



# The Anatomy of a Relationship:

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

 **Wilson  
Center**  
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## 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—terrorist groups, organized crime networks—posing border and national security threats in the region 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 placing the efficient management of the U.S.-Mexico border as 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, the development of partnerships and cooperative methods of border administration.

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 U.S. 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 trafficking and illicit bulk cash.

At the U.S.-Mexico border, these changes meant that Mexico necessarily and for the first time fully got a seat at the table in discussions of border management. It took several years for the development to be fully institutionalized, but it was achieved through the formal creation of the Executive Steering Committee (with leadership in the White House and Los Pinos) 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 stepped up to join the governments as stewards of transborder resources and ecosystems and as the NADBank expanded its operations.

Over the past decade and a half, 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 will be released individually throughout 2015 and published as a volume in early 2016.

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.

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

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<sup>1</sup> *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

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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, 2012 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.<sup>2</sup> 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

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<sup>2</sup> 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.

in the work. The NGO community also introduced policy options to address the declining levels in Lake Mead with a document under the title “Conservation Before Shortage,” authored by several NGOs and presented to the U.S. Bureau of Reclamation<sup>3</sup> 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

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<sup>3</sup> 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.

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.

*“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.”*

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.

## WATER AND BORDERS

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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

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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.<sup>4</sup>

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

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<sup>4</sup> 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.

the goals the institutions were created for in the first place. The phenomenon, which we have referred to as “sovereignty over integrity,” 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,<sup>5</sup> 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 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 CONAGUA<sup>6</sup> in Mexico and USBOR in the United States, will require for an explicit intervention from the highest levels of both governments.

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<sup>5</sup> 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.

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<sup>6</sup> Mexico’s National Water Commission, *Comisión Nacional del Agua*.

## THE THREE WATERSHEDS

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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.

### *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) 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:

- i) contingency plans for low reservoir conditions;

- ii) storage capacity for both countries past the yearly cycles, and a release protocol in the event of water shortages;
- iii) a model for cross-border investments in infrastructure for water conservation and improved efficiency; and,
- iv) 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;<sup>7</sup> the work of

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<sup>7</sup> 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

Osvel Hinojosa and Francisco Zamora in mapping the conservation priorities and crafting a protocol for fieldwork in wetland restoration; or the work of Yamilett 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*<sup>8</sup> form and gravitate around a common goal. It produced the first international agreement in history to dedicate freshwater environmental flows out of the international agreement.<sup>9</sup>

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instance, <http://www.circleofblue.org/waternews/2015/world/colorado-river-basin-conservation-agreements-take-shape/>.

<sup>8</sup> 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/ceeri/The%20Nature%20of%20Policy%20Change%20and%20Implementation.pdf>

<sup>9</sup> 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/>

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.<sup>10</sup> 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

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<sup>10</sup> See Minute 319 at [http://www.ibwc.state.gov/Files/Minutes/Minute\\_319.pdf](http://www.ibwc.state.gov/Files/Minutes/Minute_319.pdf)

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,<sup>11</sup> 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

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<sup>11</sup> 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.

advocates integrality rather than sovereignty.

In a study in 2000,<sup>12</sup> 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.<sup>13</sup> 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

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<sup>12</sup> 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.

<sup>13</sup> 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.

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 achieved<sup>14</sup> 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***

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<sup>14</sup> 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](http://www.swrcb.ca.gov/rwqcb9/water_issues/tijuana_river_valley_strategy/docs/Recovery_Strategy_Living_with_the_Water.PDF) (November, 2015).

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 – 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.<sup>15</sup>” According to the new Minute, the BGC will be appointed and coordinated by the Commission, “shall include representatives

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<sup>15</sup> IBWC, Minute 320.  
[http://www.ibwc.state.gov/Files/Minutes/Minute\\_320.pdf](http://www.ibwc.state.gov/Files/Minutes/Minute_320.pdf)

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.”<sup>16</sup>

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 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.

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<sup>16</sup> Ibid.

- *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)

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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 US. 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,<sup>17</sup> 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.

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<sup>17</sup>[http://www.ibwc.gov/Citizens\\_Forum/citizens\\_forum\\_s.html](http://www.ibwc.gov/Citizens_Forum/citizens_forum_s.html)

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.

**The Cross-Border Xpress:  
Enhanced mobility between Tijuana  
and San Diego.**

The "Cross Border Xpress", a 325 feet/100 meters pedestrian skybridge that connects the region of Otay with the International Airport of Tijuana, is a joint venture between the Chicago magnate Sam Zell and the Pacific Airport Group from Mexico. It is currently under construction and is scheduled to begin operations late this year.

It is estimated that around 2.4 million travelers from the United States use this airport every year, producing around of 60 percent of its traffic.

There will be immigration and customs checkpoints. The skybridge will allow ticketed passengers who pay a toll to cross from/to the Tijuana airport.

This bridge will have a significant environmental impact by reducing the number of southbound cars trying to get to the Tijuana airport.

This project is considered a key component of the enhanced mobility initiative in the North American Free Trade Agreement (NAFTA), especially in light of the economic transformation of the Tijuana/San Diego metropolitan area to become a hub of vibrant economic activity and technological innovation that sets the standard of the future collaboration between both countries and societies.

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.

## CONCLUSIONS

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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 factors 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.

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