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ALTERNATIVE COOPERATIVE ARRANGEMENTS FOR MANAGING TRANSBOUNDARY AIR RESOURCES ALONG THE BORDER

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INTRODUCTION

In a discussion of the alternative cooperative arrangements which could be taken to manage transboundary air resources along the United States-Mexico border, we would do well to note the word of caution towards environmental control sounded by Professor Chayes several years ago: “[I]nstitutional design for international environmental affairs depends on the basic conception of the problem.”¹ How is the problem of air resources management perceived and conceived along the border? What needs to be understood at the outset is that the different perceptions and conceptions regarding air resources will define and delimit the nature of any institutional response to air resources regulation. This paper will explore some of the conceptions and perceptions which may influence the various actors along the border, as well as discuss the institutional alternatives which might be implemented. Three different levels of analysis may be used: 1) the global ecosystemic analytical level or approach; 2) the international or bi-national analytical approach; and 3) the national and subnational analytical approach.

THE GLOBAL ECOSYSTEMIC APPROACH

The global ecosystemic approach is rooted in systems theory and the outlook of the ecologist.² Ecologists tend to view the environment in holistic terms, as Barry Commoner phrased his First Law of Ecology, “everything is connected to everything else.”³ The science of ecology stresses the interrelationship and interdependence of all phenomena in the ecosystem. At the international level those who have an ecosystemic perspective are likely to talk of “Spaceship Earth” and the need for approaching global environmental problems as part of one unified system.⁴ These analysts are likely to downgrade

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1. Chayes, *International Institutions for the Environment*, in *LAW, INSTITUTIONS AND THE GLOBAL ENVIRONMENT* 2 (J. Hargrove ed. 1972).

2. See Major, *Historical Development of the Ecosystem Concept*, in *THE ECOSYSTEM IN NATURAL RESOURCES MANAGEMENT* 9 (G. Dyne ed. 1989).

3. B. COMMONER, *THE CLOSING CIRCLE* (1971).

4. Among analysts in this vein are R. FALK, *THIS ENDANGERED PLANET* (1972); H. &

the role of the nation-state in formulation of policy and to stress the need for approaching any given environmental problem from a global perspective.⁵ Concomitantly, they usually recommend the formation of functional global institutions that resemble world governments, or ones that have strong supranational authority which will permit them to attack and eventually solve any environmental problem.

Prior to the Stockholm Conference on the Human Environment in 1972, some naively thought that what would emerge would be a strong supranational agency which could adequately cope with global environmental problems.⁶ Others were more pessimistic and correctly foresaw the creation of the weaker United Nations Environmental Programme (UNEP), with its primary function being information gathering and support for research and training of technical personnel. Professor Chayes wisely noted prior to Stockholm that drastic action such as the creation of a regulatory agency with supranational powers required a heightened sense of impending doom and crisis which was clearly lacking throughout the world.⁷ In the intervening years since Stockholm there does not appear to have been a major change in attitude on the part of national governments towards global environmental regulation. Indeed, because of the worldwide energy crisis of 1973-74 and the increasing confrontation between the North and South over resource utilization, concern for the environment as a priority global problem has been reduced.

However, the international political context of the environment, along with other global problems such as food, population, energy, water, distribution of resources, uses of the sea, and nuclear proliferation, has resulted in new patterns of international diplomacy which should be noted. Subnational, transnational, and supranational actors, while by no means replacing the nation-state as the primary actor, most certainly have increased in both overall importance as well as sheer amount of activity in global politics.⁸ Both intergovernmental and nongovernmental organizations play more prominent roles, and

M. SPROUT, *TOWARDS A POLITICS OF THE PLANET EARTH* (1971); and B. WARD & T. DUBOS, *ONLY ONE EARTH* (1972).

5. Coplin, for example, talks about a world policy process model in which other actors are equal to nation-states over specific issues. See W. COPLIN, *INTRODUCTION TO INTERNATIONAL POLITICS* (1972).

6. While no one specifically thought that a world superagency would result, there existed a general ambience that a different type of international politics was right around the corner as a result of commonly perceived problems of the globe. See, e.g., B. COMMONER, *supra* note 3; B. WARD & T. DUBOS, *supra* note 4; and various articles in *WORLD ECO-CRISIS* (D. Kay & E. Skolnikoff eds. 1972).

7. Chayes, *supra* note 1, at 2-4.

8. See, e.g., R. MANSBACH, Y. FERGUSON & D. LAMPERT, *THE WEB OF WORLD POLITICS: NON-STATE ACTORS IN THE GLOBAL SYSTEM* (1976).

frequently bring to the attention of nation-states more pressing issues. Indeed, it was mainly non-state actors that provided the original and chief impetus for a discussion of environmental problems along the border.⁹ Most certainly the nation-state remains paramount in global politics, but the new patterns have changed the framework in which the nation-state operates.

