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Developing Treaty Compatible Watershed Management Reforms for the U.S. - Mexico Border: The Case for Strengthening the International Boundary and Water Commission

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Developing Treaty Compatible Watershed Management Reforms for the U.S. - Mexico Border: The Case for Strengthening the International Boundary and Water Commission

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Stephen P. Mumme†

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I. Introduction

In 2002, the United States and México, acting through the International Boundary and Water Commission (IBWC), signed Minute No. 308 as a partial solution to the dispute over México's water debt on the Rio Grande. This groundbreaking agreement committed both parties to investments in water conservation on the Rio Grande drainage, recognized the need for additional institutional reforms to strengthen the sustainable management of Rio Grande treaty waters, and called for a bi-national conference, planned for 2005, to identify and recommend changes to boundary water management.

Minute 308 is the strongest official recognition of the need for fundamental changes to the treaty system dominated by the 1944 Water Treaty. The 1944 Water Treaty has served the two nations well by providing a basis for peaceful resolution of most water management problems on the border. Yet, strains to the treaty system have been building for over a decade, driven by drought

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and rising demands on border water resources. Most observers agree that treaty compatible reforms are feasible by working within the current formal and informal mechanisms. With surface water disputes dominating the bilateral water agenda, much of the proposed innovation centers on enhancing the IBWC's authority to develop policy, encourage public participation, and assist subnational agencies in managing boundary river water. Bilateral border environmental cooperation, the bi-national Border Environment Cooperation Commission (BECC) and its financial partner institution, the North American Development Bank (NABD), have also drawn reformist concern. It is useful to review the options for improving the IBWC's performance with reference to these various programs and institutions concerning border water management.

II. IBWC Targeted Reforms

Criticism of the IBWC is almost as old as the Commission itself. Over the past sixty years, the Commission, particularly its U.S. Section, has been attacked for numerous grievances. Complaints include U.S. intrusion on national sovereignty, unnecessary duplication of functions of domestic water management agencies, the adoption of an overly technical and politically narrow interpretation of treaty-based responsibilities, use of an ad-hoc approach to dealing with problems and disputes falling within the scope of its official mandate, and failure to respond to local constituencies. By contemporary standards, the IBWC is deficient in various areas, ranging from the adequacy of its mandate to administration and operational procedures. Centered on the task of protecting national treaty water endowments, the IBWC was, and arguably remains, poorly positioned to address contemporary water management concerns or to promote an agenda of sustainable development of border water resources. The Commission, however, is also praised as a model of institutionalized bi-national cooperation.1 It is the lead agency for transboundary water management and the settlement of bilateral disputes relating to managing shared water resources. For this reason, it is useful to review and evaluate the options for

improving the Commission's watershed management capabilities in the border area starting with the most pressing controversies.

A. The Rio Grande Water Debt

The current reform recommendations arise from disagreements over treaty water management along the border. The most prominent dispute, the Mexican water debt, highlights the 1944 Treaty's ambiguity on the question of border-wide drought and the larger problem of watershed management. The 1944 Treaty deals only with the two principal transboundary rivers: the Rio Grande and the Colorado and, by extension, certain aspects of the management of their tributaries and drainages. The immediate complications in the Mexican water debt dispute arise from the region-wide drought affecting the Rio Grande basin as far back as 1992 and the treaty's ambiguous Article 4 provisions for managing drought on the river's mid-lower reach.

Article 4 stipulates that México must, over a period of five consecutive years, deliver a minimum annual average of 350,000 acre-feet of water from its Rio Grande tributaries to the United States. If an extraordinary drought prevents México from supplying that volume, a debt to the United States may be rolled over and paid in the next five-year cycle. This rollover does not excuse México from its obligation to deliver the 1.75 million-acre feet (maf) required during this second cycle. Any Mexican debt is entirely forgiven when U.S. storage capacity in the two uppermost dams, Falcon Dam and Amistad Dam, is reached, triggering the start of a new five-year accounting cycle. The treaty is silent, however, as to when and how a state of extraordinary drought is to be formally determined. It also makes no provision for a debt to be rolled over beyond a second cycle. These lacunae, it turns out, greatly complicate arriving at a cooperative solution.

