United States — Mexico: Coping with Environmental Problems at the Border

Scott N. Weston

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I. INTRODUCTION

The border between the United States and Mexico extends over 1,952 miles. More than 6.8 million people live along this border. Covering four American states and six Mexican states, the border zone encompasses thirty-six cities overall. From these statistics, it is clear that the border covers an extremely large territory, encompassing an extraordinary amount of people. Consequently, the quality of the environment at the border is of vital importance to both the United States and Mexico.

Unfortunately, the environment at the border has been continually plagued by several problems which adversely affect the inhabitants in the area. These problems at the border cover a wide range of concerns including water (quality and quantity), air, soil pollution, and solid waste disposal. While the water pollution occurs mostly in the Rio Grande, Colorado, and Tijuana rivers, the air pollution occurs mostly in the urban areas on both sides of the border. In the most general terms, the major causes of the pollution problems at the border are industry, agriculture, and transportation.

1. Int’l. Boundary and Water Comm’n., JOINT PROJECTS OF THE UNITED STATES AND MEXICO THROUGH THE INTERNATIONAL BOUNDARY AND WATER COMMISSION at 1 (1981) [hereinafter JOINT PROJECTS]. The international boundary between the United States and Mexico was established by treaties in 1848 and 1853. Id. The International Boundary and Water Commission [hereinafter IBWC] describes the boundary as being “[c]haracterized by deserts, rugged mountains, abundant sunshine and by two major rivers - the Colorado River and the Rio Grande, which provide life-giving waters to the largely arid but fertile lands along the rivers in both countries.” Id.
2. Id.
5. Id.
7. Id. Most of the industrial air pollution comes from iron and steel producers in Monterey and Nuevo Leon, as well as a copper smelter in Sonora. Id. at 344. More specifically, there are four major sources of pollution at the border: (1) Agriculture (the use of pesticides); (2) Particulates (from quarrying of rock, sand and gravel, cement making and concrete plants);
United States tends to be a major contributor of the pollution caused by the industry, Mexico is a major contributor of the pollution caused by agriculture and transportation.  

From the above description, it is evident that while the border itself represents the physical dividing line between two great sovereign nations, it creates no obstacle for the passage of pollutants in the free flowing environment. Unlike humans, who must display a passport when crossing the border, contaminated air and water pass freely. Consequently, regardless of which country causes a particular pollution problem, the citizens of both Mexico and the United States who live in the border area will feel the effects of such pollution.

However, the very existence of the border serves as a constant reminder to both Mexico and the United States of the tremendous political, cultural, and social barriers which must be overcome in attempting to tackle environmental problems at the border. One such difference lies in the area of administering local governmental programs. In Mexico, the cities lack local autonomy to make major political policy decisions and implement programs; thus, they must rely on their state and national governments to bring about major changes. By contrast, the local governments in the United States possess independent authority to administer and regulate many aspects of their own affairs.

This Comment will use a historical perspective to trace the attempts of the United States and Mexico to overcome these barriers in tackling environmental problems at the border. Within this development, this article will describe the problems that have arisen in the border area, and will assess the effectiveness of the agreements passed by the two countries to deal with these problems. Finally, this Comment will indicate the role of international law in addressing these problems.

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8. *Id.* at 354-55. Vehicles in Mexico tend to be much older than those in the United States, and many do not have air pollution control devices. *Id.* The United States, on the other hand, greatly reduced auto emissions with its 1970 Clean Air Act, which required a greater reduction in air pollutants for autos manufactured after 1970. *Id.*

It is interesting to note that vehicle discharge produces far more pollution than does industrial discharge. *Id.* In El Paso County alone, the carbon monoxide emitted from vehicles is estimated at 122,000 metric tons annually, while the total United States industrial discharge is estimated at 123,000 metric tons annually. *Id.*


10. *Id.*

11. *Id.*
environmental problems, and suggest further measures that the United States and Mexico should employ in order to become more effective in handling environmental problems.

II. HISTORY OF BILATERAL AGREEMENTS BETWEEN MEXICO AND THE UNITED STATES

It was not until the past few years that the United States and Mexico made an effective comprehensive cooperative agreement, covering both air and water pollution, for the improvement of the quality of the environment at the border.12 The United States enacted environmental legislation covering its states near the border several decades ago, but it was not until the early 1970's that Mexico passed similar legislation.13

A. The Water Utilization Treaty

The first major treaty between the two countries which related to the environment was the Water Utilization Treaty of 1944.14 The purpose of this treaty was to allocate between Mexico and the United States the rights to the waters of the Rio Grande, Tijuana, and Colorado Rivers.15 This treaty established the International Boundary and Water Commission (IBWC), which would resolve all disputes and engage in planning for the use of the rivers.16

Because the treaty made no specific reference to water quality, it was ineffective in dealing with the improvement of the environment at

12. See infra notes 63-65 and accompanying text.
13. See infra notes 33-37 and accompanying text.
16. Water Utilization Treaty, supra note 14, at arts. 224-25. These articles provide that the IBWC shall consist of a United States section and a Mexican section, and shall have the status of an international body. Id. The function of the IBWC is to "apply the rights and obligations which the Governments of the United States and Mexico assumed under the numerous boundary and water treaties and related agreements . . . ." JOINT PROJECTS, supra note 1, at 5. The United States and Mexican section maintains headquarters in the adjoining cities of El Paso, Texas and Ciudad Juarez, Chihuahua respectively; the commissioners from each section meet at least once a week. Id. at 6.

