that are in the border region, which represent valuable assets in terms of resources and skills. This mechanism understands ports of entry between Mexico and the United States as clear examples of dynamism and cooperation. For instance, the beginning of the construction of the Matamoros-Brownsville Railway Bridge—the first one of its kind in over 100 years—is about to be opened and will help improve the lives of the inhabitants of the region and boost the economy by reducing crossing times and building infrastructure where needed. On the same note, the port of entry Otay-Mesa, the second busiest commercial port of entry on the common border (by volume) which processes approximately 780,000 truck crossings and around \$23 billion dollars in trade,⁷ underwent a pilot program in 2014, focused on analyzing wait times and developing binational recommendations to improve traffic flows.

According to the San Diego Regional Chamber of Commerce, by 2050, border crossings in San Diego County are estimated to reach 3.4 million incoming trucks annually and 39 million tons of goods with a value of

⁶ “Current border activities,” U.S.-Mexico Joint Working Committee on Transportation Planning, <http://www.borderplanning.fhwa.dot.gov/current.asp>.

⁷ Sandra Dibble, “U.S., Mexico strike deal on trusted traders,” UT-San Diego, October 18, 2014, <http://www.utsandiego.com/news/2014/oct/18/trusted-trader-c-tpat-customs-mexico/>.

\$309 billion dollars.⁸ On that matter, associations such as the Smart Border Coalition, which brings together stakeholders from both Tijuana and San Diego, work jointly to manage different projects such as the so-called “Cross Border Xpress,” a pedestrian bridge connecting the Tijuana International Airport with the United States. This will be the first bridge to connect a facility in the United States directly into a foreign airport terminal and is expected to open by the end of 2015. The facility will serve nearly 2.4 million passengers⁹ per year and will allow residents of the San Diego Metropolitan area to fly directly to Asia and other destinations in the Americas without having to drive to Los Angeles.

Cross Border Energy Infrastructure

Mexico’s demand for natural gas is growing to support its electric sector for generation purposes; the oil industry as fuel in its refineries; and the industrial sector.¹⁰ As a response, Mexican cross-border energy infrastructure is increasing as well.

U.S. gas imports to Mexico have increased 45 percent since 2010, covering 27 percent of the country’s gas demand. Nowadays, 70 percent of the imports are done through pipelines from the United States, with an estimated 1,755 million cubic feet per day (MMcfd) through different ports of entry (Figure 4).¹¹ This flow of gas will keep increasing in the next decade, reaching 3,800 MMcfd in 2018, and around 4,400 MMcfd by 2020.¹²

Mexico is entering one of the largest pipeline construction periods in its history with several new pipelines between Mexico and the United States being constructed to fulfill Mexico’s needs. These natural gas infrastructure projects will help support cross-border energy development and a cleaner regional environment. The projects include:

Los Ramones Pipeline is the largest energy infrastructure investment in 40 years. It consists of a 1,054 km (650 miles) pipeline spanning from Agua Dulce, Texas, United States to Apaseo el Alto, Guanajuato, Mexico. Los Ramones phase I started operations in December 2014; meanwhile Los Ramones phase II (Nuevo León-Apaseo el Alto, Guanajuato) will start operations in December 2015.

The Waha–Presidio gas pipeline will transport natural gas from the Waha, Texas region to meet electricity requirements in the Central, Northern and Western regions of Mexico. It will be approximately 230-km long and 42-inches in diameter, with a capacity of 1,350 million cubic feet per day (MMcfd) for gas transportation between Waha and Presidio, both in Texas. This natural gas system will interconnect with the Ojinaga–El

8 “Policy Priorities,” San Diego Regional Chamber, <http://sdchamber.org/mexico-business-center/mbc-issues.html>.

9 “Otay Tijuana Venture, LLC Announces Unprecedented Border Crossing Between San Diego and the Tijuana International Airport Breaks Ground,” BusinessWire, July 14, 2014, <http://www.businesswire.com/news/home/20140714006099/en/Otay-Tijuana-Venture-LLC-Announces-Unprecedented-Border#.VE55BfnF98E>.

10 Secretaría de Energía, *Prospectiva de Gas Natural y Gas L.P. 2014-2028*, (Mexico: Secretaría de Energía, 2014), <http://www.sener.gob.mx/res/ProspectivaDeGasNaturalyGasLP2014.pdf>.

11 Ibid.

12 “Mexico’s energy ministry projects rapid growth of natural gas imports from the U.S.,” U.S. Energy Information Administration, May 29, 2014, <http://www.eia.gov/todayinenergy/detail.cfm?id=16471>.

Encino gas pipeline on the Mexican side of the border,¹³ supplying natural gas to new power generation plants, as well as those currently operating with fuel oil, which will be converted to use natural gas as their base fuel. The Waha-Presidio gas pipeline will start operations in March 2017.

The Waha–San Elizario pipeline will transport natural gas from Texas to several pipelines in Chihuahua, interconnecting in San Elizario at the Mexican border with the San Isidro–Samalayuca gas pipeline in Chihuahua and with the *Corredor Chihuahua* pipeline, which is currently operating. The Waha-San Elizario pipeline will start operations in January 2017.

The Sierrita Pipeline will transport natural gas from Tucson, Arizona to the border with Sonora, Mexico. This pipeline will supply gas to the existing fuel-oil-fired power generation plants that will be converted to natural gas, along with other new natural gas fired power generation plants that will be built during the next 15 years. The pipeline will supply natural gas to the Mazatlán–Sásabe corridor to contribute to the industrial development of Sonora and Sinaloa. These two states currently lack natural gas for their development.

Mexico and the United States also have electric transmission lines instrumented in the border in 11 points. Electricity trade across the border is conducted by the National Center of Energy Control (CENACE). The trade flows of electricity with the United States are made through interconnections with the Western Electricity Coordinating Council (WECC), located in California, Arizona, New Mexico and a small portion of Texas; and with the Electric Reliability Council of Texas (ERCOT).

“Mexico is entering one of the largest pipeline construction periods in its history with several new pipelines between Mexico and the United States being constructed to fulfill Mexico’s needs.”

Both our countries have realized that energy costs have an outstanding impact on productivity and competitiveness on both sides of the border. Therefore, Mexico and the United States are working on strategies to support the development of unconventional energy resources and border electric interconnections. Currently, in North America, natural gas has an extremely competitive price compared to other energy sources, especially with the recent discovery of shale gas, which has increased gas reserves and lowered the prices in the United States. In consequence, the tendency is higher use of natural gas for electricity production. In addition, Mexico’s Federal Electricity Commission (CFE) has sought to replace electricity production from fuel oil with natural gas, based on the fact that it has lower pollutant emissions.¹⁴

The exchange of electricity between countries is an important matter since it has great potential. Cross-border interconnections arise from the idea of linking lines and electrical systems that allow energy border trade between neighboring countries. This exchange benefits from double seasonality between Mexico and the United States, where electricity consumption varies on each side of the border throughout the day. For example, the use

¹³ This project will be interconnected to El Encino –Topolobampo and to El Encino – La Laguna pipelines, both currently under construction.

¹⁴ Prospectiva de gas natural y gas L.P. 2014-2028, <http://www.gob.mx/cms/uploads/attachment/file/352/Prospectiva-GasNaturalGasLP-2014.pdf>, pages 68-70

of air conditioners is higher during the day on one side of the border, while its peak use comes at night on the other side. This translates into more electricity production on the side of the border that is using less electricity, while the other has greater demand for it, making the systems complementary. One of the main advantages of this strategy is to achieve increased efficiency within the network by allowing for the generation of electricity with the most efficient technology and environment in one region and then sending it from the place with lower prices and production costs to regions with higher prices.¹⁵

“Both our countries have realized that energy costs have an outstanding impact on productivity and competitiveness on both sides of the border.”

Figure 2. Waha-Presidio pipeline



Source: Comisión Federal de Electricidad
<http://www.cfe.gob.mx/Licitaciones/Licitaciones/Documents/ElEncinoLaLagunaIN1003.pdf>

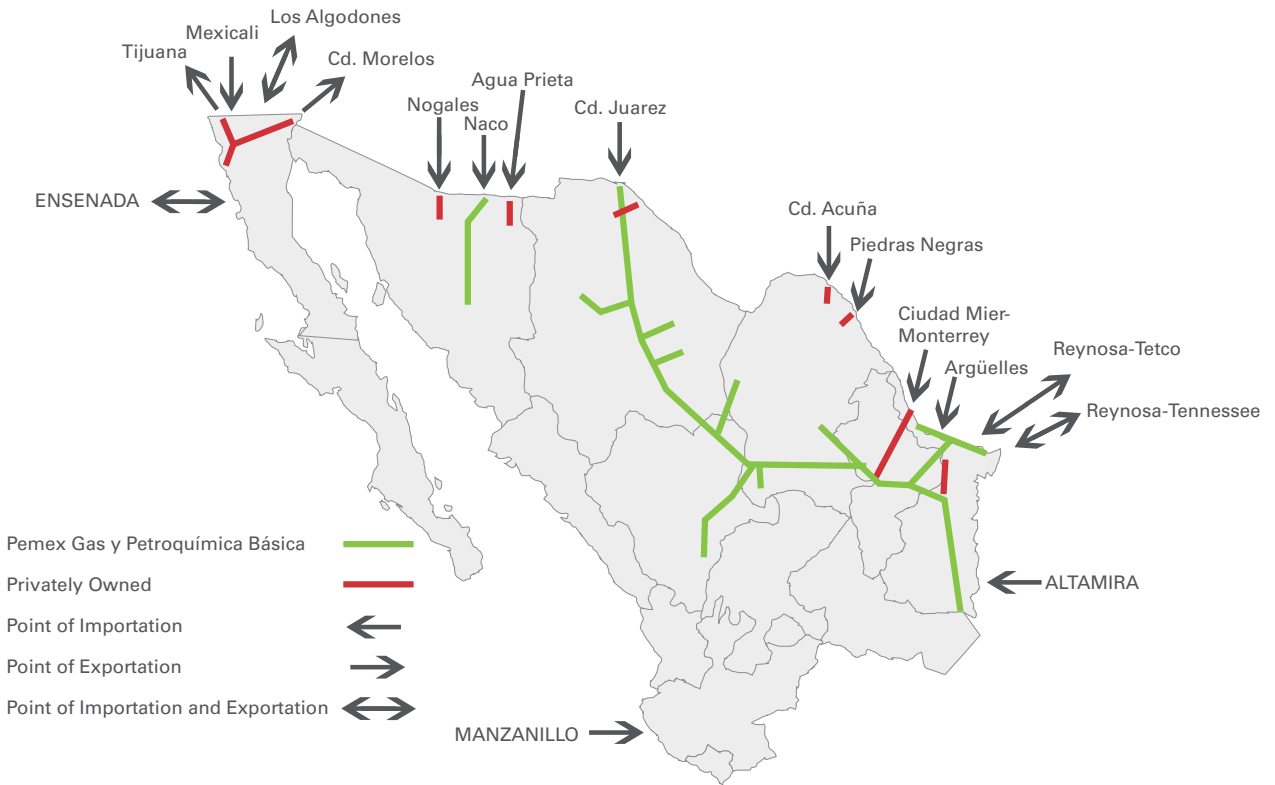
Figure 3. Waha-San Elizario pipeline



Source: Comisión Federal de Electricidad
<http://www.cfe.gob.mx/Licitaciones/Licitaciones/Documents/SanIsidroSamalayucaIN1003.pdf>

15 Prospectiva del Sector Eléctrico 2014-2018, http://www.energia.gob.mx/res/prospectiva_de_electricidad_2014.pdf, page 43

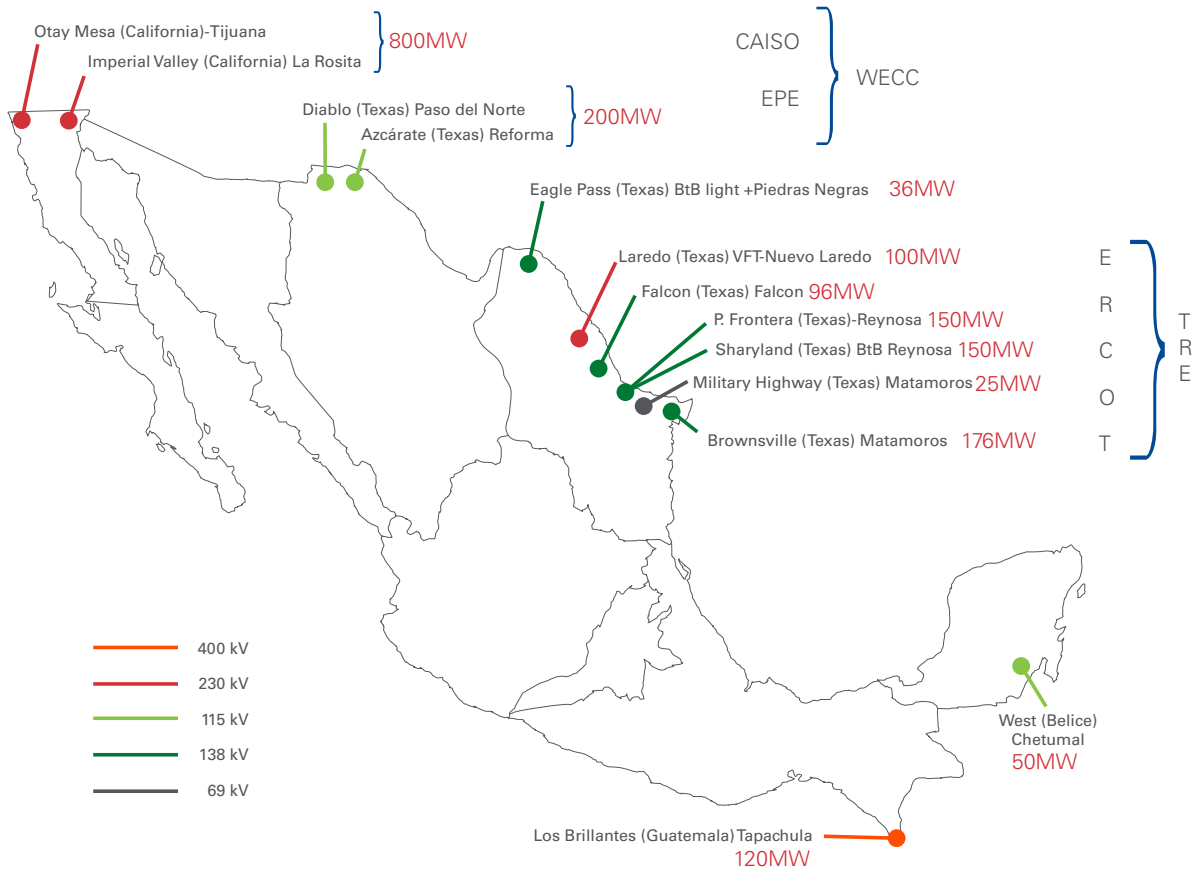
Figure 4. Natural gas exports and imports points of entry (2013)



Source: *Prospectiva de Gas natural y LP 2014-2028*, SENER, p.67

<http://www.energia.gob.mx/res/ProspectivaDeGasNaturalyGasLP2014.pdf>

Figure 5. Mexico- U.S. cross-border electric infrastructure and capacity



Source: "Prospectiva del Sector Eléctrico 2014-2028," SENER, p.80

http://www.gob.mx/cms/uploads/attachment/file/62947/Sector_El_ctrico_2014-2028.pdf

Joint Working Committee

Mexico and the United States—through the Joint Working Committee (JWC)—have been collaborating together since January 1994 to establish Regional Border Master Plans (RBMP). RBMPs allow local stakeholders to provide input into infrastructure planning along the border. Just recently (October 2014), the Chihuahua-New Mexico Border Master Plan was opened under the initiative of this Committee.¹⁶ Some other examples of these collaborative plans are: Sonora-Arizona (February 2013), Baja California-California (September 2008), El Paso/Santa Teresa-Chihuahua (October 2013), Tamaulipas-Lower Rio Grande Valley (October 2013), Coahuila/Nuevo León/Tamaulipas-Laredo District (June 2012).¹⁷

The Regional Border Master Plans are important long-term tools that help keep port of entry and transportation infrastructure up to date. They aim to prioritize infrastructure projects based on each region's interests, needs and priorities. The plans are periodically updated and amended in order to support the region's vision and goals. Additionally, plans signify binational stakeholder efforts to: a) prioritize and promote ports of entry and related transportation projects, b) inform decision-making, c) allocate limited funding sources, d) ensure continued dialogue and coordination on current and future ports of entry, e) support transportation infrastructure needs and projects, and f) establish a multi-disciplinary group of experts from both Mexico and the United States to engage on transportation issues in the border region with short, mid and long term perspectives.¹⁸ The JWC seeks to promote an efficient, safe and sustainable movement of goods and people along the border and to boost the competitiveness of the area. Given the complexity of managing the border region, JWC provides an exceptional space where stakeholders can share their expertise and best practices in order to achieve efficient and low-cost cross-border mobility. The JWC collaborates with other groups, such as the Mexico-U.S. Binational Bridges and Border Crossings Group and the Border Governor's Conference Worktable on Border Crossings, to implement transportation improvements and infrastructure.

