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How to Accommodate an Uncertain Future into Institutional Responsiveness and Planning: The Case of Mexico and the United States

In 1889, Mexico and the United States created, through the Convention to Avoid the Difficulties Occasioned by Reason of the Changes which Take Place in the Beds of the Rio Grande and Colorado River,¹ their first joint bilateral mechanism to deal with border water problems. In 1906, they concluded the Convention Providing for the Equitable Distribution of the Waters of the Rio Grande for Irrigation Purposes.² Finally, on February 3, 1944, they signed their historic Treaty Relating to the Utilization of Waters of the Colorado and Tijuana Rivers and of the Rio Grande,³ which broadened the powers of the now century-old International Boundary and Water Commission. By the late 1970s, the Commission had apparently led the two neighbors to settle all major surface water allocation and distribution problems, through the adoption of an incredible number of agreements.⁴

The marvel of the IBWC experience was that, even as late as 1989, it had existed and developed for 10 decades, especially the latter four, practically oblivious to the political turmoil and other disputes which

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1. Mar. 1, 1889, U.S.-Mex., 26 Stat. 1512.

2. May 21, 1906, U.S.-Mex., 34 Stat. 2593.

3. Feb. 3, 1944, U.S.-Mex., 59 Stat. 1219.

4. See C. Sepulveda, *Instituciones para la Solucion de Problemas de Aguas de Superficie entre Mexico y Estados Unidos*, 18 Nat. Res. J. 131 (1978); S. Mumme, *Continuity and Change in U.S.-Mexico Land and Water Relations: The Politics of the IBWC* (1980); S. Mumme, *The Background and Significance of Minute 261 of the IBWC*, 11 Cal. W. Int'l L. Rev. 223 (1981); S. Mumme, *Regional Powers in National Diplomacy: The Case of the U.S. Section of the IBWC*, 14 *Publius* 115 (1984); S. Mumme, *Engineering Diplomacy: The Evolving Role of the International Boundary and Water Commission in U.S.-Mexico Management*, 1 J. Borderlands Stud. 24 (1986); M. Jamail & S. Mumme, *The International Boundary and Water Commission as a Conflict Management Agency in the U.S.-Mexico Borderlands*, 19 Soc. Sci. J. 45 (1982); S. Mumme & S. Moore, *Agency Autonomy of U.S. Transboundary Resource Commission*, 3 *Transboundary Res. Rep.* 3 (1989); S. Mumme & S. Moore, *Agency Autonomy in Transboundary Resource Management: The United States Section of the International Boundary and Water Commission, United States and Mexico*, 30 Nat. Res. J. 661 (1990); Eldridge, *A Comprehensive Approach to U.S.-Mexico Border Area Water Management*, 4 *Southwestern Rev.* 89 (1985).

plagued the bilateral relationship between the two countries during the previous 100 years. That can only mean that its work was not dependent on political considerations, but rather was handled on the basis of a common understanding and awareness of the need to resolve the issues from a technical, economic, and even ecological perspective, for the mutual benefit of the two countries.⁵ The work method established by the Commission was usually praised in the abundant specialized literature, as it consisted in the technical and legal analysis of its concerns, not by politicians but by the specialists from both the Mexican and the United States sections which integrate it.

There had been sufficient political will on the part of the two countries to approve most of the agreements reached by the Commission (incorporated into Minutes submitted to the approval of both governments in order to acquire full legal force), and which translated into major successes, such as exchange and integration of information regarding the hydrological and climatological behavior of watercourses, channelization and channel rectification works, construction of five major international dams, and the good prospects for solution of some initial sanitation problems related to the use of river waters in neighboring urban areas in the border.⁶

During the 1960s, the dispute over the salinity of the Colorado River water reaching Mexico did in fact disrupt the relatively peaceful political relationship along the border. Saline water originating in underground deposits of the Wellton–Mohawk irrigation district of Arizona caused severe damages to soil and crops in the Mexicali Valley. This dispute was finally resolved in 1972 through Minute 242 of the IBWC and gave testimony once again of the effectiveness of that bilateral institution.⁷

Perhaps the best that can be said about the Commission is that its work involved one of the most contentious and volatile border areas in the world, with a growth potential perhaps not comparable to any elsewhere. The border became a kind of laboratory where most future environmental

5. C. Ramirez, *La Comision Internacional de Limites y Aguas: Cien Anos de Relaciones Bilaterales (1889–1989)*, 26 *Politica Exterior* 13 (1990).