The IBWC is not actually an entirely new creation. Id. at 2. The IBWC was formerly known as the International Boundary Commission (IBC); it was created by the convention of March 1, 1889, in order to settle disputes arising out of the location of boundaries when rivers changed their course. Id.
the border. The main purpose for enacting the Water Utilization Treaty was to delegate water quantity, not deal with water quality. As a result, the treaty contained no explicit language referring to the "quality" of the waters to be supplied to the other country. At the time this treaty was signed, however, no international law in the area of water quality existed. Consequently, there was little idea of what pollution was, from either a technical or legal standpoint.

B. Minute 218

During the seventeen years following the signing of the Water Utilization Treaty, there was no significant legislation passed between the United States and Mexico relating specifically to the quality of the environment. But in 1961, a bitter dispute arose between the two countries over the quality of the Colorado River waters that were to be delivered by the United States to Mexico. Under the Water Utilization Treaty, two-thirds of the water to be delivered by the United States to Mexico passed through the Imperial Dam for diversion by Mexico at the Morales Dam. The conflict which arose centered around the increased salinity of this water. The United States, in developing and using the Colorado River under the Water Utilization Treaty of 1944, degraded the quality of the water to be delivered to Mexico. This happened because while the tonnage of dissolved solids remained the same, the amount of water which carried the

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17. Sepulveda, Mexican-American International Water Quality Problems: Prospects and Perspective, 12 Nat. Resources J. 487, 489-90, reprinted in P.I.B., supra note 3, at 8. Cesar Sepulveda, President of the Mexican branch of the International Law Association, states, "[i]t is probable that later conflicts would have been prevented if the quality had been stipulated. On the other hand, it can also be surmised that if there had been insistence by either side with respect to water quality, there would have been no treaty." Id. at 488-89.
18. See Note, supra note 15, at 603. For a discussion of the various views on whether or not the Water Utilization Treaty "impliedly" deals with water quality, see generally, Sepulveda, supra note 17.
19. Sepulveda, supra note 17, at 488.
20. Id. at 487. Sepulveda explains that in 1944 "there was no systematic treatment of these matters in national and international legal literature. Jurisprudence had not applied itself to the problem in any apparent way." Id.
23. Id.
solids was diminished; thus, there was an increased concentration of solids in the water delivered by the United States to Mexico.\textsuperscript{25} This altercation had the distinction of being the first dispute in the world over the quality of international waters.\textsuperscript{26} Some argue that it was this dispute which opened the world’s eyes to the existence of international water pollution conflicts.\textsuperscript{27} The conflict lasted for several years before being effectively resolved by an agreement which was contained in Minute 218 of the IBWC’s March 22, 1965 meeting.\textsuperscript{28} This agreement required the United States to take specific steps to improve the quality of the water it delivered to Mexico and reduce the amount of pollution discharged into the Colorado River.\textsuperscript{29}

Therefore, for the first time the deterioration of water quality had become so critical that both countries were forced to work together to create specific remedies for the improvement of the environment. But while Minute 218 was effective in resolving the immediate conflict over the salinity of the Colorado River, the agreement’s scope was too narrow to have any real impact on improving the quality of other rivers, or on other environmental problems such as air pollution, at the border.\textsuperscript{30} First, the countries stipulated that this agreement was to be in effect for only five years.\textsuperscript{31} Second, and more important, Minute 218 explicitly provided “[t]hat the provisions of this minute [do] not constitute any precedent, recognition, or acceptance affecting the rights of either country, with respect to the Water Treaty of

\textsuperscript{25} Reynolds, supra note 22. Reynolds expands on the reasons for salinity:

[W]hen water is diverted from a stream for irrigation — or for that matter, for most municipal and industrial uses in the Southwest, a part of the water evaporates and the remainder returns to the stream. . . . Water diverted which is consumed, or evaporated, is pure \textit{H}_2\textit{O}. Water which returns to the stream carries all of the dissolved minerals, or salinity, that was in the diverted water.

\textit{Id.} at 483.

\textsuperscript{26} Sepulveda, supra note 17, at 487.

\textsuperscript{27} \textit{Id.} Sepulveda argues that this dispute “began the problems of water quality in international watercourses and of pollution of non-maritime waters.” \textit{Id.}

\textsuperscript{28} Recommendation on the Colorado River Salinity Problem, Minute No. 218 of the ABWC (effective Nov. 16, 1965), \textit{reprinted in} 4 INT’L LEGAL MATS. 545 (1965) [hereinafter MINUTE 218].