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2 See infra Table 1 for a brief comparison of some of the more prominent suggestions.
3 See Mary Kelly & Alberto Szekely, Modernizing the International Boundary and Water Commission, Policy Paper No. 1, Univ. of Calif. at Berkely Center for Latin American Studies, (2004); see also Albert E. Utton, Overview: Symposium on Anticipating Transboundary Resource Needs and Issue in the U.S.-Mexican Border Area to the Year 2000, 22 NAT. RESOURCES J. 735 (1982).
### Table 1. Recent IBWC Reform Proposals Compared

<table>
<thead>
<tr>
<th>Recommended Institutional Change</th>
<th><em>Kelly &amp; Szekely</em>&lt;sup&gt;5&lt;/sup&gt;</th>
<th><em>Schmandt</em>&lt;sup&gt;6&lt;/sup&gt;</th>
<th><em>Nitze/Gemstar</em>&lt;sup&gt;7&lt;/sup&gt;</th>
</tr>
</thead>
</table>
| **Commission Executive**         | • Eliminate Engineer-Commissioner requirement  
• Elevate border water issues at level of the foreign ministries  
• Enhance authority of USIBWC Liaison  
• Reinstall General Directorate of Int’l Boundaries and Waters at Mexican Foreign Ministry | Create new second Commissioner responsible for integrated river basin management | Provide add’l resources for technical assistance and financing as “sticks and carrots” for stakeholder engagement in watershed processes |
| **Staff/Agency Organization/ Budget** | • Establish Joint IBWC/CILA office–emulating BECC  
• Coordinate data gathering, outreach, and technical aspects of project design.  
• Review staff capabilities  
• Increase budget | Create two ad hoc committees for drought management and groundwater management with short-term advisory mandate | |
| **Authority for Watershed Management** | • Require joint notification and consultation on any project or modification affecting basin hydrology or stream flow  
• Provide for the Commission to function as Secretariat for other advisory bodies and stakeholders | Create bi-national Rio Grande Basin council with two tasks: 1) basin wide water planning and; 2) designing water improvement projects | Create bi-national stakeholder councils for each watershed along the border |
| **Advisory Boards** | Establish joint Basin councils | Established Scientific Advisory Board to Rio Grande Basin council.  
• Establish four regional water task forces: Paso del Norte; Conchos-Pecos; International Reservoirs; and Lower Rio Grande | |
| **Policy Integration** | | Water management actions undertaken by IBWC Rio Grande Basin Council and Task Forces to be reviewed by BECC for Sustainability and NABD for funding | Ensure that BECC and NABD are incorporated in the policy planning and support process |

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<sup>5</sup> Kelly & Szekely, *supra* note 3.


<sup>7</sup> William A. Nitze, Draft: The Role of Climate Change in Water Management in the U.S.-Mexico Border Region: A Challenge for the BECC, the NADB and Other Bi-national Institutions (Nov. 9, 2004) (unpublished manuscript on file with author).
In the present instance, when México fell in arrears at the end of the 1992-1997 accounting cycle, the United States agreed to rollover the debt as provided in Article 4. Unfortunately, even though drought conditions were present and clearly effected the programming of Mexican water deliveries, no formal agreement was reached over whether the Mexican arrears were provoked by this extraordinary drought. In 1999, with precipitation still below average and a Mexican arrears still on the books, México formally, and unilaterally declared an extraordinary drought. In its formal declaration, México argued that the extraordinary circumstance in essence freed México from its formal obligation under Article 4, though it would try to meet its obligations and restore normal deliveries as soon as Mother Nature cooperated. The United States responded that México’s position was unacceptable and that México was bound by Article 4 provisions.

In 2002, the United States, with México’s concurrence, agreed to rollover the debt to a third consecutive cycle. México viewed its obligation at this point as an obligation in comity, and as a moral, rather than legal, obligation owing to the continuing drought and its 1999 declaration. The United States claimed significant damages to its downstream agriculture, rejecting México’s argument that the debt was in abeyance and denying that México’s interpretation of the extraordinary drought language was correct. The United States further produced evidence that México may have withheld available water in tributary storage to meet domestic needs even though the Treaty obligation is arguably the highest priority on the river, superseding domestic ordinances.

The two countries, with the assistance of foreign ministries, continued to manage the situation through the IBWC diplomatic process. In 2002, in IBWC Minute 308, the two countries agreed to invest funds in upstream water conservation that would improve México’s water use efficiency. This agreement provided, as first priority, that saved water would revert to the river for satisfying México’s treaty obligations. In the meantime, México agreed to

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8 México took the position that the U.S. government had virtually conceded that an extraordinary drought prevailed at the end of the 25th accounting cycle in October 1997, arguing that if this were not the case, the United States would have accused Mexico of defaulting on its treaty obligation at the end of the 25th cycle. Kelly & Szekely, supra note 3, at 12-13.