6. S. Mumme, *The Politics of Water Apportionment and Pollution Problems in United States–Mexico Relations* (1982); G. Rohlich, *Surface Water Quality in the Border between El Paso and the Gulf of Mexico*, 22 *Nat. Res. J.* 915 (1982); S. Mumme, *State Influence in Foreign Policy Making: Water Related Environmental Disputes along the United States–Mexico Border*, 38 *Western Pol. Q.* 620 (1985).

7. L. Cabrera, *La Salinidad del Rio Colorado: Una Diferencia Internacional*, Coleccion del Archivo Historico Diplomatico Mexicano (1975); H. Dregne, *Salinity Aspects of the Colorado River Agreement*, 15 *Nat. Res. J.* 43 (1975); D. Furnish & J. Ladman, *The Colorado River Salinity Agreement of 1973 and the Mexicali Valley*, 15 *Nat. Res. J.* 83 (1975); D. Gantz, *United States Approaches to the Salinity Problem on the Colorado River*, 12 *Nat. Res. J.* 135 (1972); A. Kneese, *A Theoretical Analysis of Minute 242*, 15 *Nat. Res. J.* 135 (1975); D. Mann, *Politics in the United States and the Salinity Problem of the Colorado River*, 15 *Nat. Res. J.* 113 (1975).

needs and problems could be the object of anticipatory consideration, not only the Commission itself but by outside observers as well.⁸

During the past few years, however, some observers have found signs that the IBWC may not be as well equipped as in the past to deal not only with its current agenda, but even less so the formidable tasks ahead. The apolitical nature and technical expertise of those who are directly responsible for the work of the Commission, and which constituted the keys to its successes, has apparently dwindled or perhaps even vanished. More importantly, there are those concerned with the fact that, even if the Commission maintained the degree of excellence it showed during the past century, the enormity of the new challenges ahead go well beyond its management capacity, as it was not designed to deal with such situations.

There is in fact some basis for such anxieties. For example, since 1973 and approval of Minute 242, the IBWC has had general rules for establishing a bilateral regime to conserve, manage, and distribute transboundary groundwaters. Despite the fact that this regime was urgently needed 18 years ago, practically nothing has been done in this respect by the Commission to date. This is viewed as a most desperate situation, and some grave disputes may already be on the horizon as a result of the Commission's passivity. That is undoubtedly the case of the Hueco Bolson aquifer, which is close to disappearing as a result of a clear case of non-management.⁹

Another case in point is the way the Commission has handled the problem presented by the lining of the All American Canal which parallels part of the border between California and Mexico. Plans for the lining were initiated by the United States without timely prior consultation with Mexico, as demanded by Minute 242.

For both cases, there are those who feel that the previous generations of commissioners, from both sides, would never have allowed for such situations to arise, much less to get to the point where they are now, and that they would have taken in proper time the necessary preventive joint action.

Even more troublesome may be the fact that the Commission was designed more to deal with the kind of problems it has faced up to now, than to tackle the specific size and sort of phenomena, such as global

8. The U.S.-Mexico Border Region: Anticipating Resource Needs and Issues to the Year 2000 (C. Sepulveda & A. Utton eds., 1984); N. Armstrong, *Anticipating Transboundary Water Needs and Issues in the United States-Mexico Border Region*, 22 Nat. Res. J. 877 (1982).

9. See A. Utton, *International Groundwater Management: The Case of the U.S.-Mexican Frontier*, 57 Neb. L. Rev. 641 (1978); A. Utton & R. Hayton, *Transboundary Groundwaters: The Bellagio Draft Treaty* 29 Nat. Res. J. 663 (1989); A. Szekely, *Contexto Juridico Internacional en el que se Enmarcarian las Negociaciones Bilaterales sobre Uso y Conservacion de Mantos Acuiferos Subterranos Transfronterizos* (1987); U. Canchola, *El Regimen Juridico de las Aguas Subterranas Transfronterizas: El Caso de Mexico y los Estados Unidos*, Tesis en la Facultad de Derecho, UNAM (1990).

warming, that loom in the near future.¹⁰ Those phenomena were naturally not contemplated in 1889, when the Commission was first set up nor were they even imagined in 1944 when its powers were broadened. However, even as recently as 1989, despite the existence of well-documented studies, neither the Commission nor its member governments seemed to suspect the enormity of the impending environmental problems nor the inherent inability of the Commission to deal with them.