“Mexico and the United States—through the Joint Working Committee (JWC)—have been collaborating together since January 1994 to establish Regional Border Master Plans.”

The work of JWC is proof of the mature level of cooperation of both countries. JWC has been formalized with two Memoranda of Understanding (MOUs). The first one, signed in 1994, under the framework of NAFTA at the “NAFTA Transportation Summit,” focused mainly on promoting a joint planning process for the Mexico-U.S. border. The second one, signed in 2000, centered mainly on nine work topics: 1) trans-border corridor planning, 2) a coordinated port of entry management system, 3) intelligent transportation systems (ITS), 4) a border infrastructure needs assessment, 5) intermodal transportation, 6) air quality, 7) geographic information systems/live data bank, 8) a border technology exchange program and 9) innovative financing mechanisms.¹⁹

16 U.S.-Mexico Joint Working Committee on Transportation Planning, <http://www.borderplanning.fhwa.dot.gov/mexico.asp>.

17 “Regional Border Master Plans,” U.S.-Mexico Joint Working Committee on Transportation Planning, <http://www.borderplanning.fhwa.dot.gov/masterplans.asp>.

18 “Texas Border Master Plans,” Texas Department of transportation, <http://texasbmps.com/>.

19 “Memoranda of Understanding (MOUs),” U.S.-Mexico Joint Working Committee on Transportation Planning, <http://www.borderplanning.fhwa.dot.gov/mou.asp>.

Trade Facilitation

High Level Economic Dialogue

The High Level Economic Dialogue (HLED), established in 2013, is a mechanism designed to foster government commitment at the highest level in strategic areas or topics. Its main goal is to improve competitiveness, prosperity, connectivity, and regional outreach by engaging the cabinets of the governments of Mexico and the United States in order to take our close economic and commercial relationship further. It recognizes the border region as a catalyst for development, promotion of competitiveness and enhanced connectivity. It also takes into account the crucial role that stakeholders play and the way their participation can help overcome challenges in the region by including their input as an important part of the discussion on all matters, including border issues.

In January 2015, as part of President Peña Nieto's visit to Washington D.C., the Second Annual Meeting of the HLED was held with the participation of nine Secretaries from both countries and chaired by Vice President Joseph Biden and Mexican Secretary of Finance, Luis Videgaray. The Secretaries reviewed the progress achieved so far and established the priorities to focus on in 2015. The chosen strategic areas are energy, workforce development, a modern border, regulatory cooperation, and joint regional and global leadership, through cooperation on the development of Central America and the multilateral transparency initiative *Open Government Partnership*. Stakeholder engagement remains a priority for achieving the Dialogue's objectives.

The Dialogue has resulted in concrete, measurable achievements since its establishment. In 2014, Mexico and the United States worked together to successfully establish a Northbound Single Rail Manifest, and in 2015 they will also work to implement single cargo manifests for maritime and air shipments. In October 2014, the Mutual Recognition Agreement between Mexico's Tax Administration Service (SAT) and the U.S. Customs and Border Protection (CBP) was signed.²⁰

“The High Level Economic Dialogue (HLED), established in 2013, is a mechanism designed to foster government commitment at the highest level in strategic areas.”

Similar schemes of collaboration have also taken place in the telecommunications sector along the border region, where Mexico and the United States have worked consistently to establish mobile broadband services. We have actively engaged in discussions to eliminate regulatory divergences to reduce red tape and help businesses on both sides of the border. The United States has also provided legal and regulatory expertise to Mexico's new telecommunications regulator to support our country's goals of creating a competitive, market-based regulatory landscape more conducive to telecommunications investment.

Our countries have developed strategic partnerships in order to share economic best practices. In 2013, both nations collaborated on formal agreements as part of the Small Business Network of the Americas; organized events and conferences with the purpose of improving financial access for businesses; and launched training sessions about entrepreneurship. Meanwhile, they started mapping a series of cross-border economic clusters,

²⁰ This Agreement forms part of the 21st Century Border Management Mechanism, explained earlier in this essay, as well as of the High Level Economic Dialogue.

boosting both nations' capabilities to produce high-value products and services and are actively engaging in dialogues to streamline bureaucratic processes. The cluster mapping project is part of the initiatives of the HLED work stream and has had important milestones. The pilot project in the Cali-Baja region is completed and the project in the Texas-Monterrey/Salttillo region is underway.

Both Mexico and the United States have recognized the importance of stakeholder engagement because of their capability to inform both governments on private sector priorities that will facilitate trade, boost economic growth and enhance job creation. In this regard, and under the United States Chamber of Commerce and the *Consejo Coordinador Empresarial's* U.S.-Mexico CEO Dialogue, in December 2014, business leaders from both countries got together in Monterrey, Mexico, to celebrate its third meeting. The CEO Dialogue is a forum for the private sector to engage in discussions about key issues that could impact the two countries' economic markets and relationships. It is also a meaningful space for the private sector to provide their input to policymakers on economic matters.

The 2014 CEO Dialogue contributed to our goal of forging a closer commercial relationship between our countries by agreeing to take additional steps to boost the economic relationship using the HLED as a path. Emphasis was placed on three topics: 1) *Optimization*, 2) *North American Competitiveness* and 3) *Connected Cross Border Cities*. On the subject of "*Optimization*," it was determined that there should be significant increases in the number of companies that participate in the "trusted traveler/shipper" programs in order to reduce border crossing times. They also resolved that both countries should implement transport tracking/monitoring technology on strategic border crossings to analyze northbound and southbound flows of goods.

Regarding "*North American Competitiveness*," the CEO Dialogue recommends a long-term vision centered on four essential pillars: education, energy, infrastructure, and labor mobility. It was emphasized that the U.S. immigration policy should progressively acknowledge the reality of a NAFTA economic space where services, goods and people are highly mobile. Finally, the "*Connected Cross Border Cities*" initiative prioritizes a comprehensive approach in which cross-border cities should be fully integrated in pairs, with the aim of improving the flow of people, information and goods, and thus augmenting security in the region.

At the technical level, there are numerous working groups comprised of subject matter experts from both countries' relevant agencies. For example, SAT, CBP and the U.S. Immigration and Customs Enforcement (ICE) have a Customs Bilateral Strategic Plan in place through which they develop ambitious initiatives that they further report to the High Level groups. SCT and the U.S. Department of Transportation (DOT) have a working group to explore initiatives to improve transportation systems and for freight collaboration; among other possibilities.

Mexico and the United States are fully aware that in order to make North America the most competitive and prosperous region in the world, we have to do so in a sustainable manner. This is why one of our priorities is to foster innovation and entrepreneurship to make them the engines of our economic growth. For this reason, the Mexico-U.S. Entrepreneurship and Innovation Council (MUSEIC) was created. The Council's mission is to conduct our countries' efforts regarding the promotion and development of entrepreneurs, as well as small and medium enterprises. MUSEIC coordinates and collaborates in the creation and implementation of strategies geared toward growth of entrepreneurs and micro, small and medium enterprises.

“In 2013, both nations collaborated on formal agreements as part of the Small Business Network of the Americas; organized events and conferences with the purpose of improving financial access for businesses; and launched training sessions about entrepreneurship.”

Environment and Sustainability

The development of the border should also focus on an understanding of the environment by using mechanisms that foster a coordinated stewardship that takes into account the natural resources of the region. Only through joint actions can Mexico and the United States protect the ecosystems along the border and sustainably manage the available resources.

The International Boundary and Water Commission established in 1889 is a perfect example of bilateral cooperation between both countries, in a region where conflict over natural resources, such as water, can rapidly grow. The Commission is an international body that manages water-rights treaties and agreements between Mexico and the United States. It is divided into Mexican and American sections that work together to administer the distribution of the waters of the Rio Grande, the Rio Tijuana and the Colorado River, protect lands along the rivers, manage border sanitation, establish regulation, as well as oversee infrastructure projects along the border with a hydrological focus.

More recently, Minute 319 set unprecedented institutional foundations to ensure regional water and environmental sustainability in the Colorado River. In November 2012, both countries signed this 5 year agreement for bilateral water basin management, storage, environmental enhancement and distribution of the waters of the Colorado River. Last year, the groundbreaking agreement helped one percent of the river flow all the way to its delta, reaching the Sea of Cortez for the first time in 50 years.²¹ This milestone proves that Mexico and the United States are continuously engaging in pragmatic projects and working together to achieve better environmental conditions that will benefit both countries. Among the projects under consideration for new water sources is the construction of a binational seawater desalination plant. Based on these positive experiences, our governments are exploring ways to move forward on water collaboration.

The North American Development Bank (NADBANK) together with the Border Environment Cooperation Commission (BECC), through the Border 2020 program, collaborate with relevant government agencies in both countries, with the goal of developing new cross-border initiatives and financing projects to increase cooperation in specific infrastructure sectors such as renewable and clean energy, electricity connection and water. Since the implementation of NAFTA, BECC has certified 227 projects and NADBANK has provided more than \$2.25 billion dollars in loans and grants to finance 192 of those projects, benefitting almost 15 million residents in communities on both sides of the border. In addition, both institutions have provided \$66

²¹ “Colorado River Pulse Flow Event,” Sonoran Institute, <http://www.sonoraninstitute.org/where-we-work/mexico-colorado-river-delta/colorado-river-pulse-flow>.

million dollars in technical assistance to support the development of projects in 165 communities.²²

The Wastewater Collection System in San Luis Rio Colorado, Sonora is one of the recently certified projects. It aims to extend the wastewater collection system to alleyways known as “B” streets. The project includes the installation of more than 77,000 lineal meters of sewer lines and 4,369 residential sewer hookups in eight different sections of the city. This project will help provide first-time sewer service to nearly 16,000 residents and will eliminate approximately 46.65 liters per second (lps) of untreated wastewater discharges.²³

Other projects include the Wastewater System Rehabilitation Project in Piedras Negras, Coahuila, that will help repair two sections of the Rio Bravo Marginal Collector, make general repairs in the area of Lift Station No. 4 and replace 154 manhole covers and frames located throughout the city; the Wind Park “El Porvernir,” located in the Mexican state of Tamaulipas, which pursues the reduction of more than 90,976 metric tons of carbon dioxide (CO₂), 1,442.4 metric tons of sulfur dioxide (SO₂) and 189.7 tons of nitrogen oxides (NO_x) per year; as well as “Los Alisos” Wastewater Treatment Plant, located in the state of Sonora.²⁴ Additional support has also been given to previously certified projects, \$1.5 million dollars in additional loan funds were approved for the South-South Wastewater Treatment Plant in Ciudad Juárez, Chihuahua, as well as \$65,000 dollars through NADBANK’s Community Assistant Program (CAP) grant funds for the storm drainage project in Santiago, Nuevo León.²⁵

“Since the implementation of NAFTA, BECC has certified 227 projects and NADBANK has provided more than \$2.25 billion dollars in loans and grants to finance 192 of those projects, benefitting almost 15 million residents in communities on both sides of the border.”

Environmental cooperation has been progressive and continuous. Just recently, in October 2014, the U.S. Environmental Protection Agency (EPA) granted more than \$8.6 million dollars to the Border 2020 program to help advance Mexican and U.S. environmental commitments, in addition to funding another seven environmental projects announced earlier this year. The money was allocated to projects such as “The Border Environment Infrastructure Fund,” “The Border Wastewater Treatment Plant Upgrade,” “The New River Cleanup and Education Campaign,” “Electronic Waste Management” and “Border Environmental Health Assessment.”²⁶ During this time, Mexico’s Ministry of Environment and Natural Resources (SEMARNAT) and the state of California signed a historic Memorandum of Understanding to collaborate on international climate

22 “NADB-BECC Board of Directors celebrates 20th Anniversary at Mexico City meeting,” May 12, 2014, http://www.nadb.org/pdfs/pastnadbnews/volume_18/16.pdf.

23 “Consejo Directivo del BDAN y de la COCEF celebra 20º Aniversario de las instituciones en reunión en México, D.F.,” Border Environment Cooperation Commission & North American Development Bank, May 10, 2014 http://www.nadb.org/Reports1/Press_Releases/spanish/2014/100514.htm.

24 “Proyectos certificados,” Comisión de Cooperación Ecológica Fronteriza, <http://www.cocef.org/proyectos/proyectos-certificados>.

25 “NADB-BECC Board of Directors celebrates 20th Anniversary at Mexico City meeting,” May 12, 2014, http://www.nadb.org/pdfs/pastnadbnews/volume_18/16.pdf.

26 “Efforts Expand to Improve Environment Along US-Mexico Border,” Department of State, October 8, 2014, <http://iipdigital.usembassy.gov/st/english/article/2014/10/20141008309574.html?CP.rss=true#axzz3FZUIXAUT>.

change and the environment. This agreement will help promote bilateral actions on four specific subjects: climate change, wildfires, air quality and clean vehicles.²⁷ While helping the environment, this instrument will also help support sustained economic growth in the region.

Mexico and the United States have long understood that the best path for our shared success is through investment in the most important resource we both have—our people. Therefore, both countries have partnered with organizations and institutions that foster this commitment to strengthen our human capital. In collaboration with the EPA and the Latin American and Caribbean Water Center, “*Centro del Agua para América Latina y el Caribe*” (CDA) of the Monterrey Technological Institute (ITESM), 405 workers from 20 utility companies in 13 communities in Mexico received training in the proper and efficient operation and maintenance of wastewater treatment plants.²⁸ Additionally, in June 2014, BECC and NADBANK hosted a seminar in Los Cabos, Mexico, about desalination as an alternative for ensuring the availability of drinking water.

“Mexico and the United States have long understood that the best path for our shared success is through investment in the most important resource we both have—our people.”

Border, Culture and Society

The border is more than just trade numbers; it is also about the people. It may be difficult for those who live outside the border area to fully appreciate the economic, social, and cultural impact that living in the region has on the inhabitants of the Border States. Despite the line that legally divides the two countries, Mexico and the United States have a seamless border that shares a culture and population.

The border between Mexico and the United States is an area of rich cultural exchange. Culture is part of a dynamic process in which people, beliefs and behaviors are interconnected. The flow of Mexican migrants to the United States has culturally impacted the border states. Mexican immigrants come not only from the border region, but from many different parts of the country. These immigrants take with them their knowledge and their cultural identity and expressions. Since a great amount of these immigrants decide to stay in the border region, the result is the creation of new transnational social spaces in these areas. Cultural life on both sides of the border is transformed; communities and immigrants get involved in a process of biculturalism, in which coexistence between two different cultures generate changes in both of them. This impact is not only limited to first generation immigrants, but to the whole new societies, with their own particular cultural identities that evolve generation to generation.

The inhabitants along our border today have both much and little to do with the population of the 19th or 20th centuries. Today, our border communities are full of young, talented people who might be called “*Border Millennials*” and who are, in many cases, bilingual, binational and bicultural. They were born in the era of globalization and the Internet, a NAFTA generation.

²⁷ “Semarnat y el Gobierno de California fortalecen alianza ambiental,” July 28, 2014, <http://saladeprensa.semarnat.gob.mx/index.php/noticias/1781semarnatyelgobiernodecaliforniafortalecenalianzaambiental>

²⁸ Report “Two Decades of Results 1994-2014 U.S.-Mexico Border Region”, p.6.

These “*Border Millennials*” share perspectives and beliefs that transcend nationalities and conquer stereotypes, thus facilitating new and adventurous interactions between Mexico and the United States. Simultaneously, this young population is building a new cultural identity, deepening long-standing ties between our communities. They see the border as a conduit, rather than as a barrier, and their fresh perspective translates into the political will behind binational initiatives and programs designed to foster collaboration and a better understanding. One such program is the workshop “*U.S.-Mexico Border Region; Bridging the Cultural Divide*,” which took place in February 2014, in the border city of San Diego, California, and brought together key regional leaders from the public sector to promote cultural awareness and enhance daily interactions between the Mexican community and the U.S. authorities in that area.