9 United States Allocation of Rio Grande Waters During the Last Year of the
continue to try to pay down the debt as a matter of comity and to meet its cyclical obligation in the new cycle consistent with Article 4 provisions. In 2004, it had significantly increased its inputs to the river and paid down nearly seventy-five percent of its remaining debt while meeting current cycle obligations.10 The prospect that México might actually top off United States storage capacity in the dams, vacating all existing debt and triggering a new cycle, seemed to worry Texan state interests, which were claiming treaty based damages in the earlier cycles. In December 2004, South Texas irrigators filed a claim for $500 million (USD) in damages under NAFTA’s Chapter 11, alleging that México’s failure to meet its treaty obligations was related to Mexican hoarding of tributary water.11 The plaintiffs allege this treaty water was used to raise agricultural export products, which unfairly impacted Texan agricultural investments and resulted in an effective taking of property under NAFTA provisions. Whether this novel argument will hold remains to be tested by a NAFTA dispute resolution panel.

Regardless of the merits in this dispute, the case itself points to a number of Treaty-based shortcomings related to drought management that must be addressed. These mandate shortcomings include the need to: (1) define ambiguous language in the water treaties, (2) better articulate and enhance the role of the IBWC in this area, particularly in relation to the responsibilities of domestic agencies, and (3) elaborate both staff capabilities and citizen and professional advisory functions related to watershed management. A brief word on each of these elements is required. Treaty architects and analysts foresaw the problem of extraordinary drought. Not only does the term appear in Article 4, but it is also found in Article 10 where it is applied to a different context, the Colorado River. The term itself derives from the 1906 Water Treaty dealing with the upper Rio Grande’s

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waters—now linked to the 1944 Water Treaty through the IBWC's mandate to administer the U.S.-México boundary and water treaties. Fortunately, the 1944 Treaty is not an obstacle here. While it failed to define these terms (which contributed to the present difficulties), it also provides a process for extrapolating bi-national interpretation of the treaty. This process, known as the Minute Process, by which the IBWC interprets and extends the Treaty to deal with particular implementation problems, requires the consent of the foreign ministries but otherwise imposes no further requirement for Treaty approval. Where appropriations are required to comply with new agreements, of course, national legislatures come forcefully into play. The Minute process is entirely adequate to reach a new bi-national understanding on the interpretation of the extraordinary drought language in the 1906 and 1944 Treaties.

In addition, the concept of cycles, referenced in Article 4 of the 1944 Treaty, ought to be better defined as well. In 1969, nearly a quarter century after the 1944 Water Treaty was signed, IBWC Minute 234 gave effect to the current system of cycles—the delay in doing so occasioned by the need to complete the hydraulic infrastructure on the Rio Grande. Unfortunately, at this time no effort was made to anticipate the need to extend debt payments beyond a period of two consecutive cycles or to further elaborate how debt payments might be made in the context of these cycles. Arguably, the term "cycles" and its application should be better defined to enable the two countries to articulate their domestic water management practices to meet Treaty obligations and to better understand the nature of national obligations in meeting cyclical obligations.

The water debt crisis has also drawn attention to the limits and inadequacies of the IBWC's current structure. Various critics and commentators have recently argued that the Commission's executive structure, staff capabilities, and public advisory process should be modified or strengthened. The IBWC's executive structure is in some respects unique, certainly by comparison to other bi-national water management agencies. Under Article 2 of

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the Treaty, the Commission is comprised of two national sections. Each section has a Commissioner with ambassadorial status who by Treaty must be a licensed engineer, as well as two Principal Engineers, a Secretary, and a Legal Advisor. Commissioners are presidential appointees and are officially accountable to chief executives through the foreign ministries of each country. The 1944 Treaty does not stipulate any other aspect of each Section’s organization. As a result, the two national sections have evolved somewhat differently. The United States Section has built up a substantial engineering-construction division, and the Mexican Section has deferred to other federal agencies for these functions.

Critics note that this structure is highly centralized, with a strong technical bias that may limit the agency’s diplomatic flexibility and responsiveness to public constituencies. Such criticisms have acquired greater force in an era in which the Commission’s work has shifted from infrastructure development to management of a broad range of problems, some of which were not anticipated by the 1944 Treaty, as well as accommodating a wider range of stakeholders. The fact that the Commissioners oversee both operational and diplomatic functions may be viewed as a crosscutting directive. Some analysts are now calling for treaty modifications that either eliminate the Treaty requirement that the Commissioner be a licensed engineer or establish a second Commissioner in each national section whose primary responsibility would center on watershed management and constituency relations. These same analysts would also like to see the Commission invested with new operational responsibilities for coordinating watershed management functions in the mainstem and tributary treaty rivers. They point to the organization and functions of the International Joint Commission (IJC), whose Windsor, Ontario Secretariat oversees and has recently added additional Water Management Boards on key transboundary watersheds along the U.S.-Canada border. Additional staff

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13 1944 Treaty, supra note 4.
15 Schmandt, supra note 6, at 152-53; Kelly & Szekely, supra note 3, at 12-13.
16 Schmandt, supra note 6, at 155.
capability would be added to buttress the IBWC’s capabilities in the area of watershed management.