What are the possibilities of a truly global ecosystemic approach being used along the U.S.-Mexico border? Should not the commonly shared border contribute to an equally shared perception of the need for an ecosystemic regulatory agency for border environmental problems? Frankly, the answer to both questions is a flat, no! There is almost no perception by public officials on either side of the border of the need for regulation of air resources. While many official and nonofficial persons may be somewhat concerned with the problem of air pollution, neither side, at any governmental level, appears ready to submit to a superagency the necessary regulatory powers to allocate or control resources of any type. Along the border air pollution as a problem ranks far behind others such as unemployment, health care, industrialization, lack of development, and a host of others. We can, therefore, eliminate immediately and without further ado any ecosystemic approach to management of air resources along the border or the establishment of a strong supranational agency to solve pollution problems.

THE INTERNATIONAL AND/OR BI-NATIONAL APPROACH¹⁰

An international analytical approach to environmental problems could be at several different levels. International organizational response as in the case of UNEP or the involvement of the Pan American Health Office (PAHO) could be discussed. Indeed, it has been primarily through the efforts of PAHO and the Bi-National U.S.-Mexico Border Health Association that any effort towards mutual governmental resolution of environmental problems have taken place. The chief function of these agencies is to serve as catalysts and

9. University professors, international lawyers, and governmental officials acting in a private capacity have written about border environmental problems in two books of readings: *POLLUTION AND INTERNATIONAL BOUNDARIES* (A. Utton ed. 1973) and *AIR POLLUTION ALONG THE UNITED STATES-MEXICO BORDER* (H. Applegate & C. Bath eds. 1974). The latter book is a collection of papers given at the First Bi-National Symposium on Air Pollution Along the United States-Mexico Border in El Paso, Sept., 1973.

10. There is some confusion over the use of the word "international." Normally to a political scientist, the term international would not seem appropriate as applied to the IJC and the IBWC; rather, bi-national describes the actual decision-making apparatus. However, if agencies are classified under the international Organization Immunity Act as international, then apparently international lawyers so classify them. It must be recognized that the function of the agencies remain bi-national.

conveyors to involve the two nation-states, although both obviously play subordinate roles in terms of information gathering and dissemination and as a forum for the meeting of people concerned with a common problem. The possibility of organizations of the United Nations system going beyond these limited functions does not appear very great over the short-term future. Regional agencies such as those in Europe could also serve as models, but these organizations are probably more appropriate to those concerned with management of water basins.¹¹ Since there are only two governments involved along the U.S.-Mexico border, perhaps the most logical model to follow would be that presented by similar organizations elsewhere which function in resolving bi-national boundary disputes. In this regard the joint effort of Canada and the United States to develop mutual programs for reduction of water pollution may prove to be the best example in view of the obvious similarities between the two border regions. Let us briefly explore the joint effort between Canada and U.S.¹²

The International Joint Commission (IJC) was established by formal treaty in 1909. The major purpose for the IJC was to create an agency capable of resolving several thorny boundary problems resulting from shared rivers and lakes. But Article IX of the treaty stated that the waters on either side should not be polluted to the injury of the opposing side. The Treaty neither defines pollution nor injury and no enforcement procedures were established. Indeed, it is unlikely that the writers of the Treaty meant this particular article to be very significant. Nonetheless, under the procedures established by the Treaty, both governments submit letters to the IJC (these letters are by tradition identical) to investigate a given problem. Since 1909 there have been at least ten such letters. By far the most important agreement was that reached for cleaning up the Great Lakes in 1972.

Brief mention should be made of the types of procedures developed

11. See, e.g., Utton, *International Water Quality Law*, 13 NAT. RES. J. 282 (1973); see also Sepulveda, *Implications for the Future: Design of Viable International Institutions*, 15 NAT. RES. J. 215 (1975).

12. For sources consulted for environmental regulation along the U.S.-Canada border, see Dworsky, *The Management of International Boundary Waters of Canada and the United States: A Comparative Study*, 15 NAT. RES. J. 223 (1975); Dworsky, Francis & Sweezy, *Management of the International Great Lakes*, 14 NAT. RES. J. 103 (1974); Morse, *Model Water Resources Program for International Boundaries of the United States and Canada*, 12 NAT. RES. J. 388 (1972); McCaffrey, *Trans-Boundary Pollution Injuries: Jurisdictional Considerations in Private Litigation Between Canada and the United States*, 3 CAL. W. INT'L L. J. 191 (1973); Tempe, *International Air Pollution—United States and Canada—A Joint Approach*, 10 ARIZ. L. REV. 138 (1968); Bilder, *Controlling Great Lakes Pollution: A Study in United States-Canadian Environmental Cooperation*, in LAW, INSTITUTIONS AND THE GLOBAL ENVIRONMENT, *supra* note 1, at 294; D. PIPER, *THE INTERNATIONAL LAW OF THE GREAT LAKES* (1967).