Academic Collaboration

The two governments established the U.S.-Mexico Bilateral Forum on Higher Education, Innovation and Research (FOBESII, acronym in Spanish), which aims to expand opportunities for educational exchanges, scientific research partnerships, cross-border innovation and to develop a 21st century workforce for our mutual economic prosperity and sustainable social development. The implementation of FOBESII is taking place under an Action Plan divided into four main pillars: academic mobility, language acquisition, workforce development, and joint research and innovation. Four standing working groups are helping ensure that these pillars move forward in 2015.

“The two governments established the U.S.-Mexico Bilateral Forum on Higher Education, Innovation and Research (FOBESII, acronym in Spanish), which aims to expand opportunities for educational exchanges, scientific research partnerships, cross-border innovation and to develop a 21st century workforce for our mutual economic prosperity and sustainable social development.”

Thanks to this increased academic collaboration, Mexico’s National Association of Universities and Higher Education Institutions (ANUIES, acronym in Spanish) initiated alliances with universities and research centers in California, Massachusetts and Texas, and launched a co-development and commercialization partnership with NASA’s Johnson Space Center, as well as one on cyber infrastructure with the University of Texas in El Paso (UTEP). It is also developing entrepreneurship, innovation and internship programs with the American Chamber of Commerce of Mexico and the California Chamber of Commerce.

We are currently working on developing binational research and innovation centers such as the recently launched Logistics and Distribution, and Advanced Nonferrous Alloys and Materials consortia. These centers add to the existing cooperation agreements between the Gulf of Mexico and the Caribbean Marine Research Institutions Consortium (CIIMAR-GOMC) and three U.S. organizations (U.S. Gulf of Mexico University Research Collaborative, the Harte Research Institute, and the Northern Gulf Institute), as well as a binational virtual center on advanced manufacturing between the National Council of Science and Technology’s (CONACYT, acronym in Spanish) Center of Advanced Technology (CIATEQ) and the University of Texas (PanAM and Austin). Likewise, the University of Arizona, through their Mirror Lab in collaboration with Harvard University, is working with the Institute of Astronomy at the National Autonomous University of

Mexico (UNAM, acronym in Spanish) and the *Instituto Nacional de Astrofísica, Óptica y Electrónica* (INAOE) to create new astronomical projects in both countries.

Moving Forward

The border region is in a period of rapid development, producing beneficial results for both our economies, and making impressive progress on structural reforms. We have established and tested that preclearance programs, which help expedite logistics and value chains at the border, can help boost regional growth. However, our shared connectivity still lacks appropriate infrastructure, technology, innovation and investment. Nonetheless, our multiple collaborative projects clearly demonstrate that Mexico and the United States are increasingly sharing a vision that commits us to work together and make improvements in those specific areas. We share a border but we are more than neighbors, we are partners in a key region which is at the forefront of the global economy.

“We share a border but we are more than neighbors, we are partners in a key region which is at the forefront of the global economy.”

While NAFTA has brought an increase in intra-regional trade of 379 percent in twenty years,²⁹ and of 556 percent in Mexico-U.S. trade, as previously mentioned, perhaps the most important change in the economic relation of the region is the growing integration of value chains. Given that we not only produce goods in each country to sell to our neighbors, but rather produce goods jointly to sell to the North American region and to third markets, any border inefficiency has an outsized impact on the competitiveness of the region as a whole. For instance, it has been estimated that auto-parts cross North American borders eight times before there is a finished car, so, in this case, inefficiencies are multiplied by a factor of eight.³⁰

However, the border is only part of the competitiveness equation for the region. Industry clusters, such as those in the automotive and aerospace industries, must be properly connected through world class infrastructure and seamless border operations. That is why, through the High Level Economic Dialogue, we are fostering the development of strategic logistics corridors, which we envisage as a set of transportation, infrastructure and logistics services that generate and facilitate the flow of trade and transport among major economic centers, or logistics nodes, involving different modes of transport (airports, roads, ports and railways) as well as logistics infrastructure (logistics platforms, containers, storage facilities, and distribution centers). This is a tall order which requires very close collaboration between government and business. Without a holistic approach to the connectivity of industrial clusters it will not be possible to unleash the complete potential derived from the economic complementarities of the region.

Moreover, the states along the border, both on the Mexican and U.S. sides, are culturally and economically linked in many important ways. It naturally makes sense to continue collaborating on policies and practices that help us attain a shared and strategic development plan. We understand that managing the border is a complex task that can only be achieved by establishing a comprehensive approach and harmonized policies in both countries, and the border should be met with compelling strategies that consolidate the economic strength of

29 Information generated by the Economic Affairs Office of the Embassy of Mexico in the United States.

30 Robert Pastor, “The Future of North America,” *Foreign Affairs*, July/August, 2008, 89.

the region. These holistic management tactics at the border will translate into benefits not only in the border region but will cause prosperity to spill over throughout both our countries.

The competitiveness and success of the border region depends on the ability of our nations to enhance our strengths and understand our needs. The best expression of our bilateral relation can be found in this region, which is the most competitive area in both countries. Furthermore, both Mexico and the United States need to strengthen intangible, yet crucial, “people to people” connections. Without them, all the infrastructure in the world is rendered meaningless. Our border is a *bona fide* asset that enriches the region far beyond cultural exchange alone.

“The best expression of our bilateral relation can be found in this region, which is the most competitive area in both countries.”

BECOMING A USEFUL TOOL FOR GOVERNMENTS

THE EVOLUTION OF THE NORTH AMERICAN DEVELOPMENT BANK

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Introduction

With the North American Free Trade Agreement (NAFTA) reaching its 20th anniversary in 2014, we have recently had the opportunity to reflect on its evolution and discuss its future prospects. There was no shortage of seminars and ceremonies in which the usual North American *movers* and *shakers* of bilateral relations relived their experiences and anecdotes, made their assessments and proffered their ideas for the future. This backdrop also provided the opportunity to take stock of what had been accomplished with a lesser known institution created in the context of the NAFTA negotiations: the North American Development Bank (NADB). Indeed, after two decades of operation, NADB celebrated its 20 anniversary with ample possibilities of becoming a more meaningful and useful tool for Mexico and the United States in their bilateral agenda and, more specifically, for their border communities. Furthermore, NADB is one of the few truly bilateral entities; its evolution provides good lessons for border management and for future institution-building.

This paper is divided into three parts. First, I recap why and how NADB came to be. As is often the case, the context in which an institution is created is extremely important. It is no secret that NADB and its sister institution, the Border Environmental Cooperation Commission (BECC), were but one piece of a bigger puzzle in securing the passage of NAFTA. While the context was broad, these institutions were designed with a clear focus on the border, where—then as now—creative solutions are needed to tackle the shared challenges both countries face. Second, I talk at greater length about NADB’s evolution. The institution has gone through various phases as part of its natural evolution: creation, consolidation, and growth. These phases are not neatly defined in chronological terms and overlap substantially. But what I really wish to emphasize is that such phases are only natural when building these types of institutions and also reflect—at least to some extent—changes in the border region. Third, I review NADB’s more recent developments and explain why NADB is better positioned today, as compared to twenty years ago, to be relevant and useful in the bilateral agenda.

“The North American Development Bank is one of the few truly bilateral entities; its evolution provides good lessons for border management and for future institution-building.”

This is not an academic paper. I am writing from a practitioner’s perspective, based on my own experience in border management and as Managing Director of NADB. I have also relied on conversations with people who have been involved with NADB over the years, my own recollection of events, and the book: *A Celebration of Progress*, published by NADB and BECC for our 20th Anniversary. Most of the relevant data cited comes from this book; however, when appropriate, I cite other sources.

One final clarification is in order. Although this paper—including its title—refers to NADB, the Bank cannot be conceived nor understood without BECC. Presently, and rightly, the institutions are in the middle of a merger process that I am convinced will make them more efficient and effective in fulfilling their mission. This paper, I hope, will explain how we got to this point.

NAFTA, the Border and the NADB

NAFTA and the terrible events of September 11, 2001 (and its aftermath) are the two factors that have had the greatest structural impact on U.S.-Mexico relations and the border region over at least the last half century. The latter event raised a new set of security concerns—mostly shared by the two countries—that fundamentally altered the movement of goods and people across the border and how this movement is perceived. It modified traditional relations among counterpart-agencies in the U.S. and Mexican governments—with the creation of the new Department of Homeland Security—and unfortunately the response to those events also disrupted life for border communities. Needless to say, at times, border security has created tense and difficult moments in bilateral relations. Other more able contributors to this book are addressing this topic. But let me just say that I believe the learning curve is proving useful, and thankfully both sides, by and large, have remained constructive as they pursue their interests while accommodating those of their neighbor.

Going back to NAFTA, we can say that in many ways it has had an even more profound and lasting effect on the relationship. The most obvious result is the tremendous growth in trade and investment through the establishment of one of the largest and most sophisticated trading blocs in the world. As is frequently cited, U.S. and Mexico trade in goods and services averages US\$1.4 billion every day. Economic integration, however, is not the only legacy of NAFTA. As Linda J. Allen points out in *The North American Agreement on Environmental Cooperation: Has It Fulfilled Its Promises and Potential? An Empirical Study of Policy Effectiveness*, NAFTA was the first trade agreement that explicitly linked trade to environmental protection goals.

In October 1992, in a ceremony in San Antonio, Texas, attended by the three North American leaders, NAFTA was initialed by their respective trade ministers, marking the formal conclusion of negotiations. However, the reconfiguration of the political landscape in the U.S. after the November 1992 election complicated the scenario. In particular, U.S. congressional approval required the negotiation of side agreements on labor and environmental standards. The North American Agreement on Environmental Cooperation came into force precisely with the objective of supporting the environmental goals of NAFTA and fostering trilateral cooperation to conserve and protect the environment.

In the U.S.-Mexico sphere, legislators and non-governmental organizations (NGOs) in the U.S. demanded that solid waste and water management problems in the border region be addressed in some way as part of the negotiations. The solution was the creation of BECC and NADB, through the *Agreement between the Government of the United States of America and the Government of the United Mexican States Concerning the Establishment of a Border Environment Cooperation Commission and a North American Development Bank* (the Charter). Indeed, these institutions were chartered with the mission of helping develop and finance environmental infrastructure in order to preserve, protect and enhance the environment of the border region.

“NAFTA was the first trade agreement that explicitly linked trade to environmental protection.”

The context and reasons behind their creation bear some consideration. First, the fact that NADB and BECC were not part of the initial vision of NAFTA, but rather a side product of a broader policy goal, weighed in the governments' initial attitude towards the institutions and in their impetus to get them going. Second, in spite

of this fact, the concerns about water and solid waste management in the border region that were voiced at the time were certainly valid. For example, according to BECC and NADB estimates based on data from Mexico's National Water Commission (COANGUA), only about 21% of wastewater in Mexican border cities was being treated in 1995. Consequently, a significant amount of untreated water was flowing into and contaminating shared river basins. Proponents of these institutions were rightly concerned not only about the existing deficit in basic infrastructure at the time, but also by the fact that population growth and urbanization in the border region would increase as a result of NAFTA. In other words, the effects of economic integration would naturally be stronger in the border region and would result in additional infrastructure needs. For example, the *State of the Border Report* estimated that the population of U.S. counties along the border grew at an average rate of 1.62% between 2000 and 2010, as compared to the national average of 0.97%. In the case of Mexico's border municipalities, these figures are 2.24% and 1.52%, respectively. The same can be said for population growth in the border states and in the geographic area in which NADB operates (100 km north of the border and 300 km south). Third, given the transboundary nature of many environmental issues, it is only natural that such issues are more prevalent in the border region and, thus, within the geographic scope of these institutions. Fourth, transboundary issues in general are not only more strongly felt in the border region, they are also more politically visible. Then, as now, the manner in which both governments approach their shared challenges in the border region is reflected in the overall bilateral agenda and frequently shapes public opinion on the bilateral relationship. In addition, it can be said that the border region frequently complains about being neglected by both federal governments. The fact that NADB and BECC were created as border institutions helps mitigate this sense of neglect. Fifth, it is safe to say that the governments are careful—even reluctant—to broach the creation of new international institutions, especially if they imply money, permanent staff and physical offices. The fact that both governments committed these elements when creating NADB and BECC is in itself important and noteworthy.

I have sometimes commented—even as its managing director—that the creation of NADB was the result of a very particular set of political and bilateral circumstances. Nevertheless, and especially in hindsight, the objectives for which it was created were relevant then and, I would argue, they are even more relevant today.

NADB'S Evolution

NADB and BECC formally initiated operations in 1994 and began what I would call an initial or *construction* phase. Beyond the agreement of both countries to create them and the broad objectives and functions set forth in their Charter, there was not much of a blueprint.

Naturally, it was necessary to install their respective boards, establish their offices, hire personnel—including the first management teams—and develop policies and procedures in accordance with their objectives, functions and responsibilities as set forth in the Charter. BECC developed its first set of certification criteria, while NADB developed loan and guaranty policies and operating procedures based on sound banking principles and standard market practices. The first project certification did not take place until 1995, and the first loan—for a water treatment plant in Brawley, California—was not contracted until 1997.

As part of their initial efforts, BECC and NADB encountered various obstacles that had to be addressed in order to certify and finance viable projects. The most salient of these challenges were: lending in sectors historically

considered difficult from a banking standpoint; in some cases limited institutional capacity on the part of local project sponsors to plan and develop projects; limited fiscal resources and creditworthiness at the local level; and, in general, a lack of projects ready for financing and implementation. Clearly, there was substantial need for safe drinking water, adequate wastewater treatment, and proper solid waste disposal facilities, but relatively few projects had been developed to address these deficiencies. In many cases, projects were mere concepts with no actual design and only preliminary cost estimates. These problems were—and to a large extent are—more prevalent in Mexico. However, in the U.S., NADB encountered difficulty in providing competitive terms and value added as a development bank, given the existence of a well-developed municipal bond market that offers tax benefits and a comprehensive array of financial advisors.

To address these issues, NADB began pursuing several program initiatives aimed at bolstering the creditworthiness of project sponsors and making infrastructure more affordable for border communities. At the same time, BECC looked for ways to improve the planning and design of projects submitted for certification. Both institutions began offering technical assistance grants to communities and local utilities. BECC mainly concentrated on project development activities aimed at increasing project readiness for certification and financing, while NADB focused on institutional capacity-building measures aimed at helping utilities improve service efficiency and increase revenue streams, thereby enhancing their creditworthiness and long-term sustainability.

In 1996, NADB and BECC engaged the U.S. Environmental Protection Agency (EPA) and other potential grant agencies in discussions regarding appropriate mechanisms through which available grant resources could be channeled to projects in both countries. As a result, EPA awarded BECC an initial US\$10 million grant to support development of water and wastewater projects on both sides of the border through the Project Development Assistance Program (PDAP). Likewise, EPA signed a cooperative agreement with NADB establishing the Border Environment Infrastructure Fund (BEIF) with an initial contribution of US\$170 million in grant funding for water and wastewater facilities in both the U.S. and Mexico. During this period, BECC and NADB also continued to strengthen relationships with other agencies, local stakeholder groups and advocacy organizations working on environmental issues in the border region and became instrumental in convening these organizations on a regular basis to discuss shared objectives and resolve issues. The role played by EPA through its funding was significant, as it catalyzed investment from the Mexican National Water Commission (CONAGUA) for water and wastewater projects in the Mexican border region. BECC and NADB became effective advocates for the interests of the border region, helping to bring border infrastructure issues to the attention of state and federal agencies, as well as elected officials who could contribute to the successful development and implementation of projects. These programs and the collaboration with EPA and CONAGUA allowed BECC and NADB to begin implementing many priority water and wastewater projects in the border region and have been quite successful throughout the 20 years of operation.

NADB, working with its board, was also able to resolve issues associated with its lending to state and local public entities in Mexico. Mexico's Treasury Department (SHCP) agreed to extend an exchange risk coverage mechanism (FOAEM) to include NADB, thus allowing the Bank to use its dollar resources to make loans in pesos, while keeping financing costs low. The NADB Board approved the creation of a "SOFOL," a type of Mexican financial institution authorized to make loans to a specific sector—in this case, environmental infrastructure. By 1998, *Corporación Financiera de América del Norte, S.A. de C.V. SOFOL* (COFIDAN) was fully established, serving as a mechanism to channel NADB loans to state and local public entities in Mexico.