Complimentary institutional reforms would extend to the public advisory and constituency-stakeholder process. Borrowing from the IJC’s practice on the Great Lakes and U.S.-Canada transboundary river basins, critics argue the IBWC should take on a bi-national Scientific Advisory Board. They also push for adding bi-national Water Management Advisory Boards, Councils, or Task Forces dealing with the major rivers and supplementing these, most likely, with tributary level task forces or public advisory boards. Critics also advance an argument for joining the operations of the two national sections in a single office to improve bi-national coordination and consultation.

Aside from modifying the Commission’s formal executive structure, much of this is possible within the scope of the Treaty and requires only the consent of the governments and sufficient budgeting to give such changes effect. While the Treaty’s formal specification of executive structure is fixed and politically unalterable, there is nothing in the text that precludes adding on additional surface water management functions should the governments agree to do so. Indeed, some elements of these reforms are already in motion, though not yet on a bi-national basis. In 1999, the U.S. Section elaborated its first border-wide Strategic Plan, a document that commits the Section to advancing sustainable development and certain components of watershed management. In the context of these strategic objectives, the U.S. Section proceeded to organize six Citizen’s Advisory Boards for key transboundary rivers, streams and sections of streams that impact the border. These watershed boards are not fully comprehensive and fall short of what might be expected of a full-scale watershed advisory board structure. In the last decade, the U.S. Section has also significantly enhanced its staff capabilities for environmental protection, water quality, and public affairs. Most recently, the U.S. Section’s new

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17 Id. at 152-53.
18 Kelly & Szekely, supra note 3.
19 See infra Table 2.
Commissioner, Arturo Duran, has reorganized the agency's operations on a regional basis that arguably might be better adapted or extended towards a watershed orientation to surface water management. Commissioner Duran has also controversially reorganized the U.S. Section's Commissioner's Office to incorporate more recent administrative roles and functions in that office including a public affairs officer, a state government liaison, and federal regulatory functions while assigning the two principal engineers the responsibility of overseeing operations and engineering functions.\textsuperscript{21} This approach seeks to modernize the older structure by rearranging and combining the Treaty mandated offices with newer, treaty compatible functions at the U.S. Section.

Table 2: USIBWC Strategic Goals and Objectives

<table>
<thead>
<tr>
<th>Goal No. 1: Transboundary Cooperation</th>
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<tbody>
<tr>
<td>1. Partner with other entities to carry out border groundwater investigations in support of regional sustainable development efforts which balance the needs of the riparian ecology and the human population.</td>
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<tr>
<td>2. Partner with other entities to develop and implement water marketing and transfer approaches for dealing with water quantity and quality questions.</td>
</tr>
<tr>
<td>3. Coordinate the exchange of expertise, technology, and other information within the IBWC and other entities to provide a more global approach to the IBWC’s int’l coordination and problem solving role.</td>
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<tr>
<td>4. Cultivate regional and int’l stakeholder support using proactive communication.</td>
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<tr>
<td>5. Partner with other entities in int’l problem prevention and resolution.</td>
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<tr>
<th>Goal No. 2: Boundary Preservation</th>
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<tbody>
<tr>
<td>1. Preserve, demarcate, and delineate the land boundary in an effective, innovative, and cost-effective manner that is responsive to stakeholders.</td>
</tr>
<tr>
<td>2. Preserve and delineate the river boundary and demarcate its ports-of-entry in a manner that balances the riparian ecology with human activities and incorporates advanced cost-effective technology that is responsive to stakeholders.</td>
</tr>
<tr>
<td>3. Delineate the land and river boundary on maps in an innovative and cost-effective manner that is responsive to stakeholders and complies with the 1970 Treaty, Article 2, Part C., river mapping requirement.</td>
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<tr>
<td>4. Establish a boundary-wide Global Information Systems (GIS) to manage data.</td>
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<tr>
<th>Goal No. 3: Water Resources Management</th>
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<tbody>
<tr>
<td>1. Incorporate stakeholder input, new tracking and forecasting technology, and a visionary U.S.-México environmental policy with flood control activities.</td>
</tr>
<tr>
<td>2. Renovate water data gathering, exchange, and accounting activities to accomplish more time-sensitive scenarios that incorporate current technology and methodology in support of stakeholder needs.</td>
</tr>
<tr>
<td>3. Operate river system structures, utilizing new technology and methodology in concert with other entities in a manner that is responsive to stakeholders and the riparian ecology.</td>
</tr>
<tr>
<td>4. Develop innovative approaches to water quality improvement and border sanitation problems.</td>
</tr>
<tr>
<td>5. Carry out studies and negotiations to reach agreement on the magnitude of the criteria flows and on the technical criteria for acceptability of proposed constructed works within the criteria flow floodplain in both countries as required under Article IV-B of the 1970 Boundary Treaty. Proceed the resources necessary to apply these technical criteria within the criteria flow floodplain in the United States in a manner that supports both limited development and maintenance of the riparian habitat.</td>
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<tr>
<th>Goal No. 4: Agency Resources Optimization</th>
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<tbody>
<tr>
<td>1. Value human resources through organizational development initiatives, including development and empowerment of personnel and promotion of a quality culture.</td>
</tr>
<tr>
<td>2. Analyze and establish priorities for agency programs and initiatives in concert with int’l and domestic mandates (legal and policy).</td>
</tr>
<tr>
<td>3. Align budget, performance, and organization to move towards achieving strategic goals and ensuring accountability to stakeholders.</td>
</tr>
<tr>
<td>4. Apply a strategic management approach to the integration and delivery of the agency’s engineering, construction, operations, maintenance, foreign affairs, and administrative support functions.</td>
</tr>
<tr>
<td>5. Maximize stakeholder participation in existing/future IBWC programs and projects.</td>
</tr>
</tbody>
</table>