\textsuperscript{29} Sepulveda, supra note 17, at 490. More specifically, the agreement provided that the United States would build a drainage channel at its own expense, which would divert polluted water into the Gulf of California rather than into Mexico. \textit{Id.} Although actual quality of the water was never explicitly mentioned in Minute 218, both countries understood that salinity would not exceed 1500 parts per million. \textit{Id.}

\textsuperscript{30} \textit{Id.} at 492. Sepulveda points out that Minute 218 was “only a transitory measure [which did] not solve the question of water quality.” \textit{Id.}

\textsuperscript{31} MINUTE 218, supra note 28, art. 8, at 557.
3, 1944, and the general principles of law."\textsuperscript{32} From these facts, it appears evident that both the United States and Mexico wanted to keep the effect of Minute 218 as narrow as possible. By the late 1960's, the United States and Mexico still had not signed a comprehensive cooperative agreement for the improvement of the environment at the border.

\section*{C. Mexican Legislation}

Several events in the early 1970's increased the likelihood that an agreement between the United States and Mexico would finally take place. On March 23, 1971, the Mexican Congress enacted the Federal Law for the Prevention and Control of Environmental Contamination.\textsuperscript{33} This was the first environmental legislation ever passed by the Mexican Congress.\textsuperscript{34} Environmental deterioration had reached such a critical state in Mexico that a Constitutional Amendment was passed on July 6, 1971.\textsuperscript{35} This Amendment enlarged the powers of the Council of Health, allowing it to enact environmental legislation subject to congressional review and presidential veto.\textsuperscript{36} More specifically, the Amendment stated that "the measures that the Counsel [of health] has enacted in the campaign ... for the prevention of and fight against environmental contamination, will afterwards be reviewed by the National Congress in cases within its jurisdiction."\textsuperscript{37}

Thus, with the Mexican implementation of Constitutional provisions and congressional legislation relating to environmental issues, Mexico signaled that it was ready to at least unilaterally attempt to

\begin{itemize}
\item \textsuperscript{32} Id. art. 11, at 557.
\item \textsuperscript{33} Ley Federal Para Prevenir y Controlar la Contaminacion Ambiental, D.O., 23 de Marzo, (1971) at 8-11, translated into English by Juergensmeyer & Blizzard, \textit{Legal Aspects of Environmental Control in Mexico: Analysis of Mexico's New Environmental Law}, 12 NAT. RESOURCES J. 580, 596 app. (1972), reprinted in P.I.B., supra note 3, at 101, 117 [hereinafter Environmental Legislation]. This law also governed "conservation and restoration of the environment; activities which are declared in the public interest." Environmental Legislation, \textit{supra} art. 1, at 596. This legislation provided for prevention and control of air, water, and soil contamination. \textit{Id.} arts. 10-28, at 597-99. Additionally, sanctions were set out for violation of this regulation; at the time of enactment of this legislation, fines were from $50.00 (pesos) to $100.00 (pesos), and temporary or permanent closures of factories or businesses which produce prohibited contaminants were made in addition to the fines. \textit{Id.} art. 29, at 599.
\item \textsuperscript{34} Juergensmeyer & Blizzard, \textit{supra} note 34, at 580. The United States had unilaterally enacted legislation far earlier than Mexico. Busch, \textit{supra} note 6, and accompanying text.
\item \textsuperscript{35} Juergensmeyer & Blizzard, \textit{supra} note 34, at 585.
\item \textsuperscript{36} \textit{Id.} at 585-86.
\item \textsuperscript{37} \textit{Id.} at 585.
\end{itemize}
improve its environment.  

D. The Neighborly Principle

Both Mexico and the United States attended the United Nations Conference on Human Environment, which was held in Stockholm in 1972. This conference was a landmark in the development of international environmental law. It produced the Declaration on the Human Environment, which established the important principle of international law that no country may engage in an activity which might be injurious to the environment of its neighbors. Both the United States and Mexico recognized the so-called “neighborly principle” when they signed the Declaration on the Human Environment in 1972. Although the recognition of international law technically is not binding, it shows the current attitudes of the countries. Thus,
the United States and Mexico, by recognizing this neighborly principle set out by the Conference of 1972, indicated a new attitude of cooperation when engaging in activities which might have an adverse effect on one another's environment. Although the two countries had cooperated in the past when dealing with environmental problems, that cooperation had always been precipitated by a particular crisis. This "new" cooperation, set out in the neighborly principle, existed at all times, whether or not there was a particular crisis.

E. The 1980 Marine Environment Agreement

From these events, it would have seemed that the time was right for a newly formed comprehensive agreement between the United States and Mexico which would enable the two countries to bilaterally attack environmental problems at the border. As it turned out, however, the countries engaged in incremental bilateral efforts during the 1970's, but they did not sign a comprehensive environmental agreement until another decade had passed.