NADB took its capacity-building efforts a step further in 1999 by launching the Utility Management Institute (UMI), which provides an annual series of seminars on financial administration and planning for water utilities. That same year, the NADB Board approved using a limited portion of the Bank's retained earnings to establish the Solid Waste Environmental Program (SWEP) to help compensate for the lack of government funding available in the solid waste sector.

Given the heavy reliance on grants in the water and solid waste sectors, coupled with growing concerns that the Bank's resources were being underutilized, NADB and BECC began working with stakeholders to explore additional environmental sectors within the scope of the Charter where the institutions could have a positive impact. The NADB Board brought together experts in various fields to assess potential new areas of activity for the two institutions. By the end of 2000, the BECC and NADB Boards had approved resolutions expanding the sectors that the institutions could serve, while maintaining drinking water, wastewater treatment and solid waste management as priorities. Projects qualifying as "related matters" under the Charter were defined as water conservation, water and sewer hookups, waste recycling and reduction, and hazardous waste. A second group of environmental projects was also added to include air quality, clean and efficient energy, public transportation and municipal planning.

Several observations can be made about this initial or *construction* phase. First, it can be argued that NADB was the first *green bank* ever created. Yet, as I mentioned earlier, there was not much of a blueprint. Implementing what the Charter establishes took more time than was probably expected. Secondly, if one looks at the raw numbers for the first five years of operations, the results are mixed. By the close of 2000, NADB had approved only seven loans totaling US\$11 million—a very small fraction of the banks approved paid-in capital. BECC had certified 43 environmental infrastructure projects, representing a total investment of more than US\$968 million. The sponsors of 35 of those projects had requested financing from NADB, but mainly in the form of grants from the BEIF program, though which 25 grants totaling US\$274 million had been contracted. Third, water and solid waste management—priority sectors according to the Charter—traditionally relied heavily on grants in both countries. Therefore, the structuring of bankable projects in these sectors has always been a challenge. The decision to gradually open operations for new environmental infrastructure sectors proved to be a turning point in making these institutions more useful. Fourth, in spite of the relatively modest results in terms of the actual financing contracted (especially in loans), the decision to promote specific technical assistance efforts and resources—whether for project development or institutional strengthening of potential project sponsors—has become a crucial part of the value added provided by both institutions. Finally, the unique arrangement established under the Charter—namely that of having two separate institutions and boards with the same objectives sharing responsibility for different parts of the same process, has implied a long learning curve. I will comment more about this later.

“...it can be argued that NADB was the first green bank ever created.”

Along with significant advances in infrastructure in the border region came recognition that there was still much to accomplish. Public discussion intensified among elected officials, policy research and advocacy groups, and other border stakeholders regarding *maximizing the capacity* of BECC and NADB to support the development of needed infrastructure. This renewed interest was also spurred by the start of new presidential administrations in both countries. These discussions culminated in a set of initiatives agreed to by Presidents George W. Bush

and Vicente Fox in March 2002. Most notably, the agreement called for the establishment of a single board of directors for the two institutions and expansion of their geographic mandate to 300 kilometers south of the border into Mexico.

While these reform initiatives worked their way through the respective legislatures of Mexico and the U.S., projects continued to be certified and financed, including the first air quality improvement projects through street paving. Additionally, drought conditions in the Rio Grande watershed prompted the creation of the Water Conservation Investment Fund (WCIF), which would direct US\$80 million in retained earnings from NADB toward infrastructure improvements in irrigation districts on both sides of the border that would ultimately yield significant water savings on an annual basis. The reform initiatives were approved by the Mexican Senate and the U.S. Congress, and the amended BECC-NADB Charter went into effect on August 6, 2004.

The Charter reform was crucial in the *consolidation* of NADB and BECC. Not only did it provide for a better operational structure and increase the potential pipeline of environmental infrastructure projects by expanding the geographical mandate in Mexico, it also represented the renewed commitment of both governments to the institutions and their purpose. In fact, prior to the reform, there were discussions about the possibility of closing NADB in Mexico's government. Personally, I have always argued that closing NADB would have been a very bad decision, reflecting poorly on the overall bilateral relationship and contributing to a sense of negligence regarding the border region. Nevertheless, one cannot deny the central argument behind this idea. At that time, NADB's loan portfolio was much lower than its paid-in capital, and its loan income was not sufficient to cover its operating expenses. Fortunately, discussions were turned towards making the institution operate better and more efficiently.

“[The charter reform] represented the renewed commitment of both governments to the institutions and their purpose.”

In this sense, the new board of directors approved a series of recommendations derived from a comprehensive business process review of both institutions. Among the most significant changes were steps taken to streamline the project development process by making project certification and financing approval a simultaneous action of the board. Standardized operating procedures were also approved, aligning BECC's project certification process with NADB's financial analysis into a single, integrated project development cycle. In addition, the certification criteria were revised to recognize the distinct nature of projects sponsored by private-sector entities, while the Bank's loan policies and procedures were revised to make its lending program more accessible to qualified borrowers.

By December 2006, BECC had certified 115 environmental infrastructure projects, and NADB had approved US\$260.7 million in loans for 37 projects, US\$493.9 million in BEIF grants for 55 water and wastewater projects, US\$4.5 million in SWEP grants for nine solid waste projects and US\$76.4 million in WCIF grants for 19 water conservation projects. At the close of 2006, 43 BECC-certified projects financed by NADB had been completed and were in operation.

With the project development process fully aligned under a single board of directors, project certification and financing began to grow at a consistent pace. Projects in the air quality and renewable energy sectors, along with

an increase in construction starts in the water and wastewater sector, catalyzed growth in lending. Operationally, the two institutions made important strides in efficiency and in reducing the time between funding approval and disbursement. Consequently, the Bank's loan portfolio grew 284% in the three-year period between December 2006 and 2009.

Working with state and federal agencies, as well as local border communities, BECC and NADB initiated a results measurement program to assess and report on the impact of completed projects. Through this process, clear goals and indicators for each certified project are established, and information on results helps shape the development of future programs and resource strategies and serves as a tool for reporting on the effectiveness of the two institutions in accomplishing their mission.

Additionally, during this period, BECC demonstrated its added value beyond the certification of projects through its support of EPA and the Mexican Ministry of Environment and Natural Resources (SEMARNAT) in the administration of the U.S.-Mexico Border 2012 Program (now the Border 2020 Program), which included various studies, such as paving and needs assessments in the Mexican border states, in order to more effectively channel assistance to community needs. This successful collaboration has continued and grown, with BECC identifying, procuring and managing specific projects within the goals of the program in the areas of water, soil, air, environmental health, emergency response, and other environmental management issues.

Recent Developments and Future Outlook

Steady growth in the number of projects certified and seeking NADB financing required the Bank to look to the financial markets to leverage its capital subscriptions into additional funding for its lending program. To facilitate this effort, NADB obtained its first credit ratings—Aaa from Moody's Investor Service and AA+ from Standard & Poor's—and placed its first public debt issuance for US\$250 million in February 2010. By the close of 2010, BECC had certified a total of 175 projects, and NADB had contracted US\$1.22 billion in loans and grants to finance 149 of those projects. NADB's loan portfolio stood at US\$470.2 million, representing an average annual growth rate of 56% for the four-year period between December 2006 and 2010. A total of 99 projects had been fully implemented.

As new leadership took the helm at both BECC and NADB towards the end of 2010, it was determined that the capacity of the institutions to accomplish their mission would depend on their ability to adapt to four key factors: (a) a drastic reduction in the funding available for the BEIF program; (b) the need to work increasingly with private-sector sponsors and project finance structures and a general trend towards the use of public-private partnerships for infrastructure financing; (c) improved follow-up on projects after financial closing, during implementation and in assessing their impact; and (d) better use of technical assistance resources by focusing them more on project development.

Based on these factors, a series of strategic initiatives were promoted. One of the most important was achieving the full integration of both institutions. The decision to establish them as separate institutions was largely a matter of circumstance and not necessarily based on elements of structural and operational efficiency. Over the years, enabling both institutions to better fulfill their mission had, to a great extent, required the U.S. and Mexican governments to make decisions and take actions aimed at integrating various institutional and

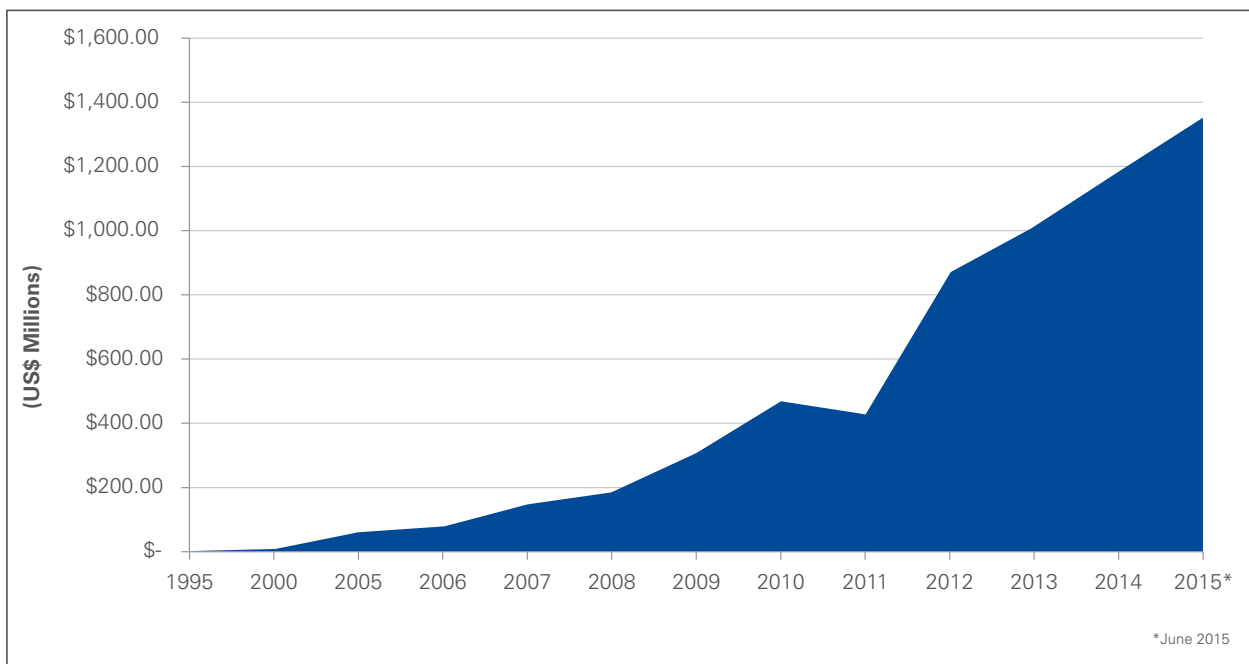
operational aspects of BECC and NADB. In 2014, the board of directors approved a resolution recommending that the governments of the United States and Mexico proceed with the integration of NADB and BECC.

During this period, BECC and NADB entered the renewable energy field with the certification and financing of its first solar project, a 23-megawatt photovoltaic plant in Imperial Valley, California. The development of clean and renewable energy had become a policy priority for both countries, and the border region offered ideal conditions for solar and wind energy projects. This expansion was endorsed by the board of directors through a resolution in support of energy transmission and distribution infrastructure, public transportation, and the production of goods and services in the border region designed to enhance or protect the environment.

Parallel to this growth, NADB and BECC expanded efforts to serve smaller communities with little or no debt capacity. The Community Assistance Program (CAP) was created to provide grants for the implementation of small, but critical environmental infrastructure projects in low-income communities. In the same action, the board agreed to consolidate all the Bank’s grant financing activity funded from its retained earnings under the new program.

In the past few years, NADB has experienced significant growth in its lending operations. As a result, the Bank has now tapped the international markets through successful bond issuances amounting to more than one billion dollars. Similarly, NADB is increasingly working with other financial institutions—both public and private—to co-finance projects. This collaboration is important considering the emphasis that the Charter gives to leveraging other sources of funding, including private sources. From a financial standpoint, NADB has become a more complex operation. Whereas in 2000, the amount of loans outstanding per employee was US\$0.15 million, in 2014 this figure had reached US\$20.43 million. In this regard, NADB initiated a review of its operational risk profile and created a new risk management area.

NADB Loan Portfolio



At the governance level, the United States and Mexico have continued to demonstrate strong shareholder support for BECC and NADB. In September 2013, the two governments launched a High-Level Economic Dialogue (HLED) to advance strategic economic and commercial priorities central to promoting mutual economic growth, job creation and global competitiveness. Making effective use of BECC and NADB was also recognized as an objective within the HLED framework.

“In the past few years, NADB has experienced significant growth in its lending operations. As a result, the Bank has now tapped the international markets through successful bond issuances amounting to more than one billion dollars.”

In this context, the rapid growth of its portfolio combined with a robust pipeline of projects prompted NADB to propose its first capital increase, which at the time this essay was written was being discussed as part of the federal budget in Mexico and the United States.

At 20 years of operation, BECC and NADB have evolved into institutions that are having a transformative impact on the quality of life in the border region. At the close of 2014, BECC had certified 243 projects and NADB had contracted US\$2.40 billion in loan and grant financing to support the implementation of 204 of those projects. These projects are producing tangible results, especially with regard to wastewater treatment coverage along the Mexican border, which has increased from 21% in 1995 to 87% in 2012. Water savings in irrigation districts are estimated at 371,000 acre-feet a year, sufficient to supply drinking water to four million residents. Solid waste projects are enabling proper management of 1,550 tons of waste a day. In air quality, paving projects in various Mexican communities are helping eliminate about 170,000 tons of vehicular dust (PM₁₀) a year. Finally, renewable energy projects are helping to avoid the release of 2.1 million metric tons/year of carbon dioxide and other greenhouse gases.

Despite these important accomplishments, much remains to be done. Moreover, as I mentioned in the introduction, the reasons why NADB and BECC were created are even more important now than twenty years ago. Good environmental stewardship has rightly gained prominence worldwide and in the bilateral agenda. Water will continue to be a priority for the border region, beyond supplying safe drinking water and adequate wastewater collection and treatment, areas where we have traditionally concentrated. The border region is in need of a comprehensive sustainability plan with conservation and efficient water management as the key objective. This will require significant cooperation among different authorities from both sides of the border, as well as considerable investments in infrastructure. Given its bilateral nature and the experience accumulated over 20 years, NADB can and should continue to play an important role.

Also, in recent years, Mexico and the United States have taken a prominent role in addressing climate change and global warming, and this has naturally become part of the bilateral agenda. Both countries now have legislation or regulations at the state and federal level with ambitious clean energy standards. In recent years NADB has proven its capacity to help develop and finance projects that support achievement of these standards. A good example is the Bank's leading role in the first trans-border renewable energy project, which produces wind energy in Mexico that is sold to the United States. In this same realm, energy efficiency is fast becoming an important objective for both the private and public sector. Most of the efforts that NADB and BECC have conducted so far have been in technical assistance, intended to develop eligible projects in industrial plants (i.e. *maquiladoras*), public lighting, and water utilities, which consume substantial amounts of electricity. In the area of solid waste management, dynamic economic activity demands creative solutions for recycling, for example in e-waste. As bilateral trade continues to grow, improving port-of-entry (POE) infrastructure has become a key element of the regional competitiveness equation. In spite of significant efforts by both governments, in some cases, congestion and thus border wait-times continue to be a problem, which not only affects border communities and businesses, but also has adverse effects on the air quality in the border region. NADB is poised to play a more active role in helping both governments develop POE projects and structure innovative schemes to finance them.

“NADB has over the years made important contributions to the border region and the bilateral relationship, and it is today well positioned to serve an even larger role in this ongoing endeavor.”

The U.S.-Mexico border is frequently referred to as unique, complex, dynamic and full of challenges and opportunities. The manner in which both governments face these challenges and capitalize on these opportunities, frequently reflects upon the overall bilateral relationship and how it is perceived in our countries and worldwide. NADB has over the years made important contributions to the border region and the bilateral relationship, and it is today well positioned to serve an even larger role in this ongoing endeavor.

LESSONS FROM THE DEVELOPMENT OF BINATIONAL AND CIVIL SOCIETY COOPERATION ON WATER MANAGEMENT AT THE U.S.-MEXICO BORDER

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* The authors wish to thank Raúl Rodríguez-Barocio for his precious insight. He read an early draft of this text and provided extremely useful comments.