B. Ecological Uses

In addition to this menu of modifications to the IBWC’s current mandate, a range of critics, including this writer, have

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22 These informal changes, remain exclusive to the U.S side of the border. Mexico has not yet produced a strategic plan of its own or informally altered much of its existing agency structure.
called for enhancing the priority bestowed by the Treaty on ecological uses of water.\textsuperscript{23} The question of ecological uses has cropped up most forcefully in the Colorado River delta region but is highly relevant for bi-national efforts to conserve habitat and biodiversity in other regions of the border as well. Conserving riparian ecology is now very much on the bi-national radar screen in the Tijuana river basin, the New River-Salton Sea, the river basins of the Sonoyta, the Santa Cruz, and the San Pedro, and along the various reaches of the Rio Grande. Without going into detail, the problem here is simply the 1944 Treaty’s failure to mention the importance of ecological uses, as in the priority framing language of Article 3 consigns these in-stream flow questions to the least priority category of “all other beneficial uses.”\textsuperscript{24}

In the case of Colorado delta riparian conservation, pressed by a bi-national alliance of environmental organizations and university based scholars, the two countries agreed in Minute 306 in August 2000 to create a bi-national task force to study the water requirements of the Delta ecosystem and to continue bi-national discussions on the topic.\textsuperscript{25} The issue was controversial enough that the IBWC’s authority to do this was linked to the 1970 Boundary Treaty’s mandate for channel rectification and maintenance, not the 1944 Water Treaty. Given the intensity of current demands on the Colorado River, there is little doubt that any linkage of ecological uses to the 1944 Treaty will continue to be highly controversial.

\textbf{C. Groundwater Management}

Groundwater remains another serious concern. Analysts of


\textsuperscript{24} \textit{Id.}

border water management have long called for strengthening the Commission’s formal role in groundwater management along the border.26 At least one model treaty has been written with this end in mind.27 Yet, there has been little progress on bi-national groundwater management since 1973 when Minute 242, the “Permanent and Definitive” solution to the Salinity Crisis, endowed the Commission with a small role in groundwater governance and provided for mandatory bi-national consultation on any public or private initiative that would materially affect the groundwater balance at the international border.28 Increasing reliance on groundwater for municipal and industrial uses on the border has raised the potential for bi-national conflict over this resource. In at least one instance, the case of the All-American Canal in California’s Imperial County, the issue has already risen to the cause celebre level.29

While scholars and activists have steadily called for concerted bi-national effort to negotiate agreements on bi-national groundwater management as envisioned by Minute 242, little has occurred to improve the overall situation in the past quarter-century. This may change, as the advent of the BECC has drawn attention and resources to the needs of urban water management along the border. This, in itself, harbors potential for designing and implementing groundwater management solutions along the border. The Mexican Section of the IBWC has also been quietly championing the idea of a framework agreement for groundwater


management on the border that would provide both political cover and a technical context for engaging local stakeholders in bi-national negotiations on the management of particular basins.\(^3\) This would certainly be compatible with the watershed management functions that have also been advanced on the agenda of IBWC mandate reform.