Unfortunately for both countries, a major catastrophe finally opened the legislators' eyes to the desperate need for bilateral cooperation in dealing with environmental problems at the border. On June 3, 1979, an oil and gas well, owned and operated by the Mexican government oil monopoly (Petroleos Mexicanos — "PEMEX") blew out and began spilling oil at a tremendous rate into the Bay of Campeche, in the Southwestern part of the Gulf of Mexico. Since neither the United States nor Mexico could effectively coordinate efforts in response to the oil spill, almost three billion barrels of oil escaped. This

established in the first international air pollution case ever, between the United States and Canada.

46. See supra notes 21-29 and accompanying text (response to salinity crisis in the Colorado River).

47. See supra notes 40-43 and accompanying text.

48. Pursuant to an Act of Congress on September 19, 1966, the United States participated in a joint project to improve the water quality of the Lower Rio Grande. JOINT PROJECTS, supra note 1, at 21. Additionally, in 1970, the IBWC coordinated and implemented a plan to protect against floods in the city of Harlingen, McAllen area, and farmlands on the United States side. Id. at 20. Finally, on August 26, 1980, the IBWC submitted and got approval for Minute No. 264, Recommendations for Solution of the New River Border Sanitation Problem at Calexico, California-Mexicali, Baja California, Norte, T.I.A.S. No. 9918. With this agreement, Mexico was to "take steps to provide an interim solution to the problem of the discharge of sanitary and industrial waste waters from the Mexican City into New River which flows north across the boundary." JOINT PROJECTS, supra note 1, at 34.

caused severe ecological damage to sea life in both countries.\textsuperscript{50} The catastrophe, regarded as the worst oil spill in the world,\textsuperscript{51} provided the impetus for the 1980 "Agreement of Cooperation Between the United States of America and the United Mexican States Regarding Pollution of the Marine Environment by Discharge of Hydrocarbons and other Hazardous Substances."\textsuperscript{52}

This treaty organized systems so that both countries could respond more effectively to similar future incidents.\textsuperscript{53} The agreement provided for both unilateral and bilateral response teams and systems.\textsuperscript{54}

This treaty was certainly the most comprehensive cooperative agreement that the two countries had ever made, but it was still too narrow in its scope to effectively dissipate the border's environmental problems.\textsuperscript{55} First, the treaty made no reference to "air" pollution, it was strictly a "joint contingency plan regarding pollution of the marine environment . . ."\textsuperscript{56} as its title suggests. Second, the treaty focused on measures which could be taken only after an incident had occurred. For example, most of the treaty's measures provided for plans for responding to an incident, rather than preventing an incident from occurring in the first place.\textsuperscript{57} Finally, the treaty was designed merely to combat "polluting incidents."\textsuperscript{58} A "polluting incident" was narrowly defined as:

\begin{quote}
    a discharge or the threat of an imminent discharge of hydrocarbons or any hazardous substance in the sea, of a magnitude or significance that requires an immediate response in order to contain,
\end{quote}

\textsuperscript{50} Recent Developments, \textit{Transnational Pollution Agreement Regarding Marine Incidents}, 23 HARV. INT'L L.J. 177, 179 (1982).

\textsuperscript{51} Current Events, \textit{supra} note 49.


\textsuperscript{53} Marine Pollution Agreement, \textit{supra} note 52.

\textsuperscript{54} Id.

\textsuperscript{55} \textit{See infra} notes 56-60 and accompanying text.

\textsuperscript{56} Marine Pollution Agreement, \textit{supra} note 52 (emphasis added).

\textsuperscript{57} \textit{Id. at} 696-710.

\textsuperscript{58} \textit{Id.} Some further weaknesses of this treaty include: Shortages of response personnel and equipment which will reduce the effectiveness of the response programs; no mechanisms to determine liability and compensation for marine pollution damage; and lack of financial commitment by both countries in investing in programs. Recent Developments, \textit{supra} note 50, at 183-84.
recover, or destroy the substance for the purpose of eliminating the threat or of minimizing its effects on the marine flora and fauna and on the public health and welfare.\textsuperscript{59}

As evident by the treaty, the United States and Mexico made no attempt to combat the numerous causes of environmental pollution which did not fall neatly within the narrowly defined "polluting incident" category. Rather, the provisions were designed to prevent the re-occurrence of another major catastrophe like the 1979 oil spill.\textsuperscript{60}

III.\textbf{ AGREEMENT BETWEEN THE UNITED STATES AND MEXICO ON COOPERATION FOR THE PROTECTION AND IMPROVEMENT OF THE ENVIRONMENT IN THE BORDER AREA}