The water agenda in the bilateral relationship between Mexico and the United States will thus have to include not only those current issues which already put great pressure on the resource, and which are due to increased demand, spurred largely by population growth along the border, to the depletion of groundwater, to periods of short-term or even prolonged extraordinary drought, to degraded water quality and to land uses that affect water supply, flooding and water quality. The agenda will above all have to include planning to respond to the effects of greenhouse warming, which will add incredible complications, such as a change in spatial and temporal distribution of precipitation, soil moisture and runoff, and the frequencies and magnitudes of droughts and floods, all of which in turn will lead to changes in cropping patterns, in the supply and demand for water, and in changes in the natural ecosystems.

The studies undertaken to estimate the potential impacts of global warming on the water supply in the United States–Mexico border areas show us that supplies would greatly diminish, starting from almost a 76 percent reduction in the Rio Grande region to nearly 40 percent in the upper Colorado River basin.¹¹ These are enough to begin to understand that the scope of transboundary water issues between Mexico and the United States will inevitably take a dramatically different direction in the immediate future. If it is remembered that in the Rio Grande, the Colorado, and the Great Plains basins, total consumption is already, today, more than 40 percent of renewable supply, then the additional complications that will come from the regional effects of global warming can only point to potential catastrophic situations. If, on top of all that, it is considered that changes in any part of the macro-basin, constituted by the Rocky Mountain system as situated from Alaska to southern Mexico, may have effects on the entire western half of the North American region, then to contemplate merely bilateral solutions is clearly a fragmented approach.

10. See A. Szekely, *Establishing a Region for Ecological Cooperation in North America*, 32 Nat. Res. J. 563 (1992) (providing a brief analysis of the alarmingly grave potential consequences that global climate warming is expected to have on the availability of water resources in the Mexico–United States border).

11. R. Revelle & P. Waggoner, *Effects of a Carbon Dioxide-Induced Climate Change on Water Supplies in the Western United States*, in *The Challenge of Global Warming* 151 (D. Abrahamson ed., 1989); Knox & Buddemeir, *Impacts of Climate Change on California Water Resources*; Stockton & Boggess, *Geohydrological Implications of Climate Change on Water Resource Development* (1979).

It is against all this that the IBWC would have to cope in much of its second century. The 1944 Treaty provided the Commission with practically no tools, especially in the case of the Colorado River, to face 'extraordinary drought' situations of significantly lesser importance than that which global warming may in fact present. The literature on the subject, mostly the research of professors Sepulveda and Utton, has been alerting for some time of the dangers that may result from the fact that the Treaty is unclear and leaves a legal vacuum as to the rules applicable in the face of an "extraordinary drought."¹² Those warnings, however, were made without taking into consideration the possibility of the more permanent consequences from a phenomenon like global warming. So, if the Treaty left the Commission with no effective tools to deal with normal, foreseeable extraordinary droughts of the kind expected to come in almost any major basin from time to time, it much less designed it for and equipped it with what it needed to respond to a phenomenon of the dimension and potential terminal consequences of global warming.

More importantly, the IBWC was created on the premise and with the expectation that there would always be water available to distribute between the two countries. As a result of climate change, if its projected consequences are confirmed, the new normality will be the ordinary, dramatic unavailability of water for the border region and, instead of extraordinary droughts, permanent ones may be the rule. The political, economic, social, cultural, legal, ecological, and other impacts that such a new order would bring could hardly be the jurisdiction of an entity such as the current Commission. It will not take much to see, then, that the very foundations for the creation of the IBWC would have been attempted against. If such scenario as global warming did come to happen, one could say, in regards to the 1944 Treaty and its mechanism, the Commission, that a sort of fundamental change of circumstances would have operated.