In sum, a number of mandate changes have been proposed that directly center on the IBWC. Many of these proposed changes are feasible within the terms of the existing water treaty system and remain primarily contingent on government support. A further concern, however, is with the IBWC’s capacity to better articulate its mission and capabilities within the evolving complex of bi-national programs and other agencies with water mandates on the border. To understand these possibilities, it is useful to consider how the La Paz process and BECC and NADB now engage the IBWC in managing surface water as well as water quality along the border.

D. The La Paz Process and Border 2012

In August 1983, the U.S.-México Border Environment Cooperation Agreement, better known as the La Paz Agreement, ushered in a new era of formal bi-national consultation and heightened attention to environmental problems in the border region, particularly those with a clear bi-national component. The La Paz Agreement stipulates that “nothing in this Agreement shall prejudice or otherwise affect the functions entrusted to the International Boundary and Water Commission, in accordance with the Water Treaty of 1944.”\(^3\) A decade after La Paz, with the NAFTA debate reshaping the bi-national policy agenda, the La Paz process was strengthened, first with the 1992-1994 Integrated Border Environmental Plan, followed by the 1995-2000 Border XXI Program, and, since 2000, the Border 2012 Program.

These successive programs had several important effects on bi-national water management at the border. First, they gradually


reframed and broadened the context and supporting rationale for border water management, extending the scope of border water management to include pollution prevention, water quality management, a concern for ecological processes, and, after 1992, a concern for advancing sustainable development of water resources along the border. Working in tandem with the IBWC on a range of water quality issues, starting with the problems of sewage spills into the Tijuana River and copper tailing spills on the San Pedro River, the environmental ministries of the two countries gradually elaborated an agenda for water quality management that was border-wide. Second, they drew on a larger range of interests, redefined as stakeholders, and provided new venues for bi-national discussion and cooperation. Third, they afforded a rationale for greater federal financial investment in water management at the border, with resources flowing through the U.S. Environmental Protection Agency (EPA) and México’s Secretaria de Medio Ambiente y Recursos Naturales (SEMARNAT), the BECC and NADB, and national public health ministries. These changes, taken as a whole, have been transformative. They envelop the older treaty based procedures and establish a new dynamic in border water management.

As befits a bi-national framework for environmental cooperation that espouses greater institutional and civic inclusion, the La Paz process has been closely scrutinized and criticized since its inception. At the outset, it was seen as a largely ad hoc decision making process that failed to prioritize or adequately budget for needed solutions to border environmental problems. It was also criticized for federal domination of the process, despite its formal validation of state and municipal governments and non-governmental civic organizations as legitimate stakeholders in the process. Under the Border XXI Program, which raised the priority accorded the border environment by the governments, water management was incorporated as one of the program’s nine functional policy domains and received the greatest level of federal financial support of any of the nine sectors. Individual projects associated with Border XXI Water varied widely, ranging from training water professionals in water management operations, to monitoring water quality in particular localities, to characterizing groundwater resources in transboundary aquifers. Most of the Border XXI investment in the water sector, however,
centered on BECC certified projects and project proposals in the border region which were developed in an ad-hoc manner. In short, basic criticisms of the La Paz Process persisted.

The latest program iteration, the Border 2012 Program, aims to dispel such criticism by reorganizing and decentralizing the La Paz process away from federally dominated sector organization in favor of a more regional and localized series of workgroups and task forces. At the border-wide level, a new water policy forum under the guidance of the environmental ministries, will seek to prioritize and address bi-national issues through the use of federal resources. The environmental ministries (officially identified as National Coordinators) may then create regionally based task forces to deal with a range of locally identified environmental concerns, including water matters. These task forces are to be as "representative as possible" of all potential stakeholders in the area.

The notion driving this change is not only to decentralize decision-making but also mobilize local resources for local solutions to water-based problems. While the La Paz process and Border 2012 acknowledge the IBWC’s historic treaty role in bi-national water planning, and IBWC will certainly participate in its Policy Forums and Regional Workgroups, at present it remains unclear just how these new local task forces will interact with the IBWC groups and other local initiatives bearing on watershed management at the border. The Border 2012 task forces are cross-sectional and multi-media organizations that may, in principle, incorporate water concerns. Just how they will coordinate with IBWC’s new Citizen’s Advisory Councils for bi-national watersheds has not been resolved. Nor is it certain just yet how these task forces will interact with México’s river basin councils, consejos de cuencas, on the border. These several representative bodies appear to have somewhat overlapping functions and concerns that need to be better coordinated if they are to evolve in the direction of generating a more coherent framework for bi-national watershed management on the border. Ideally, the two countries should try to build on the treaty system and the La Paz

process to bi-nationalize these advisory and coordinating bodies in watershed management, moving in the direction of the river basin councils for watershed management and strategic planning of border water resources. In principle, this is a treaty-compatible reform that could be formalized through the IBWC’s minute procedure and supplemented by the La Paz Agreement’s annex procedure.