“Every day, God gives a hand to the big river, the Rio Grande, so it can go up to the balcony and roll on the floor mats of his anteroom, but now the land is dry and the river can do nothing for her, except planting stakes to guide its course and its passengers, because this is where all would be lost if it were not for the protection of the Guadalupe Mountains to return the river to its bosom, rio grande, rio bravo.”
- Carlos Fuentes, *The Crystal Frontier*, 1996

Introduction

Mexico and the United States are partners in a number of agreements that imply joint management of natural resources.

Along their 1,954 mile-long border straddle unique ecosystems and natural protected areas that lie across the border from each other, such as Big Bend National Park and the Maderas del Carmen Biosphere Reserve, or the Organ Pipe National Monument and the El Pinacate and Desierto del Altar Biosphere Reserve.

The two countries share water resources in the Colorado and Tijuana river basins, and in the Rio Grande basin; the joint utilization of their waters is defined by the Treaty of February 3, 1944 and its Minutes (referred to as ‘The Treaty’ hereinafter).

In this essay, we argue that—since ecosystems do not respect national boundaries—binational cooperation on cross-border environmental issues is a must. Environmental issues must be seen as an integral part of border affairs and border management. Economic, security and environmental issues are all inter-related and must be addressed as such. Further, we believe that civil society activism and inter-governmental cooperation have played mutually reinforcing roles in improving the way that the two countries manage natural resources and moving towards a truly regional approach in a binational context.

Civil society has been a key driver of international cooperation on water management and other environmental issues; therefore, governments in both countries should invite and embrace civil society participation, and should study the organized support of civil society on water issues as a potential model for participation in other areas: security, economics, and migration. The question arises as to whether national perspectives are conducive to a shared, efficient management of natural resources between two countries, or if a natural-ecosystems approach with regional emphasis is a more viable option.

Mexico and the United States have had a long and productive history of sharing water resources along its common border, which dates back to at least 1906, with the Convention for Equitable Distribution of the Waters of the Rio Grande. For over a century, matters of water distribution, water quality and sharing of infrastructure have been crucial to the development of the border region, as well as for bilateral relations, with cycles and oscillations in the degree of tension and amicability between both countries strongly linked to water availability. From a formal standpoint, differences in the position of both federal governments have been consensual in all but one incident that took place from 2004 to 2007: the lining of the All-American Canal.

The high point of the relationship, up until that point in time, may well have been the signing of The Treaty in 1944. But in the aftermath of the All-American Canal controversy, a new high was reached with the signing of Minute 319, a comprehensive agreement that reshapes the way in which both countries will manage the Colorado River.

In this article, we focus on Minute No. 319 of the 1944 Treaty between the United States of America and Mexico for the Utilization of Waters of the Colorado and Tijuana Rivers and of the Rio Grande as a potential model the other two watersheds. The Minute was signed by both countries on November 20, 1944 in Coronado, California, and is a landmark event in the joint management of a trans-boundary/shared natural resource such as the Colorado River and its delta.

The process officially began in 2007, with a joint statement/communiqué between U.S. Department of Interior Secretary Dirk Kempthorne and Mexican Ambassador Arturo Sarukhán, aimed at addressing cooperative measures on the Colorado River. But in fact, bilateral cooperative measures started about a decade earlier, with environmental advocacy organizations on both sides of the border working to generate interest, the necessary science and policy proposals in order to promote restoration of the dying delta.

While cities and irrigation districts across the American Southwest flourished, thanks to the steady and reliable supply of water stored behind the dams of the Colorado River, the disruption of the river's natural flow severely impacted ecosystems, mainly its riparian corridor and its delta. A unique ecosystem of wetlands surrounded by desert once spanned two million acres, 90 percent of which gradually disappeared over the course of 50 years building the river's current infrastructure.

“Civil society has been a key driver of international cooperation on water management and other environmental issues.”

The concern of the environmental NGO community from both sides of the border became part of the formal nation to nation dialogue in December 2000, with the signing of Minute 306, a “Conceptual Framework” for “future recommendations concerning the riparian and estuarine ecology” of the Colorado River.¹ In practice, the governance of the river had begun to evolve in response to changes occurring to its physical environment, namely its ecosystems and its water availability.

By 2001, the river's water users, the seven Basin States, had begun discussions on a new set of management criteria to address the imminent shortage looming in the watershed, evidenced by the declining levels in Lake Mead. In the years that ensued the signing of Minute 306, the NGOs became increasingly present in river related discussions and meetings, advocating for restoration of the aquatic ecosystems along the Colorado. In 2005, a joint effort by advocacy groups and government agencies produced the *Conservation Priorities in the Colorado River Delta: Mexico and the United States*, which became an influential document due to the level of consensus reached on the measures outlined and the detail contained in the work. The NGO community also introduced policy options to address the declining levels in Lake Mead with a document under the title

¹ International Boundary and Water Commission, Minute 306, “Conceptual Framework for the United States-Mexico Studies for Future Recommendations Concerning the Riparian and Estuarine Ecology of the Limitrophe Section of the Colorado River and its Associated Delta”. December 12, 2000. El Paso, TX.

“Conservation Before Shortage,” authored by several NGOs and presented to the U.S. Bureau of Reclamation² as a result of a process parallel to the discussions held by the Bureau and the seven basin states.

In 2010, Minute 317 became the official birth certificate for what was already known as the Colorado River Joint U.S.-Mexico Cooperative Process. Six months later, Minute 318 was signed in response to a historical earthquake of a 7.2 magnitude on the Richter scale that occurred on April 4, 2010, which devastated the irrigation infrastructure in the Mexicali Valley.

The event left Mexico without the possibility of distributing its full allotment of water, and prompted negotiators on both sides of the border to address immediate needs first, before taking on a long term view. Minute 319 became the next natural step in bilateral collaboration on the Colorado River. But it would take two long years of talks to figure out all the details in order to take that final step.

More specifically, we will examine two elements of Minute 319 that provided an added dimension to the new agreement: societal participation in the discussions, and a regional approach to a binational issue. We believe that the ongoing cooperation between non-state actors and the different levels of government in the U.S.-Mexican Border region enabled these societal stakeholders to exert a positive influence on water management policy for both nations. We further believe that a regional perspective became the only practical, viable option in the binational negotiation, thereby opening up previously untested mechanisms for joint water management.

In the course of our discussion, we will distinguish a set of terms that are generally used interchangeably:

A *bilateral* approach, by definition, includes two sides, and each side can take a different position on any given issue of common or mutual impact. A *bi-national* approach involves an action of two nations, which we will assume implies the participation of the national capitals.

A *trans-border* or *transboundary* approach focuses on phenomena that occur at a large scale in the border region, irrespective of where the political boundary is located.

This paper takes a trans-border, integral approach from a regional perspective: the common thread will be territorial sustainability and the social wellbeing of the population.

We take as our point of departure the continuum of nature, the integrality of an ecosystem, and the interdependence between the two countries, which means that anything—positive or negative—that happens on one side of the border has an effect on the other side.

The aim of the citizen organizations whose work we discuss in this paper is to contribute to the construction and development of a unified bilateral model of environmental management in the U.S.-Mexico border. The main challenges to be tackled are posed not only by the very different institutional frameworks between the two countries, but also by the increasing effects on water resources caused by global warming and climate change.

² An initial version of the document came out in July 2005, revised in July 2006 as the Seven Basin States proposed changes to the U.S.BOR shortage guidelines.

Water and Borders

Water flows and political boundaries are two different realities. One concept seems to negate the other. Throughout the world, rivers can crisscross political boundaries or act as a political boundary between two nations, or crisscross a boundary and then become it, as it actually happens in the case of the United States and Mexico. Both rivers and political boundaries exist with total disregard for each other. Therefore, it seems ironic that the agency entrusted by the two nations to regulate their shared water resources would bear, within its name, the merging of both concepts: the *International Boundary and Water Commission*.

Nevertheless, despite the fundamental contradiction of water flows and political boundaries, more often than not, public policy on water, whether domestic or international, is subordinated to these artificial, humanly constructed barriers. From the environmental perspective, subordinating water flows and ecosystem conservation to artificial barriers implies segmenting natural systems, hindering their functionality and engaging in piecemeal solutions to a complex problem.

When an international political boundary is the cause of the split or segmentation, the data gathering, decision making and policies altogether can be totally disjointed, and the results in terms of ecosystem quality and habitat assessment can only be suboptimal.

The geography of Mexico and the United States posed this challenge of managing shared ecosystems and three watersheds since their common border was finally settled in 1848. As we stated at the start of this text, the 1944 Treaty between Mexico and the United States encompasses three river basins: the Colorado River Basin, the Tijuana River Basin and the Rio Grande / Rio Bravo basin. The two nations jointly determined how each of the basins would be managed and how to distribute the costs and benefits of the three joint watersheds, in what was clearly a diplomatic arrangement of two sovereign nations. But, what does the local and regional society want and need today regarding the management of water resources in the three river basins along the U.S.-Mexico border? What kind of expectations would a joint, long-term vision include?

The Treaty allegedly responded to the first question over seven decades ago, although much water has gone under the bridge since. Population growth, economic development, and environmental awareness have changed dramatically in the 70-plus years since the negotiation, with very little regional input as yet in this binational accord.

This interplay between economic development and natural resources, and other issues that both countries face with respect to the management of their shared water resources, underscore the importance of the Treaty being up to date and able to rise to these daunting challenges.

“The geography of Mexico and the United States posed this challenge of managing shared ecosystems and three watersheds since their common border was finally settled in 1848.”

IBWC: The Institution in the Middle

In 2014, the International Boundary and Water Commission/Comisión Internacional de Límites y Aguas (IBWC/CILA) celebrated 125 years of operation. The record speaks of enormous experience and even success, but also raises the issue of inertia and the preservation of a status quo. Much has been written about the modus operandi and accomplishments of the IBWC/CILA (Ingram and White, 1993; Mumme, 2001; Mumme and Pineda, 2002; Ingram, 2004; Kelly and Székely, 2004; Mumme, 2005; Maganda, 2012), considered by many a model for other international borders or for managing other U.S.-Mexico Border issues.

Yet, many of the writings leave a wake of dissatisfaction with the agency, and express expectations exceeding results. It is also true that never before had the IBWC/CILA been faced with the level of challenges that currently are present with regards to water management in the U.S.-Mexico Border. Never before has there been a drought as prolonged as the current 2000-2015 drought in the Southwest U.S./Northwest of Mexico, and recently NASA scientist Benjamin Cook and other colleagues in the journal *Science Advances* (Cook, Ault and Smerdon, 2015) have predicted that a “megadrought” lies ahead in the decades to come.³

In this context of increasing demand for and decreasing supply of water in the western portion of the U.S.-Mexico Border region, there is a heightened need for reviewing the institutional framework with which both countries will address the looming crisis. In their analysis of IBWC/CILA as a border institution, Ingram and White (1993) note how each “section represents the interest of its own country and is responsible to its own government” (p.153). Furthermore, the authors add:

[The] IBWC is a low visibility institution which usually operates at technical and bureaucratic governmental levels. While different from and preferable to unilateral action in response to shared problems, the parallel national actions undertaken by the IBWC fall considerably short of true binationalism. In recent years the IBWC has received criticism for its failure to aggressively address problems before they become critical, for failure to be environmentally sensitive, and for failure to include state and local governments and nongovernmental organizations (NGOs) in its decision-making process (p. 154).

The fact that Helen Ingram and David White wrote this analysis more than 20 years ago speaks of how institutional shortcomings will persistently undermine the goals the institutions were created for in the first place. The phenomenon, which we have referred to as “sovereignty over integrality,” was observed a generation ago, and continues (and will continue) to haunt IBWC/CILA unless a repositioning of the organization takes place, before the water crisis reaches a level of diplomatic proportions.

Kelly and Székely (2004), advocate for a modernization of the IBWC, which they believe requires that both governments place a higher priority on border issues, as well as more integration of both sections of the Commission, and greater influence on decision making over water management in the Border States. The call resembles that of other voices,⁴ which consider that IBWC/CILA should bear a quasi-supranational authority over the shared waters of the two countries. And while, politically speaking, there is a small likelihood of

3 See, for instance, “Worst Drought in 1000 Years Predicted for American West,” Brian Clark Howard, National Geographic, <http://news.nationalgeographic.com/news/2015/02/150212-megadrought-southwest-water-climate-environment/>. September 2015.

4 In a personal communication with Raúl Rodríguez-Barocio, former Managing Director of the North American Development Bank, he points to the need to examine and debate the possibility.

this happening, these observers are simply pointing to the apparent schizophrenia of IBWC/CILA, acting as a presumably neutral technical arbitrator while at the same time representing the interests of each section's respective country. The dilemma begs the question about how the Treaty defines the Commission's authority for decision making in the three international watersheds.

The Treaty offers guidance, but is not very specific. Article 2 of the Treaty states:

The application of the present Treaty, **the regulation and exercise of the rights and obligations which the two Governments assume thereunder, and the settlement of all disputes to which its observance and execution may give rise are hereby entrusted to the International Boundary and Water Commission**, which shall function in conformity with the powers and limitations set forth in this Treaty. **The Commission shall in all respects have the status of an international body**, and shall consist of a United States Section and a Mexican Section. (Emphasis added by authors)

The previous text suggests that the Commission's authority on water management issues at the border may already be inscribed in the Treaty. Plainly said, the Treaty unequivocally awards the Commission *in all respects...* the status of *an international body*, and has entrusted this international body with the mandate to *exercise* and *regulate* the rights and obligations assumed by the two Governments. It is also interesting to note that the character of the Commission as an international body is only true ("shall consist of") when the *United States Section and [the] Mexican Section* act in unison. In short, IBWC/CILA is very likely already the agency that both countries need in order to navigate beyond the troubled waters (or lack thereof) of the current drought and possible megadrought.

In any event, clarifying duties and authority for IBWC/CILA while avoiding turf wars with CONAGUA⁵ in Mexico and USBOR in the United States, will require for an explicit intervention from the highest levels of both governments.

The Shared Watersheds

The historical antecedents and framing of how the United States and Mexico manage their shared water resources at the border has three very distinct and different expressions in each of the three watersheds. This section describes recent developments in the management of two of these three watersheds: the Colorado River and the Tijuana River watersheds.

The Colorado River Watershed

Work on the Colorado River basin may be the poster child of how a narrowly focused (water) government driven policy evolves into a multi-thematic (water, salinity, environment, joint projects, joint water management), multi-sectorial (governments, academia, NGOs, society) approach. IBWC/CILA's stigma of not being environmental and not working with society has all but disappeared, as demonstrated by more than 15 years of joint, steady, cooperative work through governmental-no-governmental partnerships. The two obvious official landmarks, which stand as bookends in the recent history of the Colorado River, are Minute 306 (2000)

⁵ Mexico's National Water Commission, *Comisión Nacional del Agua*.

and Minute 319 (2012). The former introduced the concept of ecological restoration into the Commission's Minute framework; the latter provided the definitive statement to that effect to a greater extent than any previous legal instrument. Moreover, it provided a whole new platform for engaging regional stakeholders in the solutions to future challenges by making the binational agreement work to keep the physical elements of the region connected beyond the border.

The achievements of Minute 319 include:

- contingency plans for low reservoir conditions;
- storage capacity for both countries past the yearly cycles, and a release protocol in the event of water shortages;
- a model for cross-border investments in infrastructure for water conservation and improved efficiency; and,
- a joint approach to restoring valuable delta resources.

The contributions of societal players in expanding the working are numerous and have already been highlighted in the introductory sections of this essay. Most noteworthy of all elements is the fact that a binational coalition of CSO provided as much water to the international agreement as that contributed by each of the countries. The component of Minute 319 known as "Water for the Environment" assigned two thirds of the water dedicated for environmental restoration (130 million cubic meters—MCM) to a pulse flow for flooding purposes, which took place between March 23 and May 18 2014 and was provided by the two countries, one third each country. An additional commitment of 65 MCM was provided for base flow/site irrigation purposes by the binational coalition of CSO.

History should record the work of individuals like Jennifer Pitt and Peter Culp, who pioneered the Conservation Before Shortage proposal;⁶ the work of Osvel Hinojosa and Francisco Zamora in mapping the conservation priorities and crafting a protocol for fieldwork in wetland restoration; or the work of Yamilet Carrillo in devising ways of how to etch out, from within the annual allocation for agriculture, enough water for riparian restoration. By the same token, history should also reward the many government officials at the U.S. Bureau of Reclamation, IBWC, CILA and CONAGUA for opening up a dialogue and creating a bigger tent where all of the river's stakeholders could exchange ideas, domestically or across the border, formally or informally, until the proper mix of ideas and policies were in place to move forward on the agreement.