The 1979 oil spill catastrophe had a far more reaching impact than merely providing the impetus for the narrowly-tailored 1980 agreement. The disaster caused many legislators to feel that cooperation and coordination between the United States and Mexico was needed on a more grand scale to combat all environmental matters at the border.\textsuperscript{61} An example of this sentiment was expressed in a letter written to President Carter, signed by four congressmen in 1979.\textsuperscript{62} The congressmen commented that, "existing diplomatic mechanisms, including present bilateral working groups, . . . are too diffuse and inadequate to provide for extensive cooperation on environmental matters. \textit{We would like to see creation of a group that would focus on the whole spectrum of environmental problems and concerns . . . .}"\textsuperscript{63}

It was this type of sentiment that led to the meeting between President Reagan and Mexican President Miguel de la Madrid Hurdado in La Paz, Baja California on August 14, 1983. During this meeting, the presidents signed the Agreement Between the United States of America and the United Mexican States on Cooperation for the Protection and Improvement of the Environment in the Border Area.\textsuperscript{64} This agreement was the first formal agreement between the

\begin{itemize}
  \item \textsuperscript{59} Marine Pollution Agreement, \textit{supra} note 52, at art. II.
  \item \textsuperscript{60} \textit{See supra} notes 52-59 and accompanying text.
  \item \textsuperscript{61} On November 26, 1979, Congressmen Paul N. McCloskey, Jr. (R-CA), John N. Murphy (D-NY), Edwin B. Forsythe (R-NJ), and John B. Breax (D-LA), wrote a letter to President Carter urging him to consider the need for cooperation between Mexico and the United States on environmental matters. \textit{Current Events, supra} note 49.
  \item \textsuperscript{62} \textit{Id.}
  \item \textsuperscript{63} \textit{Id.} (Emphasis added).
  \item \textsuperscript{64} Agreement Between the United States of America and the United Mexican States on
two countries which explicitly recognized the need for bilateral efforts and cooperation in reducing all forms of pollution, including air pollution, in the border area.  

A. The Terms of the Cooperative Agreement

The formal objectives of this agreement, as listed in article one are:

To establish the basis for cooperation between the Parties for the protection, improvement and conservation of the environment and the problems which affect it, as well as to agree on necessary measures to prevent and control pollution in the border area, and to provide the framework for development of a system of notification for emergency situations.

From this language, it appears that the cooperative agreement is not simply "crisis oriented." It contains explicit language of prevention and control of all pollution, unlike language of response to an incident contained in the 1980 agreement.

The agreement encourages the countries to "use both bilateral and unilateral measures to prevent, reduce, and eliminate sources of pollution in their respective territory which affect the border area of the other." For smoother implementation of environmental legislation, the treaty establishes the Environmental Protection Agency as the United States national coordinator, and the Secretaria de Desarrollo Urbano y Ecologia as the Mexican national coordinator.

Under the agreement, delegations from the two countries are required to meet at least once a year to review the progress of the agreement's

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Cooperation for the Protection and Improvement of the Border Environment in the Border Area, 19 Weekly Comp. Pres. Doc. 1137 (August 14, 1983) [hereinafter Cooperative Agreement]. This is an executive agreement, but still has the same binding authority in the United States as a treaty. See Recent Developments, 25 HARV. INT'L L.J. 239, for a good discussion of the technical differences between an executive agreement and a treaty.

65. Cooperative Agreement, supra note 64, art. 1, at 1138.
66. Id.
67. See text accompanying notes 53-60.
68. Cooperative Agreement, supra note 64, art. 2, at 1138. More specifically, the agreement states in part:

The Parties undertake, to the fullest extent practical, to adopt the appropriate measures to prevent, reduce, and eliminate sources of pollution in their respective territory which affect the border area of the other. Additionally, the Parties shall cooperate in the solution of the environmental problems of mutual concern in the Border area, in accordance with the provisions of this agreement.

Id.

69. Id. art. 8, at 1139.
In addition, the agreement hints at particular modes of cooperation that the two national coordinators might consider adopting. The examples given are: "coordination of national programs; scientific and educational exchanges; environmental monitoring; environmental impact assessment; and periodic exchanges of information and data on likely sources of pollution in their respective territory which may produce environmentally polluting incidents . . . ."

B. The Effectiveness of the Agreement

Much like the international environmental "neighborly principle" this agreement represents a reflection of an attitude within Mexico and the United States that cooperation is needed to combat all kinds of environmental problems at the border. But, unlike an international environmental principle or declaration, this is an executive agreement which creates a binding obligation on both parties to actively pursue remedies for the improvement of the environment at the border.

This agreement establishes a goal and provides some tools necessary to implement effective environmental programs. Since this is a general, broadly-written agreement, however, much of its effectiveness depends on the good faith efforts of the national coordinators to implement programs pursuant to the agreement. Therefore, only by examining the progress made by these coordinators over the past few years pursuant to this agreement, can we truly assess the value of the 1983 cooperative agreement.