E. BECC and NADB

Since its advent in 1994, the BECC-NADB duo has become an important player in border water management and the principle source of new capital investment in border water infrastructure. Situated in Ciudad Juarez, the BECC is structured as a truly bi-national agency, a single organization with representation of both countries at the board, managerial, and advisory levels. It explicitly calls for sustainable development in the border area and has drawn much praise for its institutional commitment to building local capacity for sustainable development, public participation, and the transparency and openness of its operations. Its technical assistance to needy communities and certification procedures for project approval has significantly improved local capabilities for accessing needed water infrastructure along the border.

Today, the BECC’s problem remains one of articulating other needed reforms in border water management. The agency has a close working relationship with the national environmental ministries, and the IBWC currently is an ex-officio member of its board of directors. The BECC has also established close working relationships with the border states of the two countries. However, despite its mandate for sustainable development of border water infrastructure, the BECC’s operations proceed project-by-project and are not yet driven by a specific strategy. Although recent mandated expansion beyond urban water infrastructure enhances the BECC’s authority to support a broader

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35 Id.
range of watershed management projects, it has the potential, in the absence of strategic planning, to further complicate this situation. The BECC and NADB managers are both conversant and committed to cooperating in any way they can with the La Paz process and see themselves contributing to its aims. Gaps still remain that warrant further attention, particularly if the two countries are to move in the direction of developing formal procedures for watershed management at the border.

Challenges facing the BECC in capacity development and stakeholder participation include finding ways to sustain project social capital, civic voice, and community leadership to other policy repertoires associated with watershed management. To date, the BECC has centered its efforts on providing opportunity and stimulus for civic participation in project design and development. While it perceives this process as growing civic capacity, it has not sought to support or sustain civic groups beyond project completion or to facilitate a process of linking these water project activists with other stakeholder groups and advisory bodies to border institutions. The point is certainly arguable, but building networks and linkages is certainly a function BECC can and should facilitate as a process of community empowerment and capacity building for border-wide sustainable development.

Another element worthy of debate is whether BECC's technical assistance and certification procedures should be modified to favor projects that directly contribute to watershed management. At present, in the absence of an institutional mandate to this effect, the agency officially treats each project on its own merits. In principle, projects enhancing water conservation and sustainable use of water resources serve the broader aims of border watershed management, and such uses would certainly be factored into considerations bearing on project approval (certification). However, there is little guarantee in the present process that such projects would be favored, fast-tracked, or otherwise privileged for financial assistance and approval. To date, the BECC has not worked closely with the IBWC, or other federal and state level water management agencies, on an agenda

36 Nitze, supra note 7.
for watershed management in the border area.\textsuperscript{37} Greater integration of agency effort is certainly possible in the interest of improving bi-national cooperation in watershed management.

Another cause for concern is the pending board merger the BECC faces with its institutional partner, NADB.\textsuperscript{38} The recent reforms at the BECC and NADB create opportunities for greater synchronization of effort but also present critical challenges. Passage of House Report 254 in April 2004 facilitated mandate expansion at the BECC and NADB, enhanced NADB's lending authority, and provided statutory authority for a merger of the boards. Since then, NADB, implementing drought mitigation commitments in IBWC Minute 307 dealing with the Rio Grande, has proceeded to fund a portfolio of water conservation projects in the Conchos River headwaters and in South Texas. As some critics have noted,\textsuperscript{39} these reforms may enhance agency capacity to address identified needs in border watershed management as well as cope with regional phenomenon like climate change. However, it is also noteworthy that these projects went forward independent of BECC review and with little direct stakeholder participation apart from federal water agencies and the irrigation districts directly involved. While the urgency of the drought situation was obvious and the deployment of NADB's underutilized resources may have been reasonable, this does not appear as careful or thorough a stakeholder process as would likely have occurred if a watershed management protocol was in place. It would also unlikely have passed muster at the BECC. As the two boards merge, many observers in the border community are seriously concerned that BECC's sustainable development procedures will be diluted and fear losing an important source of influence on border water policy in the absence of new institutional mechanisms responsive to citizen concerns.