In fact, that fundamental change seems to be in the making and, consequently, the usefulness and survival of the Commission as it is known now would have to be put very much in question. It may not even be as easy as choosing between the alternatives of whether to maintain it as is or to revamp it and strengthen it. The question may be whether something else should come in its place, and then the dilemma would be what exactly to put in its place. Questions of this kind are the ones that the two governments should have been asking themselves for quite some time already. Unfortunately, they seem to be very far from even starting to identify possibilities.

12. See C. Sepulveda, *Instituciones para la Solucion de Problemas de Aguas de Superficie entre Mexico y los Estados Unidos*, 18 Nat. Res. J. 131 (1978); A. Utton, *An Assessment of the Management of U.S.-Mexican Water Resources: Anticipating the Year 2000*, in *The U.S.-Mexico Border Region: Anticipating Resource Needs and Issues to the Year 2000*, *supra* note 8.

Traditionally, the main concern about the IBWC was that it did not receive enough powers so as to turn itself into a sort of supranational organization. Now, precisely what may be needed is for the IBWC to become a mechanism ready to plan and to respond efficiently and effectively to the challenges ahead. Since such a condition is alien to its very origin and nature, it may ultimately be more convenient to contemplate a totally new institution. Professor Sepulveda has proposed that such a new entity, perhaps centered in the respective foreign ministries, and with the advice of the IBWC, be created to meet periodically with sufficient authority to regulate and coordinate joint action on boundary water issues.¹³ This would be especially necessary because, as a result of the chain-effects that global warming consequences would have beyond the hydrologic cycle, the mechanism that would be required would need to deal with many issues other than water issues. Dramatic reductions in water supply in the border would affect other natural resources and would create and complicate innumerable transboundary environmental issues, in addition to economic, social, political, and legal issues. The need to centralize in a single entity the response strategy will then be too tempting and unavoidable to resist.

It must be remembered that the 1983 La Paz Agreement on Cooperation for the Protection and Improvement of the Environment in the Border Area¹⁴ created another bilateral institutional mechanism. It requires that other bilateral and trilateral agreements in the region have to consult with several departments and agencies of the respective governments, notably the wildlife services. In the La Paz National Coordinators mechanism, integrated by the Mexican Secretariat for Urban Development and Ecology and by the United States Environmental Protection Agency, some overlapping with the functions and powers of the IBWC has inevitably been occurring already in practice. This has happened despite the fact that Article 12 of the Agreement provides quite clearly that nothing in it "shall prejudice or otherwise affect the functions entrusted to the International Boundary and Water Commission in accordance with the Water Treaty of 1944."

During its seven years of existence, the National Coordinators mechanism has directly worked and taken action on water sanitation problems in urban areas along both sides of the border. More recently, the La Paz National Coordinators and the IBWC met jointly from December 1990 to February 1991 to prepare the draft of an Integral Binational Plan for the Improvement and Protection of the Environment in the Border

13. C. Sepulveda, *Los Recursos Hidraulicos en la Zona Fronteriza Mexico-Estados Unidos: Perspectiva de la Problematica Hacia el Año 2000: Algunas Recomendaciones*, in *The U.S.-Mexico Border Region: Anticipating Resource Needs and Issues to the Year 2000*, *supra* note 8, at 353.

14. Aug. 14, 1983, U.S.-Mex., T.I.A.S. No. 19,827.

Area, which will involve both institutions and which should be ready by January 1992. The preliminary list of issues for the Plan include several water sanitations and other water related issues. This opportunity should not be missed to incorporate into the future Integral Binational Plan, and from both a substantial and institutional point of view, the issues that the two countries will have to deal with in the future, especially as a result of climate change. This should not be too difficult, since the preliminary list contemplates already, albeit in an isolated fashion, atmospheric interference issues (such as air pollution). Thus, a connection between water and atmospheric issues is indispensable and urgent.

Whatever institutional mechanism is established for the future at the bilateral level, it will necessarily have to be coordinated with any trilateral efforts undertaken to cope with regional issues in North America. If Mexico, the United States, and Canada are wise enough to formalize, hopefully through a treaty, their regional ecological cooperation, they will also need to create a North American institutional mechanism, which would also supervise the work of bilateral institutions, in order to ensure coherence and compatibility of international undertakings by the three countries. All efforts should be made to make the three governments conscious of the need to start acting responsibly on responsiveness and planning at once and with no further delays, as any more procrastinations are truly inexcusable and would be unforgivable.