But collectively, the Colorado River and Minute 319 offer an extraordinary example of how *advocacy coalitions*⁷ form and gravitate around a common goal. It produced the first international agreement in history to dedicate

6 The concept of Conservation Before Shortage was formally promoted by Defenders of Wildlife, Environmental Defense, National Wildlife Federation, Pacific Institute, Sierra Club and the Sonoran Institute in 2005. Interestingly, a recent proposal under the name System Conservation put forth by water users of the Colorado River, like the Southern Nevada Water Authority, California's Metropolitan Water District and others is based on the same principles. See, for instance, <http://www.circleofblue.org/waternews/2015/world/colorado-river-basin-conservation-agreements-take-shape/>.

7 The Advocacy Coalition Framework (ACF) is a concept that was developed in the late 1980s/early 1990s by several political scientist and policy implementation authors, mainly Paul Sabatier, H. Jenkins-Smith and Daniel Mazmanian and others. See, for instance, *The Nature of Policy Change and Implementation: A Review of Different Theoretical Approaches*. Lucie Cerna, OECD. <http://www.oecd.org/edu/cei/The%20Nature%20of%20Policy%20Change%20and%20Implementation.pdf>

freshwater environmental flows out of the international agreement.⁸

In the context of the entire U.S.-Mexico Border, Minute 319 is a landmark agreement in how it resolved regional and environmental issues within an international agreement.⁹ But what remains to be seen is whether Minute 319, and the precursor Minutes 316, 317 and 318, offer lessons for the rest of the shared rivers.

The Tijuana River Watershed

When the 1944 Treaty was signed, the population of San Diego County was a little over half a million inhabitants; it grew six-fold to 3.26 million people in 2014. The metropolitan area of Tijuana, which includes the city itself and parts of the municipalities of Playas de Tijuana, Rosarito, and Tecate, increased its population twenty five-fold from 59,952 inhabitants in 1950 to 1.559 million, according to the 2010 census. Furthermore, the rapid increase in economic activity has transformed this metropolitan area into a North American hub for the naval, military, air & space, electronics, medical & biotech industries.

Nowadays, the Tijuana-San Diego mega-region is an urban sprawl of close to five million people, three on the U.S. side and two on the Mexican side. It has the busiest border crossing point in the world, and a high-tech hub with a vibrant software industry, who's shared U.S.-Mexico production, uses inputs and talent from both sides of the border.

The environmental challenges range from very scarce rainfall, highly concentrated in a few months of the year, to a high demand for energy to transport water from the Colorado River more than 150 kilometers all the way to the Pacific coast, to air pollution caused by a relatively high automobile per capita usage.

Additionally, the coastal region was endowed with vegetation communities with a very high rate of endemic species, unique ecosystems like coastal sage scrub, chaparral scrub, and conifer forests that crown the sierras such as Cleveland National Forest and the Sierra de Juárez and Sierra de San Pedro Mártir. And at the tail end of the Tijuana River watershed lies an estuarine research reserve that is one of the few remaining saltwater estuaries in the Californias, with several endangered species and scarce habitat within its boundaries.

Seen in the context of the U.S.-Mexico border, the Tijuana River Watershed (TRW) is an interesting case for pursuing a holistic approach to managing a transboundary basin. Its size is relatively manageable,¹⁰ with a wide variety of cross-media environmental challenges such as water scarcity, ecosystem conservation, air and solid waste pollution; and with a dynamic urban population that relies on imported water resources from elsewhere.

With Minute 319 under their belt as experience for both nations, what is the best approach that could be taken to capitalize opportunities and meet the challenges posed by the Tijuana River watershed? An intelligent approach advocates integrality rather than sovereignty.

⁸ See, for instance, the Atlas of International Freshwater Agreements that was developed by the Program in Water Conflict Management and Transformation, Oregon State University. <http://www.transboundarywaters.orst.edu/publications/atlas/>

⁹ See Minute 319 at http://www.ibwc.state.gov/Files/Minutes/Minute_319.pdf

¹⁰ The Tijuana River Basin has an area of 4450 square kilometers, while the Colorado River Basin encompasses 620,000 square kilometers and the Rio Grande Basin has an area of 455,000 square kilometers.

In a study in 2000,¹¹ Tito Alegría concluded that the most cost-effective measure to reduce air pollution, namely, PM-10, in San Diego, was to pave unpaved streets in the city of Tijuana. The measure, of course, would have faced serious financial challenges, had it become a formal initiative from either Tijuana or San Diego.¹² But the logic of this measure is impeccable, if you approach it from a cost-effectiveness perspective.

But reigning public policy, dictated by the two federal governments, has approached the border not as a region, but as the ultimate limit of the national territory, or the juxtaposition of two sovereign nations.

This *binational* approach to managing the border environment fosters *bilateralism*, i.e., a position for each side of the border. Case in point, in Imperial Beach, California, at the tailwaters of the Tijuana River Watershed, a group known as the Tijuana River Valley Recovery Team (TRVRT) was created to pursue environmental health of the Tijuana River valley on the North side of the border, exactly where multiple endangered species in the estuarine reserve are threatened by water pollution, sediment and solid waste that flows across the border by way of the river as spillover from the city of Tijuana.

The Tijuana River Valley Recovery Team (TRVRT) is a coalition of civil society organizations (CSOs), regulatory agencies like the Regional Water Quality Control Board, and local governments, like that of the City of Imperial Beach. Thanks to the activism of this TRVRT, tens of millions of dollars have been spent over several years to build a concrete catchment basin and other palliative measures to capture trash and sediment in order to preserve the highly sensitive estuarine reserve.

Though extremely meritorious, the measure's cost effectiveness is highly questionable, given the meager results achieved¹³ over the course of all these years of work. The task itself seems like an uphill battle, as the groups are left to deal with only the effects and not the causes of the problem. But the important lesson here is that the existence of the TRVRT and their activism is the result of frustration with the lack of effectiveness of the binational approach. In that respect, it is quite timely that the IBWC/CILA recently signed a new Minute to set up an alternative method for local groups to come together to resolve cross-border issues, as we will describe in the next section.

The Treaty's opportunity to promote sustainable water management

The 1944 Treaty contains 28 articles, but only one, Article 16, is devoted to the Tijuana River. It is understandable. It is the least significant of the three international watersheds along the border in terms of water abundance, with limited water resources within the basin and no major perennial river that flows year round. In comparison, six articles (Articles 4 through 9) refer to the Rio Grande/Río Bravo, and six more (Articles 10

11 Alegría, Tito (2000). "Transmigrants, the NAFTA, and a Proposal to Protect Air Quality on the Border". In L. Herzog (edit.). *Shared Space: Rethinking the U.S.-Mexico Border Environment*. Center for U.S.-Mexican Studies, University of California, San Diego, U.S.A.

12 Coincidentally, the Border Environment Cooperation Commission (BECC) and the North American Development Bank (NADBank) launched in 2003 a paving program for cities in Baja California called PIPCA (Air Quality Improvement and Street Paving Program). The program came in response to a 1996 measurement of air-emissions in border cities under the EPA-Semarnap U.S.-Mexico Border XXI Environmental Program.

13 There are several documents on-line that attest to immense effort and disappointing results achieved. See, for instance, *Recovery Strategy: Living with the Water*, by the Tijuana River Valley Recovery Team, January, 2012. http://www.swrcb.ca.gov/rwqcb9/water_issues/tijuana_river_valley_strategy/docs/Recovery_Strategy_Living_with_the_Water.PDF (November, 2015).

– 15) describe how the United States and Mexico will manage the Colorado River. In the time of the Treaty, the main thrust for both governments was to secure a legally rightful, steady supply of water, and not much else.

Article 16 contains four numerals along those lines. It lists the tasks that were to be performed and decisions to be made regarding (1) the equitable distribution of the waters, (2) plans for storage and flood control, (3) an estimate of costs for the proposed works, and (4) which parts of the works to be operated by whom. But 70+ years after the signing of the Treaty, no further agreement exists on the distribution of the waters of the Tijuana River, or plans for storage and flood control, nor has there been a comprehensive infrastructure plan made. And the reason is that after more than seventy years of the signing of the Treaty, we can now see clearly that the issues of real importance facing the Tijuana River Watershed are not about the water, but about how to manage the watershed.

Still, in 2012, the International Boundary and Water Commission (IBWC) began to talk about moving forward on a Minute to resolve the current and real life issues facing the watershed. Excessive amounts of sediment are transported by the river across the border and are being deposited in sensitive estuarine habitat. Along with the sediment comes a wide array of pollutants, both organic and inorganic, including heavy metals and volatile compounds, which are causing beach closures and endangering estuarine life organisms and public health. Solid waste is rampant in waterways, and is not only the cause of eye-sore but a threat to riparian life as well. These are nothing more than the effects of urban growth happening in Tijuana. The pollutants are just the symptoms of a development disease that needs holistic attention in the root causes of those symptoms.

Unmanaged urban growth such as this causes environmental problems, which in turn cause public health issues that hinder economic and social development (Romero et al, 1999; Kahn, 2006).

Given the cross-border nature of the problem, the issue is the purview and jurisdiction of the IBWC. But rather than follow the usual path to Washington, DC and Mexico City, the Commission began moving forward on building local support for a framework Minute, i.e., an agreement of bi-national stature able to frame a dialogue of local stakeholders from both sides of the border. The vision was to develop architecture similar to the cooperative process that delivered Minute 319 for the Colorado River. The object is to make local voices part of the discussion, so to enable a regional, watershed approach to managing the issues. In that vein, on October 5, 2015, Minute 320 was signed by both IBWC/CILA Commissioners, calling for a Binational Core Group (BGC) to be formed and placed at the center of a transboundary dialogue “[T]aking into consideration the prior work and advice of U.S. and Mexican stakeholder groups.¹⁴” According to the new Minute, the BGC will be appointed and coordinated by the Commission, “shall include representatives of the Commission, federal, state, and local governments and non-governmental organizations from both countries”, and will form “Binational Work Groups to assist with the formulation of recommendations regarding transboundary issues in the Tijuana River Basin.”¹⁵

Shifting the locus of control from the national capitals to the region will not guarantee a holistic approach to managing the watershed, but it will increase the likelihood of it happening. For one, it reduces the risk of national perspectives taking over the process, thus making local dialogue more relevant. Two, on-the-ground

14 IBWC, Minute 320. http://www.ibwc.state.gov/Files/Minutes/Minute_320.pdf

15 *Ibid.*

issues become the drivers of discussion, with the parties responsible for addressing them clearly established and within arm's length of the rest of the stakeholders. A third and necessary ingredient is to honor principles that are essential to sustainable watershed and natural resources management anywhere, and which need to be applied to the Tijuana River Watershed, such as the following:

- *Integrated watershed management.* A watershed is a geographical unit, where any action within its boundaries will impact the rest of the watershed. Policies approved and actions undertaken must therefore consider original causes and not the effects, and refrain from adopting an isolated, partial view of places within the watershed.
- *An ecosystem is the basic unit of management.* Managing environmental phenomena and natural resources, be it domestic or international, requires acknowledging the unity of ecosystems when dictating policy.
- *Sustainable water management.* Water is a scarce resource within the Tijuana River watershed, and the urban development that exists within, with its high population density, requires multiple measures to maximize its benefits. Restoring vegetal groundcover and harvesting rainwater will mitigate storm impact and reduce erosion, thus reducing sediment transport in streams, protecting water quality and providing small but previously untapped sources of water.
- *Improve energy efficiency in water management.* Given the need for importing water from the Colorado River, water use in Tijuana and San Diego is highly energy intensive. Water reuse will inevitably become part of a forward looking vision to reduce costs and increase the benefits of water management in the watershed.
- *Protecting biodiversity.* The Tijuana River watershed is considered a biological hotspot due to the high degree of endemic and endangered species in the coastal ecosystems, coupled with the aggressive encroachment of habitat by urban development. The viability of preserving the native vegetation is closely linked to water management.
- *Environmental quality for residents.* Coupling together water management and vegetation restoration will not only bring an improvement in urban scenery, but will also reduce flooding in wet periods, improve air quality, reduce the *heat island effect* in Tecate, Tijuana and other neighboring cities.

The Role of Civil Society Organizations (CSOs)

Strong, successful countries require strong and vibrant civil societies. As President Barack Obama stated in the April 2015 Panama Summit of the Americas,

'we know that throughout our history, human progress has been propelled not just by famous leaders, not just by states, but by ordinary men and women who believe that change is possible; by citizens who are willing to stand up against incredible odds and great danger not only to protect their own rights, but to extend rights to others. So, civil society is the conscience of our countries. It's the catalyst of change. It's why strong nations don't fear active citizens. Strong nations embrace and support and empower active citizens.'

An integral and sustainable public policy is the result of the synergy created between the adequate design of its goals and the active involvement of society. The inclusion of citizen involvement is absolutely essential for the success of policies such as solid waste management, which is a key factor for the quality of water and the overall environmental health of the basin.

In that respect, the key role of Civil Society Organizations (CSOs) is to articulate the wants and needs of society in a coherent and organized way. A CSO was not created just to pledge allegiance to the country of citizenship of its members; they have a greater role to play. As an organization, they are on a mission, and will therefore devote their activism to what makes sense from civil society's perspective in a given the region.

The example of CSO participation in water and waste management provides lessons regarding the role of civil society in border management as a whole. Along those lines, it is worth noting the importance of civil society in addressing public security issues in Tijuana and Ciudad Juarez, as well as the redoubled focus on stakeholder outreach from the U.S.-Mexico High Level Economic Dialogue.

“Strong, successful countries require strong and vibrant civil societies.”

Besides the three elements mentioned in the effort to shift the locus of control to the border region, there is the issue of public participation and citizen involvement. The Tijuana-San Diego area is rich with CSO that have contributed strongly to the work that became the foundation for the recently signed framework Minute in the Tijuana River Watershed. Over the course of more than 20 years, advocacy organizations and academic groups convened several fora and meetings to discuss the main topics ailing the watershed, and which figure to become the main work of the Binational Work Groups:

- Water and soil pollution
- Aquifer withdrawals and recharge
- Water pollution
- Solid waste management and trash pollution in hillsides and streams
- Soil erosion
- Biodiversity and conservation of unique and scarce germplasm for the coastal sage scrub and the chaparral ecosystems.
- Loss of habitat

The contributors to this work from civil society include:

- Proyecto Fronterizo de Educación Ambiental. Environmental education has been their focus over more than 20 years of presence, work and activism.
- Over the course of a few years, the Autonomous University of Baja California (UABC) has had professors working with many counterparts in the U.S.
- El Colegio de la Frontera Norte, has done studies in risk assessment of the effects of flooding , satellite imagery and Geographical data, and a model for Tijuana River Basin, known as *Ecoparque* which treats the water and spreads it over roughly three hectares (out of the 6) of forested slope.
- Foro Ciudadano/Citizens' Forum, have now been established in four of the twin border cities. It is this forum that needs to see a specific date.

But the best example of synergy created between government institutions and non-governmental organizations may well be in the planning of the pulse flow derived from Minute No. 319. Wisely, the IBWC/CILA Commissioners and staff provided the means for civil society groups to develop a series of workshops, which NGOs organized with the participation of scientists and experts from several universities of both countries. The goal was to define how to maximize the benefits of water that had been secured by government agencies to recreate a pulse flow of water that would inundate the riparian corridor from Morelos Dam to the Colorado River's confluence with the Rio Hardy. The process included scientist from the Universidad Autónoma de Baja California (UABC), El Colegio de la Frontera Norte (Colef), the University of Arizona, the University of Montana, the Environmental Defense Fund (EDF), Pronatura Noroeste, Sonoran Institute, The Nature Conservancy and even scientist from the U.S. Geological Survey. It also involved governmental institutions such as the International Boundary and Water Commission (IBWC), Mexico's National Water Commission (CONAGUA) and the National Commission for Natural Protected Areas (CONANP), and U.S. governmental agencies such as the Bureau of Reclamation, the U.S. Geological Survey (USGS), and the Fish and Wildlife Service (FWS), all of them with the Department of the Interior (DOI), among others. Other scientific bodies, like the American Association for the Advancement of Science-Southwestern and Rocky Mountain Division, participated in previous public fora.

In the implementation of environmental flows for the Colorado River, Pro-Natura Noroeste, Pronatura Mexico, Sonoran Institute, EDF, and The Nature Conservancy jointly manage a water trust through which water rights are secured and applied to the enormous restoration effort that is now an integral component of the binational management agreement for the Colorado River.