III. Integrating the IBWC in Border Watershed Management

In sum, there is much that can be done to address shortcomings in the current bi-national water management

\textsuperscript{37} Id.


\textsuperscript{39} Id.
framework. Most of the proposed reforms outlined above are treaty-compatible and would not require fundamental changes to the present set of agreements governing U.S.-México cooperation on water management. What needs to be stressed is that treaty-compatibility does not mean political feasibility. As the ongoing case of the Mexican water debt shows, important differences in national perspective are bound to drive the dynamics of cooperation on all these issues. Cooperation will be especially difficult where altering extant formal mechanisms is concerned, since these mechanisms are tied to national endowments and development options.

While reinforcing the Treaty architecture is critical at this time, it is also true that the two countries need to focus more on how the various institutions with mandates for water management at the bi-national, national, state, tribal, and local levels coordinate responses to regional water challenges. The growing consensus in favor of a watershed approach to bi-national water management requires a greater degree of formal articulation between existing agencies than in the past. As the drought question reminds us, such innovation runs squarely up against the limits of sovereignty. But lawsuits and post-hoc recriminations, even recuperation of financial damages, will not in themselves enable the two countries to anticipate and plan for future water shortages. These shortages are likely to occur more frequently considering the rising demand on the region’s water supply. The good news is that our existing institutional arrangements can be modified in ways that should enable them to meet the needs of future generations while also sustaining our common ecological endowment. This can be accomplished without impairing the sovereign entitlements to the region’s water resources established by hard-won treaties. Additionally, the political momentum to move in this direction on both sides of the border seems to be gaining strength.

The IBWC remains critical to this process. Right or wrong, it is still the institutional mechanism charged with implementing the U.S.-México boundary and water treaties and resolving treaty related disputes between the two countries. However, the Commission’s two national sections remain embedded in the domestic administrative and political processes of their respective governments and are not really able to push significant reform initiatives independent of government support.
Within the limits of political feasibility, the IBWC has made some institutional progress in the last decade. It has tentatively and cautiously endorsed research on the Colorado River Delta ecosystem, which partially legitimizes the importance of considering ecological uses of treaty water at the bi-national level. By participating on the BECC's board, it has become engaged in matters that extend beyond its narrow treaty water turf. Both national sections openly proclaim a commitment to sustainable development of water resources, though this has yet to be formalized under the Treaty. The national sections have gone even further, with the U.S. Section officially endorsing a new strategic plan\(^4\) and establishing citizens boards while the Mexican Section quietly lobbying for bi-national cooperation in managing shared groundwater.

If the Rio Grande tributary water dispute has a silver lining, it is that it has generated additional political interest in strengthening institutional mechanisms for water conservation and management that should enable the governments to support a broadening of the IBWC's role in watershed management. This will require moving even further away from the Commission's highly restricted jurisdiction in treaty water management to the point of engaging the Commission more directly than ever with national and state water management agencies. The IBWC has the Treaty authority and a base of technical expertise that could be elaborated and reinforced in a treaty compatible manner to enable it to better diagnose boundary water supply and demand trends, issue conservation advisories, and serve as an intergovernmental locus for drought emergency response discussions and responses to other acute water supply problems affecting the two countries.

In support of these functions, the governments should follow recent advice and establish bi-national watershed boards for the Treaty rivers (Rio Grande, Colorado, and Tijuana) that represent a full range of government and non-governmental stakeholders in treaty water management. These watershed boards should be supplemented with either permanent or ad hoc scientific advisory capability, along the lines of recent practice of the IJC on the U.S.-Canada border. An effort should be made to coordinate representation on these boards with citizen representation on

\(^4\) See supra Table 2.
boundary river *consejos* and other citizens advisory functions for border watersheds, as well as with the water forums, workgroups, and relevant task forces established under the La Paz process. The two countries should also consider striving for agreement on a strategic management framework for boundary water management that either incorporates shared groundwater or creates separate framework agreements for managing surface water and groundwater. Each of these frameworks should stipulate the intergovernmental responsibilities of bi-national, federal, and sub-national agencies in data collection, operations, and financing. Insofar as new infrastructure is needed to implement strategic commitments, such projects should be vetted through the BECC’s certification procedures to ensure compatibility with bi-national sustainable development goals.

All of this is a tall order; but everything proposed here is Treaty-compatible if the governments choose to support it. Hopefully, the de facto bi-national water planning discussions for the Rio Grande envisioned under Minute 308 will push the two countries to make better use of the IBWC for watershed management in the 21st Century.
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