1. The first meeting

The first annual meeting under the cooperative agreement convened in Tijuana and San Diego on March 8th, and 9th, 1984. At this meeting, both the United States and Mexico agreed that attention
must be given to corrective measures to resolve existing problems, as well as to preventative measures designed to prevent future pollution incidents.\textsuperscript{77}

As a result of the first meeting, both parties agreed to concentrate on joint technical evaluations of environmental quality.\textsuperscript{78} Additionally, the countries agreed to accelerate data and information exchange.\textsuperscript{79} Finally, three independent multinational technical study groups were set up to evaluate data and alternatives concerning water quality, air quality, and hazardous materials.\textsuperscript{80}

The water quality group will address water sanitation problems in the Mexicali-Calexico and Tijuana-San Diego areas.\textsuperscript{81} This technical group "will also examine the concern raised by the Mexican Delegation that certain industries in Southern California are discharging heavy metals which eventually contaminate marine shellfish off the Mexican Pacific coast."\textsuperscript{82} The air quality group will focus on pollution problems arising from motor vehicle traffic and smelting operations on both sides of the border.\textsuperscript{83} The group will also study the "potential of transboundary effects of smog emanating from Los Angeles."\textsuperscript{84} Finally, the hazardous materials and waste water management group will "evaluate methods for disposing of hazardous wastes, including incineration at sea,"\textsuperscript{85} and will also study methods to control the illegal "dumping" of hazardous wastes and toxic substances.\textsuperscript{86}

During this meeting, the national coordinators set up a "hot line" to "transmit notifications and information on the transboundary movement of hazardous waste and toxic substances, and on the regulation/deregulation of pesticides."\textsuperscript{87} More than anything else, this first meeting was a positive indication that both the United States and Mexico were serious about carrying out the spirit and goals of the

\textsuperscript{77} Id. at 1-2. The countries also re-affirmed their recognition of the "neighborly principle." See supra notes 39-45 and accompanying text.

\textsuperscript{78} 1984 JOINT COMMUNIQUE, supra note 71, at 4.

\textsuperscript{79} Id.

\textsuperscript{80} Id. at 5.

\textsuperscript{81} Id.

\textsuperscript{82} Id.

\textsuperscript{83} Id.

\textsuperscript{84} Id.

\textsuperscript{85} Id.

\textsuperscript{86} Id.

\textsuperscript{87} Id.
cooperative agreement.  

2. The second meeting

The second annual meeting under the cooperative agreement convened on July 18, 1985, in San Diego, California. Reports were received from all three multinational technical groups which were established by the first meeting. The air quality group held the first biennial training course in El Paso, Texas, for air pollution control. In addition, the meeting led to the signing of three important annexes to the 1983 cooperative agreement.

The first agreement relates to the Tijuana sewage problem which had reached the critical stage by the early 1980's. During the past twenty years, the population of Tijuana has grown from approximately 200,000 inhabitants to 800,000 inhabitants, consequently causing an incredible rise in the amount of sanitary wastewaters to be disposed of. In response to this occurrence, Mexico agreed to build a sewage collection, conveyance, and treatment system which will redirect to Mexico approximately thirteen million gallons of sewage pouring across the border into San Diego. The system is currently

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88. Id. at 1. At the meeting, "[b]oth sides emphasized their governments' commitment to the principles and goals embodied in the 1983 Agreement." Id.


90. 1984 Joint Communique, supra notes 80-87 and accompanying text.

91. 1985 Joint Communique, supra note 89, at 2.

92. Id. at 6-8.

93. Cooperative Agreement, supra note 64, at Annex I (Agreement of Cooperation Between the United States of America and the United Mexican States for Solution of the Border Sanitation Problem at San Diego, California - Tijuana, Baja California) [hereinafter Sanitation Annex].

94. Recommendations For The First Stage Treatment And Disposal Facilities For The Solution Of The Border Sanitation Problem At San Diego, California - Tijuana, Baja California, Minute No. 270 of the IBWC (April 30, 1985) at 4 [hereinafter Minute No. 270].

95. Sanitation Annex, supra note 93. These facilities will dispose of and treat thirty-four million gallons of sewage per day. Current Events, Project Proposed to Treat Mexican Sewage Needs No Impact Statement, U.S. Section Says, 16 Env'tl. Rptr. 134 (1985). This new system will "reduce health hazards in the South San Diego area from raw sewage discharge by the old Tijuana sewage system and thus would improve the quality of life for people in the border area." Id. Other benefits will include:

improved water quality in the Tijuana River estuary, which would permit greater use of a sanctuary and adjacent wildlife refuge; prevention of adverse effects on critical habitat of endangered species, which would benefit local wildlife; improvement of ocean water quality in the border area, which would lead to greater use of beaches, with economic benefits for beach communities; and construction of the facilities in Mexico, which would spare archaeological and historic sites in the United States.
under construction and should be completed by 1988.96