Finally, the IBWC Citizens' Forums,¹⁶ which were established by the U.S. IBWC to facilitate the exchange of information between the USIBWC and members of the public some 20 years ago, have now become a reality in Mexico as well throughout the US-Mexico border region. Cross-border Citizens' Forum Meetings have not yet become a reality, as each forum continues to engage in dialogue with the IBWC/CILA Section from their own country.

But the fact that such organizations mirror each other across the border and related to a binational agency that deals with the management of a shared transboundary, increasingly scarce resource such as water figures to unite them in an on-going dialogue sometime in the near future. The fact that a diplomatic agency, such as the IBWC/CILA would create the conditions for such an open ended international societal exchange is truly remarkable, especially if you consider that water was a cross-border contentious issue in the Texas-Chihuahua border, and during the lining of the All-American Canal as recently as 2008.

16 http://www.ibwc.gov/Citizens_Forums/citizens_forums.html

Conclusions

The U.S.-Mexico border has been a region of contrasting policy decisions over the course of decades. Security measures in the United States over more than a decade have left a dent in U.S.-Mexico relations and presented a serious challenges to the goal of facilitating commerce and cross-border social interactions all throughout the border region. The enormous economic potential of the two countries coming together, and the tightly-knit, cross-border social interactions notwithstanding, overcrowded border crossings and insensitive security systems continue to be the overwhelming challenges for the more harmonious integration of both countries along the border.

But bilateral management of water and sensitive environmental ecosystems have come together in a different way in the U.S.-Mexico border, greatly aided by the long-standing history of work by non-governmental organizations on both sides of the border. These NGOs began to work naturally in a transboundary fashion as partners, regardless of how government agencies from across the border in both countries approached their own work. Gradually, however, the diplomatic nation-to-nation approach to resolving matters began to give way to a more goal oriented, project-driven dynamic as both sectors, government and civil, began to complement each other's work. A new coalition of stakeholders seemed to emerge surrounding the Colorado River Delta restoration efforts, first, with similar mechanisms identified in other areas of the border, namely the Tijuana River.

There is still much to do between governments and civil society organizations in Mexico and the United States to move from the current paradigm of best practices for each one on their side of the border, to a new one of joint management. A key element in improving the effectiveness of public/private efforts will be to identify which problems are generated by the scarcity of water, and which are a result of the juxtaposition of institutions and a lack of clarity in their authority and their mandate.

The vision is to no longer make the issue of transboundary water resources management a zero-sum dilemma for the U.S.-Mexico border. The goal is to advance towards a set of solutions where stakeholders in both countries find measures that complement the needs of other stakeholders, regardless of where they reside. In short, the goal is to transform a historical bilateral water management approach into a common, regional management system. Shared water, shared ecosystems, in a shared region. The same region; the U.S.-Mexico border region.

Bibliography

Center for Strategic and International Studies CSIS-SCERP Inquiry: Security and the Environment in the U.S.-Mexico Border, Washington, DC; Jan 30, 2007.

Comisión Internacional de Límites y Aguas entre México y los Estados Unidos (CILA), Hoja de datos flujos ambientales Acta 319, <http://cila.sre.gob.mx/cilanorte/images/stories/pdf/faa319.pdf>

Cook, Benjamin I., T.R. Ault and J.E. Smerdon, 2015. Unprecedented 21st century drought risk in the American Southwest and Central Plains. *Science Advances*, Vol. 1 No. 1, February.

De la Parra, Carlos A, The Interdependence of Security and the Environment - Perspectives on Security and the Environment in the Binational U.S.-Mexican Border Region, 2007. Presentation at the Center for Strategic and International Studies (CSIS), Washington.

Ingram, Steven. In a Twenty-First century “Minute”. *Natural Resources Journal*, Vol. 44, 163-211. Winter 2004.

Ingram, Helen and D.R. White. International Boundary and Water Commission: AN Institutional Mismatch for Resolving Transboundary Water Problems. *Natural Resources Journal*, Vol.33, 153-175. Winter 1993.

International Boundary and Water Commission –The United States and Mexico, Minute No. 319, November 12, 2012.

International Boundary and Water Commission –The United States and Mexico, Minute No. 320, October 5, 2015.

Kahn, Matthew E, 2006. *Green Cities. Urban Growth and the Environment*. Brookings Institution Press. Washington, DC, USA.

Kelly, Mary and A. Székely. Modernizing the International Boundary and Water Commission. *Policy Papers*, Paper No. 1, Center for Latin American Studies, University of California, Berkeley. February 2004.

Lee, Erik and Christopher Wilson, The U.S.-Mexico Border Economy in Transition, Woodrow Wilson International Center for Scholars, Washington DC, 2014, 150 pp.

Maganda, Carmen. Border water culture in theory and practice: political behavior on the Mexico-U.S. border. *Journal of Political Ecology*, Vol. 19, 2012, 81-93.

Mumme, Stephen P. The U.S.-Mexico International Boundary and Water Commission in the Sustainable Development Era. International Boundaries Research Unit, *IBRU Boundary and Securities Bulletin*, Summer 2001, 117-125.

Mumme, Stephen P. Advancing Binational Cooperation in Transboundary Aquifer Management on the U.S.-Mexico Border. *Colorado Journal of International Environmental Law and Policy*, Vol. 16:1, 2005, 77-94.

Mumme, Stephen P. and N. Pineda. *Water Management on the U.S.-Mexico Border: Mandate Challenges for Binational Institutions*. 2002, 20 pp.

Pacific Council on International Policy and Mexican Council on Foreign Relations, 'Managing the United States-Mexico Border: Cooperative Solutions to Common Challenges', Full Report of the Binational Task Force on the United States-Mexico Border, Los Angeles, 2009.

Romero, H., M. Ihl, A. Rivera, P. Salazar and P. Azocar, 1999. Rapid urban growth, land-use changes and air pollution in Santiago, Chile. *Atmospheric Environment* 33(24-25), pp. 4039-4047. Elsevier.

Sarukhán, Arturo, 2015, Cambio de bujías, El Universal, México City, March 25th.

Woodrow Wilson International Center for Scholars and Border Research Partnership, *State of the Border Report*, Washington, DC, 174 pp.

TOOLS OF THE 21ST CENTURY BORDER

Christopher Wilson

As evidenced by the ample discussion of the issue by other authors in this collection, the terrorist attacks on the United States of September 11, 2001 had an enormous impact on the management of the U.S.-Mexico border. The traditional narrative is that the need to prevent another terrorist attack led the United States to build up the defenses of *fortress America*, which included a substantial thickening of the U.S.-Mexico border, making it more difficult for not only illicit but also licit traffic to cross.

There is a substantial degree of truth in such a narrative about the changes that took place along the border in the months and years following 9/11. Gone were the days when an American accent was the only credential needed to cross the border. Instead, identity needed to be proved, and databases connected to ensure that identity could be linked admissibility and checked against lists of potential terrorists and wanted criminals. These, and numerous other measures, strengthened security, but also significantly slowed and complicated the movement of travelers and cargo across the border. The cost was great. Numerous studies show border congestion slows economic growth in the North American economy by many billions of dollars each year.¹

Perhaps counterintuitively though, the events of September 11th, 2001 were also a catalyst for a series of much more positive developments at the U.S.-Mexico border. Those who wait in line to cross the border each day, or those whose products are held up by sometimes duplicative inspections, or those border community residents who simply decide not to cross the border anymore because the whole process is too much of a hassle might be too frustrated with the remaining deficiencies to concede it, but over the past decade and a half, the framework and vision for the management of the U.S.-Mexico border has begun to catch up with the age of globalization. The name for all this was made official in 2010, but the process of building a 21st Century Border began years before and continues to this day.² But what is a 21st Century Border?

“In a world in which supply chains are multinational and non-state transnational entities abound, cooperative multinational approaches to border management are required.”

As set out in the essay by Alan Bersin and Michael Huston, at its core, 21st Century Border management means not drawing a line in the sand and forever building up more and more enforcement resources at the border itself, but instead aiming to secure and facilitate cross-border flows through an intelligent, multi-layered system approach, implemented both near to and far away from the border, inside and outside of a nation's boundaries. Such an approach, almost by definition, necessitates international cooperation and public-private partnerships—in a world in which supply chains are multinational and non-state transnational entities abound, cooperative multinational approaches to border management are required. And so that security and efficiency are not won and lost one at the expense of the other in a zero-sum game, strategies and tools are needed that simultaneously facilitate desired flows while identifying and disrupting illicit traffic. These methods, which are described in

1 See a list of such studies on page 5 of the author's testimony before the House Committee on Foreign Affairs, Subcommittee on the Western Hemisphere, December 9, 2013, <http://docs.house.gov/meetings/FA/FA07/20131209/101563/HHRG-113-FA07-Wstate-WilsonC-20131209.pdf>.

2 Declaration by the Government of the United States of America and the Government of the United Mexican States Concerning Twenty-First Century Border Management, May 19, 2010, <https://www.whitehouse.gov/the-press-office/declaration-government-united-states-america-and-government-united-mexican-states-c>; See also the 2002 Smart Border Agreement, <http://2001-2009.state.gov/p/wha/rls/fs/8909.htm>.

this essay as the tools of the 21st Century Border, take advantage of advances in data processing, inspection technologies, and management techniques to segment risk, expedite secure flows, and better target higher risk traffic for physical or non-intrusive inspection. The “tools” described below are by no means an exhaustive list of advances in border management, but have rather been selected to highlight some of the key concepts that U.S. and Mexican officials are attempting to implement in their efforts to ensure the security and competitiveness of the border region and our nations in their entirety.

Tool 1: Trusted Traveler and Shipper Programs

Among the most important concepts behind the notion of a 21st Century Border is the idea that border security need not come at the cost of efficiency, that both can be simultaneously promoted with intelligent policies. Trusted traveler and shipper programs—such as Global Entry, SENTRI, FAST, C-TPAT, NEEC, and Viajero Confiable—embody this notion. Users voluntarily submit themselves to an extensive background check, allowing the U.S. or Mexican government to ensure they qualify as a low-risk border crosser, unlikely to traffic in contraband, cause violence, or otherwise violate customs and border-related laws. Companies must take additional steps to ensure the security of their supply chains. In exchange, cleared border crossers are given a credential that allows them access to a dedicated, faster moving lane to speed-up their border crossing experience.

The benefit to users in terms of reduced border crossing times is obvious, but the border security and budgetary benefits are significant as well. As in all law enforcement, border officials must decide how to most effectively utilize their limited resources. By focusing less attention on low-risk travelers, border officials can spend more time analyzing and inspecting traffic that represents a high or unknown level of risk, thereby strengthening border security. Similarly, it takes much less time to inspect and process trusted travelers, these programs help save money, mainly in terms of staffing but eventually also on inspection equipment and infrastructure (higher throughput means fewer lanes, and therefore less technology, are needed).

“By focusing less attention on low-risk travelers, border officials can spend more time analyzing and inspecting traffic that represents a high or unknown level of risk, thereby strengthening border security.”

All of the U.S. programs have been largely successful in operational terms, significantly improving the efficiency of the inspection processes at the border ports of entry and offering members reduced wait times. The results vary by program, but the Government Accountability Office found that in general inspections took about half as long as normal for those enrolled in a trusted program. The main challenge going forward is to increase enrollment. Though still below optimum levels, enrollment in SENTRI and Global Entry has grown quickly in recent years. Unfortunately, FAST and C-TPAT, which operate in conjunction at the U.S.-Mexico border, have seen enrollment stagnate or even decline (at no U.S.-Mexico POE did more than 23% of truck crossings occur through the dedicated FAST lane in 2013).

There are several causes behind the enrollment challenge. The more efficient inspection process for both FAST/C-TPAT and SENTRI members only translates to decreased overall border crossing times when

the dedicated lanes for these programs extend as far back as traffic at busy crossing times. Often times, the dedicated lane is too short, meaning that all border crossers wait together in the same line before the trusted program members gain access to the expedited lane, thereby cutting away at the main benefit offered by enrollment. Another challenge has to do with the difficulty of certain industries to meet C-TPAT supply chain management standards. Specialized trusted programs for certain industries, such as agriculture, would help boost participation. Finally, the GAO identified delays and other issues in the application process. Given the significant security and efficiency advantages of these programs, investments to boost enrollment in these programs will be quite high.

Trusted Traveler and Shipper Programs for the U.S.-Mexico Border

Name	Who is eligible?	Established	Enrollment Requirements	Number of people/companies enrolled
Secure Electronic Network for Travelers Rapid Inspection (SENTRI)	Individuals eligible to cross the U.S.-Mexico border (in personal vehicles, and pedestrians)	1995	Pay \$122 fee and undergo background check, fingerprinting and interview with CBP officer.	369,745 members (GAO, 2014)
Free and Secure Trade (FAST)	Truck drivers from the U.S., Canada, and Mexico	2002	Pay \$50 fee for five years; undergo background check (most benefits require that supply chain also meets C-TPAT standards)	13,209 (GAO, 2014)
Customs-Trade Partnership Against Terrorism (C-TPAT)	Importers and exporters that do business with the U.S.	2002	Company must implement a number of supply chain security procedures (implementation cost varies)	10,854 (CBP, 2014)
Nuevo Esquema de Empresas Certificadas (NEEC)	Importers and exporters that do business with Mexico	2011	Company must meet security requirements. After verification, the company is certified. Registration costs \$24,507 MXN for one year (certification can be renewed).	606 (SAT, 2016)
Global Entry	U.S. citizens; U.S. lawful permanent residents; Citizens of the United Kingdom, Germany, Netherlands, Panama, South Korea; Mexican nationals.	2008 (pilot), 2012 (permanent)	Undergo background check, fingerprinting, and interview with CBP officer; \$100 fee for 5 year enrollment.	Over 2.5 million, including more than 77,000 Mexican Nationals (CBP, 2015)
Viajero Confiable	Mexican citizens; U.S. citizens enrolled in Global Entry	Launched in 2011, began operations in 2013	Undergo background check, fingerprinting, and interview with SAT official. Pay \$1,461 MXN for five year enrollment.	3,400 (INM, 2016)

Mexico's trusted programs are much newer, with the Nuevo Esquema de Empresas Certificadas (NEEC) beginning in 2011 and the Programa de Viajero Confiable beginning in 2013. The NEEC was designed to meet C-TPAT standards, so that eventually the two programs are mutually recognized, and Mexico also recently signed a mutual recognition agreement with Canada. Viajero Confiable, which is most similar to Global Entry, is still currently only available at a limited number of Mexican airports, and enrollment is still only at approximately 1,000 members. Both programs have great potential, especially insofar as they help move towards the development of joint North American trusted programs, with the data needed to perform risk analysis and expedite travel safely shared among the three countries.

Tool 2: Pre-Inspection and Joint Inspection

For many years, CBP has stationed officers at a limited number of foreign airports (mostly in Canada) to screen and officially 'admit' passengers, allowing the flight to then enter the United States essentially as a domestic flight. This helps expand the number of routes available between the countries and (usually) speeds up the processing of passengers. Two pilot projects are underway along the U.S.-Mexico border that bring this practice to the commercial environment, and a third is set to begin operations in 2016. The concept is especially useful at the land border, where commercial development tends to grow around active ports of entry, making physical expansion complicated and costly. Pre-inspection projects offer an alternative, allowing new border inspections to take place away from the physical border itself, whether at industrial sites, transportation hubs, or dedicated pre-inspection facilities.

The first pilot project opened at the Laredo, Texas airport in 2012 (it was then officially inaugurated in 2015). Mexican SAT (customs) officers work onsite along with their counterparts from CBP to clear the export of cargo flights carrying autoparts, electronics and aerospace parts into Mexico. When the flights land in Mexico, the goods are immediately released to the owner without passing through a bonded facility. This project represents the first time that U.S. and Mexican customs officials have jointly operated out of a single facility.

The second pilot project was inaugurated in January 2016. Located very close to the port of entry at Otay Mesa (near Tijuana), the pre-inspection facility is the first site out of which CBP and SAT officers have worked together to inspect cargo in Mexico. This project allows C-TPAT certified companies shipping designated low-risk agricultural products to the United States to simultaneously meet export and import requirements, facilitating quick border crossings. For several years, this project was delayed by the fact that Mexican law did not permit CBP officers to carry a sidearm while operating in Mexico. In 2015, the Mexican Congress voted to change the law to allow the joint customs inspection projects to move forward.

A third pilot project is planned at San Jeronimo, just outside of Ciudad Juárez and across from Santa Teresa, New Mexico. The project is intended to allow electronics produced at the nearby industrial park—where FoxConn assembles a large volume of computers and other electronics—to be cleared for entry into the United States while exiting the factory complex.

“Implemented in conjunction with other technological and management advances, such jointly managed facilities truly represent the border crossings of the future.”

Though the pre-inspection component, meaning the processing of imports before they reach the physical border, of these projects is important and is certainly an advance towards the development of a 21st century border, it is the joint-inspection component that has the greatest potential to transform the way in which ports of entry at the U.S.-Mexico border are built and managed in the future. Currently, ports of entry are comprised of two (or even four) separate facilities, and a commercial border crossing involves first the export of a product and then, after crossing the physical border, its importation. Much of the process is duplicative, and the separation of the procedures makes U.S.-Mexico cooperation and information sharing more difficult. The three pilot projects discussed above open the door for the development of joint customs and immigration facilities that would make exit and entry a single, seamless procedure and would encourage U.S. and Mexican officials to share information in real time rather than at monthly meetings or through bureaucratic channels. Implemented in conjunction with other technological and management advances, such jointly managed facilities truly represent the border crossings of the future.

Tool 3: Interagency and Binational Cooperation

In this era of globalization, international flows are increasing, both in gross terms and in their importance as motors of national economies around the world. From 1992-2014, the ratio of the value of global trade to global GDP increased 63%. Trade between the United States and Mexico has grown even faster, with the ratio of bilateral trade to the size of the binational economy growing 167% during the same period.³ U.S.-Mexico trade is more important than ever to both countries, so it makes sense that securing and facilitating those trade flows has become more and more a cooperative undertaking and matter of joint responsibility.

“U.S.-Mexico trade is more important than ever to both countries, so it makes sense that securing and facilitating those trade flows has become more and more a cooperative undertaking and matter of joint responsibility.”

At the same time, those that seek to do harm to the United States and Mexico, whether terrorist or organized crime groups, are increasingly transnational in organization and operation. This means that in the protection of citizen and national security, again, cooperative approaches to identifying and halting international movements of dangerous goods and individuals has become a top-level priority for both the United States and Mexico.

In order to implement the cooperative strategies discussed above and in the other essays in this series, a robust mechanism to design, implement and coordinate joint border management projects was needed. At the same time, the complexity of border management, which involves issues of interest and jurisdiction of dozens of government agencies—including agricultural pest control, nuclear non-proliferation, tax collection, arms trafficking, immigration, and public health, to name just a few—required the development of strong systems of cooperation and information sharing within the U.S. and Mexican governments. To address both of these coordination challenges simultaneously, in 2010, as a part of the 21st Century Border initiative, the two governments created a binational Executive Steering Committee, led by the White House in the United States and Los Pinos in Mexico. Reporting to the Executive Steering Committee are three binational committees:

3 Calculated by the author with data from the IMF.

1. Corridor Security Working Group: Focuses on securing areas between official crossing points.
2. Secure Flows Working Group: Focuses on the operation of the official ports of entry and the management of commerce and travel flowing across the border, focusing on efforts to strengthen security and efficiency.
3. Infrastructure Working Group: Coordinates expansion, modernization, and the construction of new ports of entry at the U.S.-Mexico border, all of which improve capacity and security.

Beginning in 2016, in recognition of the vital importance of border management issues to the competitiveness of both countries, the 21st Century Border Executive Steering Committee has also been officially linked to the U.S.-Mexico High Level Economic Dialogue, which ensures regular cabinet-level attention to the border agenda.

“The restructuring of U.S. and Mexican governing processes and responsibilities with an explicit goal of designing a system to facilitate bilateral cooperation was an innovative and precedent-setting step.”

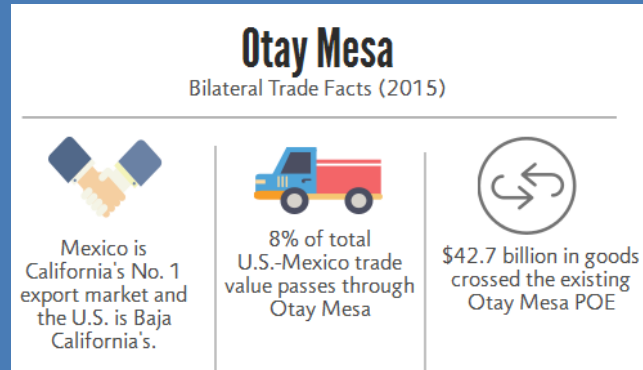
The restructuring of U.S. and Mexican governing processes and responsibilities with an explicit goal of designing a system to facilitate bilateral cooperation was an innovative and precedent-setting step. It validates the value of U.S.-Mexico partnership at the border and sets an example as a solution for the simultaneous challenges of cross-border and interagency coordination that are commonplace in an intermestic relationship such as the one between the United States and Mexico. Though political and budgetary constraints still limit the pace of progress, the new structure has institutionalized a cooperative approach to managing the border and moved the United States and Mexico toward a jointly-managed border.

Innovation at the Border

A Look at the Otay Mesa East Project⁴

Christopher Wilson and Andrea Conde*

Existing crossings at the California-Baja California border are not sufficient to meet growing demand, causing billions of dollars in foregone economic output annually. In order to address this issue, a binational multi-agency group is working on the construction of a new border crossing and related transportation infrastructure. This project seeks to bring together many of the tools of the 21st century border discussed in this essay, and, if successfully implemented, could serve to create a new model for jointly built and jointly managed U.S.-Mexico border crossings.



The **State Route 11/Otay Mesa East POE Project** is ongoing initiative led by the San Diego Association of Governments (SANDAG), the California Department of Transportation (Caltrans), U.S. federal agencies, the City of Tijuana, state of Baja California, and several Mexican federal agencies. The project is located two miles east of the existing Otay Mesa POE. The Presidential Permit was obtained in 2008 and construction of roadways that will link the new POE to existing highway systems is underway. Some of the important and innovative aspects of the project are highlighted below.

1. Joint-Planning Process

- *Binational cooperative approach*: the project integrates federal, state and local governments from both sides of the border to ensure the creation of a well-designed transborder system of connectivity. Projects to build new border crossings are often designed and implemented as two separate projects, despite the fact that the U.S. and Mexican segments are only useful when both are finished, connected, and functioning as a single system. When funding, design, and construction are all handled separately, the risk of mismatches and system inefficiencies rises—the multi-agency and binational approach to this project seeks to mitigate these challenges. California and Mexico signed a memorandum of understanding in 2014 to expedite the construction of the project and jointly monitor its progress.



⁴ Thanks to Christina Casgar of SANDAG and the other project partners for providing the authors with information about the Otay East project. Any mistakes or misrepresentations, however, are the responsibility of the authors alone.

2. System-wide approach

The project aims to begin linking together the management of border crossings within the greater-San Diego-Tijuana area so that they can effectively function as a system. The goal of such an approach is to smooth out demand at each individual border crossing, so that trucks utilize the least crowded of the region's POEs and are therefore able to cross the border as quickly as possible. In order to design and implement such a strategy, several tools are required:

- *Border Wait Times Detection:* Bluetooth and Wi-Fi technologies will be installed to accurately measure border wait times and to provide travelers with advanced information to help them make better decisions about when and where to cross the border. Ultimately, in order to be successful, similar technology that can generate accurate and real-time data regarding the length of queues to cross the border will need to be installed at all regional POEs. Much has been learned about effectively using technology to improve border wait time measures through pilot projects underway in Texas and Arizona.
- *Advance traveler information:* Travelers will need to be able to access information regarding regional POEs' status prior to arriving at the POE in order to decide when and where to cross the border. Project partners are designing an advanced traveler information system to inform border crossers about toll rates, border wait times and incidents at all regional POEs, so they can better plan their trips and select which POE best suits their needs. This information will ideally be available through a website, app, and electronic highway signs.
- *Variable toll system:* The new POE will use tolls not just as a tool to finance the project, but also as part of a system to manage demand for Otay East and other regional border crossings (principally Otay Mesa POE). Toll rates will adjust throughout the day as demand rises and falls, essentially encouraging use through low toll rates when traffic is low and slowing demand through high tolls when traffic spikes.
- *Binational traffic management:* Project partners are planning an integrated traffic management system that will link traffic operations in Tijuana with those managed by SANDAG and Caltrans. To do so, Caltrans, SANDAG, the City of Tijuana, and Mexico's Secretary of Communications and Transportation are developing a Regional Border Management System (RBMS).

3. Binational Project Financing

SANDAG has estimated a total cost of USD \$900 million for the construction of facilities on both the U.S. and Mexican sides of the border. There are three main components of funding: the Mexican and U.S. governments, as well as debt issue to be repaid by binational toll collection.

- *Single financing vehicle:* As a single project, this project will be concurrently financed on both the U.S. and Mexican sides of the border, avoiding cases in which the funding materializes much earlier on one side or the other. Further, the financing of the POE will likely require accessing bond markets, an innovation in its own right given the completely binational nature of this project.
- *Binational toll collection:* Project partners are planning a single toll collection point, rather than having two (one in the United States and the other in Mexico). Tolls would mainly be collected electronically, but other payment options are also being considered. The funding stream would help pay for the infrastructure and operation of the POE on both sides of the border, including the repayment of any debt issued to finance the project.



4. Smart Lane Management

- *Segmentation of traffic flows:* Dedicated lanes are being planned to adequately direct traffic that requires different levels of inspection. For example, trusted travelers enrolled in C-TPAT, FAST and SENTRI will have dedicated lanes. Additionally, lanes could be further segmented into *laden, empty, Ready lanes*, and other special categories. Signage ahead of the POE will guide cars and trucks to queue in an appropriate lane for inspection and clearance by border officials.
- *Active lane management:* The number of lanes dedicated to the aforementioned categories could change in order to meet demand. This would involve dynamically opening and closing dedicated lanes to effectively manage traffic congestion. The strategy will necessarily involve electronic signage prior to arriving to the POE to direct traffic.
- *Flexible lanes:* the project is exploring the possibility of having reversible north/south bound lanes, which would change direction to match peak traffic flows.

5. Possible Joint Inspection Programs

Project partners are analyzing the possibility of including joint-inspections between U.S. CBP and Mexican SAT officers. This would likely involve the construction of a single facility at the border, staffed and managed by both U.S. and Mexican officials. Rather than having two completely separate inspection points—which is inherently partially duplicative—the project partners are assessing how to create binational joint inspection facilities. If achieved, this would be the first facility spanning U.S. and Mexico sides of the border with joint-inspection: a potential model for future U.S. and Mexico border crossings.

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Tool 4: Intelligent Targeting and Risk Management

At both official crossing points and the expanses between them, law enforcement officers have taken steps to make more efficient use of limited resources. One of the most important ways of doing this is moving away from random inspections and a relatively uniform and static deployment of resources across the border. Instead, border management strategy is increasingly relying on tools (i.e. data analytics, surveillance technology) to first identify high-risk individuals, vehicles and geographic spaces and then target inspection and enforcement activities and resources based on the risk assessment. Given the huge volume of cross-border traffic each day at the ports of entry, the vast expanses (approximately 2,000 miles) of space between them, and the massive size of the agencies being tasked with becoming more nimble and responsive, this strategic shift, while well underway, has proven difficult to implement in many respects. A quick look at the relationship between trends in Border Patrol staffing and the routes of unauthorized migration into the United States makes clear how, traditionally, reality has been more dynamic than the capacity of border law enforcement to respond to it. In the early 1990s, the San Diego sector of the border routinely saw large number of migrants—approximately a half-million per year—illicitly crossing the border. In response, the Border Patrol doubled its presence in the area, hiring more than a thousand new agents from 1992-1997. Since then, apprehensions in the San Diego sector have declined precipitously, reaching just 26,000 in 2015, while other sectors, such as Tucson (1162% growth in apprehensions from 1990-2000) and the Rio Grande Valley (433% growth from 2011-2014), experienced surges in levels of unauthorized migration. Staffing levels do adjust to these trends, but much more slowly and in the context of significant hiring in all sectors. San Diego, for example, had 32% fewer agents in 2005 than it did at its previous peak in 1997, although current staffing levels are even higher than the 1997 levels. In the Tucson sector, apprehensions have dropped by 90% since the year 2000, while staffing continued to climb to its peak in 2012 before experiencing a modest 4% decline from 2012-2015. The combination of unattainable measures of border security and the resource-based approach to border security that dominated in the years following 9/11 created a situation in which the Border Patrol needed ever greater resources across the board even as activity levels were declining.⁵

“Risk must be managed, which means finite resources must be strategically deployed in order to mitigate the most overall risk and particularly the most dangerous scenarios possible.”

5 Robert Schroeder, *Holding the Line in the 21st Century*, Washington, DC: U.S. Customs and Border Protection, 2014, https://www.cbp.gov/sites/default/files/documents/Holding%20the%20Line_TRIOLOGY.pdf.

Risk-based strategies begin with the realization that eliminating risk (in this case preventing all attempted illicit border crossings) is impossible, particularly at an acceptable level of cost. Instead, risk must be managed, which means finite resources must be strategically deployed in order to mitigate the most overall risk and particularly the most dangerous scenarios possible. With its 2012-2016 strategy, the Border Patrol has begun to employ such an approach, with intelligence tools and surveillance technology used to assess risk (in addition to using them operationally), priority targets chosen based on a risk-matrix and resources deployed at a local level to either dismantle designated high-risk criminal organizations or make a target area as hostile of an environment for criminal activity as possible.

At the official crossing points, the challenge is one of finding a few needles in mountain-high haystacks. With nearly a million people crossing the U.S.-Mexico border ports-of-entry each day (northbound and southbound), only a tiny fraction of which are involved in illegal activities, two principle approaches are used to identify risk levels and apply an appropriate level of inspection. The first, described above in the section on trusted traveler and shipper programs, involves engaging citizens and businesses in a process of self-identification as low risk border crossers. These programs, in addition to the construction and deployment of databases that can analyze border crosser characteristics to generate a risk score, allow border officials to effectively shrink the haystack by applying a lesser degree of inspection to those crossers that represent a very small level of risk.

“Intelligence is increasingly being used both to assist officers in decisions about the level of inspection to apply to a specific crosser and to make broader, strategic decisions about the deployment of resources and training.

The other approach is to develop better needle detectors. There are two main categories within this approach. The first is the same type of risk scoring described above. License plate readers are in use by U.S. officials in both northbound and southbound lanes and have begun to be deployed by Mexican officials for use in tracking southbound travel. As databases of vehicular movement across the U.S.-Mexico border grow (and are hopefully eventually merged once proper safeguards for data protection are in place), they are being mined for crossing patterns associated with high levels of risk and connections to individuals that have been flagged as high risk. With these and similar types of tools, individuals, vehicles, ports of entry, and broader geographic areas can be flagged as high-risk for various types of trafficking activities. This intelligence is increasingly being used both to assist officers in decisions about the level of inspection to apply to a specific crosser and to make broader, strategic decisions about the deployment of resources and training.

Conclusion

Overcoming the false dichotomy between border security and the facilitation of trade and travel has become the defining challenge of border management in this era of globalization. Slowly but surely, the speeches and declarations of top U.S. and Mexican officials have come to reflect the realization that securing and facilitating international flows are two sides of the same coin—that we do not have to give up one in order to gain the other. This, in and of itself, has been a huge step forward from the security-at-all-costs mindset that ruled in the years immediately following September, 2001, especially given the fact that the broader political debate about the U.S.-Mexico border is still firmly rooted in an antiquated vision of borders as *lines in the sand* rather than systems to manage international flows.

As big an advance as the rhetorical shift has been, it is obviously insufficient. The technology and processes to make the vision real needed to be first developed and then implemented. Many of the needed technologies and management systems (trusted traveler programs, pre-inspection, etc.) have been developed, but we are still (with some exceptions) in the very early stages of implementation. Of course, implementation requires funding, and there has been a perennial shortfall in funding infrastructure and staffing at (rather than between) the official crossing points along the U.S.-Mexico border. Recent legislative changes have spurred an increase in public-private partnerships to help fill some of the infrastructure and staffing deficit, but private industry and local governments will never be able to relieve the federal governments of their responsibility to invest in the management of the border. Fortunately, the tools of the 21st Century Border allow for a more efficient use of limited resources, and while they often require upfront investment, the long-term payoff in both budgetary terms and economic growth throughout the region is very strong. The tools to manage the U.S.-Mexico border for the 21st century finally exist, but now we need to use them.

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