The second agreement concerns measures designed to protect against the release of hazardous materials along the inland border.97 It provides for a comprehensive "joint contingency plan" to combat both present and future pollution incidents.98 This plan resembles the plan enacted in the 1980 agreement to combat marine incidents.99 Also, a pilot program for the border region shall be in effect in the Calexico/Mexicali area sometime during 1985-1986.100 Finally, under this agreement, both countries agreed on a set schedule for meetings for hazardous materials, water and air experts' groups.101 The meetings will be held every three months in order to improve communications, increase cooperations, and find quick, effective solutions to problems.102

The third agreement represents a firm commitment by both Mexico and the United States to control the sulfur emissions of giant copper smelters in Arizona and Sonora no later than January, 1988.103 For example, Mexicana de Cobre, a copper company, agreed to have sulfur emission controls completed on its new plant in Sonora no later than January, 1988.104 Similarly, Phelps Dodge has agreed to have its copper smelter in Arizona into compliance with the Clean Air Act as soon as possible, but no later than January, 1988.105 Until permanent controls can be put into place, interim controls and monitoring arrangements will be implemented by the bilateral working group on air pollution.106

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96. General Policy, U.S. Mexico Reach Agreement on Smelters, Sewage Treatment Facility in Tijuana Area, 16 ENVTL. RPTR. 512, (1985).
98. Id. The purpose of the "Plan" is to enact cooperative measures which deal effectively with polluting incidents. Id. Under the agreement, "[a] polluting incident means a discharge or the threat of a discharge of any hazardous substances on one side of the inland international boundary of a magnitude which causes, or threatens to cause, imminent and substantial adverse affects on the public health, welfare, or the environment." Id.
99. See supra notes 53-54 and accompanying text.
100. General Policy, supra note 96.
101. 1985 JOINT COMMUNIQUE, supra note 89, at 8.
102. Id.
103. Id.
104. General Policy, supra note 96.
105. Id.
106. Id.
These three agreements provide evidence that the second meeting was more than just a statement of cooperation. Bilateral programs were implemented to combat a broad range of environmental problems. Furthermore, technical data was exchanged as agreed upon in the first meeting. Thus, the second meeting is an encouraging sign that the goals set forth by the cooperative agreement are being met. The United States and Mexico have made tremendous progress in both exchanging important scientific information, and implementing bilateral programs to improve the quality of the border environment. There is no empirical evidence showing the effectiveness of these bilateral programs in improving environmental quality at the border. Nevertheless, it does appear that the general framework and flexibility of the cooperative agreement provides a basis for the development of a wide range of bilateral efforts between the United States and Mexico in the environmental protection area.

IV. FURTHER MEASURES NEEDED

Over the past two years, the two countries have been driven by a common goal and a tremendous spirit of cooperation in order to bring about bilateral environmental programs. It is inevitable, however, that these two countries, with their diverse political and social policies, will not be able to sustain such tremendous cooperation forever. For this reason, it is crucial that the United States and Mexico pass further measures to ensure that environmental problems will continue to be handled despite the countries’ differences.

When the cooperative agreement was first signed, some critics argued that because the agreement left funding up to the individual countries, provided for no enforcement mechanisms, and was technically subordinate to the existing state and national laws, it would be ineffective in improving the environment at the border. In line with these arguments, there are four basic measures that should be immediately adopted by the United States and Mexico in order to provide

107. See supra text accompanying notes 95-103.
108. See supra text accompanying notes 78-79.
109. See supra text accompanying notes 89-103.
110. See supra text accompanying notes 75-103.
111. 1984 JOINT COMMUNIQUE, supra note 75, at 3, where the Mexican Delegation stated that “they appreciated the good will demonstrated by the Government of the United States to cooperate with Mexico in the improvement of the environment in their common border area.” Id.
112. Recent Developments, supra note 64, at 241-42.
for more effective and efficient implementation of environmental programs with regard to the border: (1) creating a neutral tribunal; (2) providing for enforcement mechanisms; (3) providing for an affirmative duty to fund projects; and (4) creating educational programming.113

The first measure calls for the United States and Mexico to set up by agreement a neutral board or tribunal which can solve problem cases that simply cannot be agreed upon by the agencies of both countries.114 This tribunal could be made up of environmental and economic specialists from both countries, as well as outside specialists both countries agree upon.115 The function of this tribunal would be two-fold. First, the tribunal would provide a forum for negotiations between the United States and Mexico in an effort to keep them from becoming polarized. This is essential because as one commentator pointed out, "[I]litigation and enforcement are essential to pollution control, but negotiation should be used more extensively to bring about consensus among disputing parties before they become polarized . . . ."116 The second function of the tribunal would be to act as a mandatory enforcement agency which could require compliance without having the two countries resort to litigation. Enforcement is an essential element of international environmental policy because there are always those in industry who will constantly attempt to evade pollution control laws.117 Additionally, because the international court of justice lacks compulsory jurisdiction, it is not used by many countries;118 consequently, an alternative "compulsory" forum such as a neutral tribunal is needed.119 Thus, the creation of a neutral board or tribunal with mandatory enforcement will assure that grievances by both countries will be heard, and compliance with pollution control laws will be adhered to.

113. See infra text accompanying notes 114-126.
114. Williams, supra note 40, at 251.
115. The cooperative agreement allows the national coordinators for Mexico and the United States to invite representative experts of international governmental or non-governmental organizations to consult on particular environmental topics. Cooperative Agreement, supra note 64, art. 9, at 1139. Thus, in line with this provision, the national coordinators could similarly select particular international governmental and non-governmental experts to serve on their neutral tribunal.
116. Current Events, Monsanto Chairman Urges Greater Use of Negotiation to Resolve Differences, 10 ENVTL. RPTR. 366 (1985). The statement was made by Louis Fernandez, Chairman of the Board of Monsanto Corporation.
117. Id.
118. Williams, supra note 40, at 251.
119. Id.
This second function of the tribunal presupposes the existence of the second measure — that the countries should agree to set up standards for enforcement. One professor states that

"governments must be convinced that the only answer for international environmental survival is to agree to be bound by an effective convention that sets out standards and guidelines as to liability, type of damage, due diligence, notification, and compulsory adjudication."

These enforcement mechanisms would create duties for both countries which would effectively replace the only current duty existing under the 1983 cooperative treaty — to act in good faith.

The third measure would require both countries to agree on mandatory funding. This could be accomplished by each country agreeing to a floor amount, adjusted each year by inflation, to be spent every year by each country on on-going bilateral programs. This amount could be written as an annex to the 1983 cooperative agreement, along with a provision which would legally obligate both the United States and Mexican Congresses to annually fund these programs. This measure would create a legal duty to spend money for pollution control, which would effectively supplant the only current obligation to spend "subject to availability of funds and other resources of each Party."

The fourth, and final measure, would require the United States and Mexico to agree in an annex to the 1983 cooperative agreement to create educational programming for the benefit of border inhabitants. For the reasons set out below, this is probably the most desperately needed, but least often mentioned, measure. The premise for this measure is that those who are most affected by a poor environment should be educated in how to remedy their own situation. One commentator predicted that "future environmental problems will stem from the improper management of resources, including loss of crop and grazing land, deforestation, erosion, mass extinction of species, and rapid population growth." Accepting this prediction as

120. Id. Sharon Williams, who made the statement, is an Assistant Professor of Law at the Osgoode Hall Law School of York University, Toronto, and is the Assistant Editor of the Canadian Bar Review. Id.
121. Cooperative Agreement, supra note 64, arts. I-III, at 1138.
122. Id. art. 18, at 1140.
123. Alvarado, supra note 4, at 413.
124. Current Events, supra note 116. The quote is from J. Gustave Speth, President of the World Resources Institute. Id.
true, it is essential that the public be educated in how to manage their resources more effectively. Indeed, a society which understands its rights to a healthy environment will certainly be more willing to cooperate with beneficial governmental action.\(^{125}\)

The United States and Mexico entered into the 1983 cooperative agreement in part because of their recognition of "the importance of a healthful environment to the long-term economic and social well-being of present and future generations of each country as well as of the global community."\(^{126}\) It seems reasonable to pass this concern on to the public in the form of educational programs, such as seminars and high school classes, since it is the public that ultimately suffers from the unhealthful environment.

**V. Conclusion**

From the preceding history, several important conclusions may be drawn. First, the United States and Mexico have only started in the last five years to work in a cooperative, comprehensive manner to deal with the broad range of environmental problems which inflict the border area and its inhabitants. Second, it is apparent that the broad, flexible 1983 cooperative agreement has provided the impetus for both countries to bilaterally adopt a variety of programs intended to resolve these problems. It has been stated that treaties "represent the most modern method of creating international law . . . [and] have become of paramount importance in international relations."\(^{127}\) Thus, it seems that the countries have picked the most appropriate legal method for binding themselves with regard to tackling environmental problems.

Additionally, the spirit of cooperation displayed by both countries in dealing with these problems should not be under-emphasized. As one author stated, "mutual good faith and equity are essential in resolving environmental problems where our ignorance is so manifest."\(^{128}\) Nevertheless, both countries must realize that they have barely begun to make progress at the border. The effects of the programs recently implemented are just starting to be felt. Only through empirical studies will we be able to analyze how effective these programs are.

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125. Alvarado, *supra* note 4, at 413.
Finally, both countries should realize that further advances are necessary to ensure effective and efficient programs. Now is the time to flesh out some desperately needed measures. Legal safeguards should be established, and a neutral tribunal created in order to assure that problems and disagreements between the countries are solved in a calm and effective manner. In addition to this, as the representative bodies of each country learn more about the causes and effects of environmental problems, this knowledge must be passed to the inhabitants in the border area. After all, it is ultimately the responsibility of an informed public to provide for themselves, and for future generations, a healthier environment to live in.

Scott N. Weston