by the IJC to resolve mutual problems. The IJC is composed of three commissioners from each country, and, until recently, these commissioners have been expert technicians rather than politicians. Recently political considerations have played more important roles, especially as the perceptions of pollution increased. The Commission has developed a strong tradition of independence and impartiality as a result of focusing on the technical nature of problems. The staff has also remained small since technical boards are picked to investigate whatever matter is under consideration. The reports submitted to the IJC by these boards have been noted for their excellence and comprehensive treatment of technical problems. As a result of these procedures, the IJC gathers information and data as an independent and self-sufficient agency. At the same time, it should be stressed that the IJC has no enforcement powers and both national governments are free to ignore the recommendations of the IJC.

After his lengthy review of the IJC, Professor Bilder concludes that the following valuable lessons can be learned:¹³

1. Large-scale environmental problems, such as that of Great Lakes pollution, are extremely difficult to solve.
2. Many environmental problems are largely localized, with their causes and effects occurring principally within a single nation.
3. Governments will be reluctant to subject their flexibility and freedom of action regarding environmental policies to international restraints.
4. Since even concerned countries can be expected to be reluctant to accept international environmental restraints, it follows that the price of including relatively unconcerned countries in an environmental arrangement may be one so watered down as to have little content; the commitments will be reduced to the "lowest common denominator" of the least interested party.
5. The possibilities for successful international cooperation with respect to particular environmental problems may be enhanced by a formal acknowledgement of the international character of such problems and of the propriety of their international treatment.
6. In attempting to deal with international environmental problems, governments may often prefer loose cooperative arrangements to techniques of formal legal prohibitions:
7. If formal treaty arrangements and institutions are established for environmental cooperation, there are strong arguments for making these arrangements relatively flexible and

13. Bilder, *supra* note 12, at 347-50; see also Dworsky, *supra* note 12, at 226-27.

- open-ended, with a capacity to expand and adapt as problems and needs clarify and the parties 'gain confidence in their cooperative activities.
8. U.S.-Canadian experience demonstrates that international environmental cooperation can yield useful dividends at relatively low costs and with limited political risks.
 9. Some of these functions potentially involved in international environmental cooperation such as monitoring, surveillance, and the presentation of technical objectives and options, seem best performed by institutions acting in a relatively expert and political capacity.
 10. Even limited patterns of international environmental cooperation may produce possibly useful secondary effects.

One is struck by the persistent thread of these conclusions: lowest common denominator of least concerned party, difficulty of solving problems, governmental reluctance to accept international restraints on national actions, limited political risks, and so forth. I have argued elsewhere that environmental regulation along the border will have to be at the lowest possible level of interaction and the results are hardly likely to please many environmentalists.¹⁴ There is no reason to believe that currently cooperation will be much beyond the lowest common denominator at least cost. That conclusion obviously sets extreme limits on the amount of bi-national interaction to resolve environmental problems along the U.S.-Mexico border.

Two major difficulties encountered in the successful management of pollution, the establishment of quality standards and the assessment of costs to the participants, should be noted in this discussion. In the case of the U.S.-Canada border, water quality standards for pollution have been achieved, but the problem of costs of cleaning up the water has not been solved—mainly because of a reluctance of the U.S. under the Nixon administration to spend money required under the 1972 agreement. Incidentally, one of the initial positions taken by Canada was that it should be permitted to pollute up to the levels of the U.S. before it assumed its share of cleaning up the water. Canada reasoned that since it had, by far, less population and industry along the Great Lakes, it was not responsible for most of the pollution and, therefore, should not pay to clean it up. Brazil took a similar stance at the Stockholm conference and the entire Third World (of which Mexico is

14. C. Bath, *Towards a Model for an Environmental Regulatory Commission Along the United States-Mexico Border* (paper presented to the Second Bi-National Symposium on Environmental Problems Along the United States-Mexico Border, Nuevo Laredo, March 13, 1975. To be published in the *Memoria* of the Symposium).

a part) generally regards pollution as a product of the developed zone—and one the developed countries should pay to clean up.¹⁵

Both of these problems, quality standards and costs of cleaning up, are critical to the U.S.-Mexico border since they will reflect different perceptions in which the management of resources will have to take place. Quality standards may not present a major difficulty, since both Mexico and the United States have established federal standards.¹⁶ One should quickly add that El Paso (as well as the rest of the border) has not been required to comply with these federal quality standards because of its very international setting. The EPA feels El Paso cannot comply because of pollution in Ciudad Juarez. It is very doubtful that Juarez is in compliance with Mexican standards either. The second problem of costs is directly related to perception of pollution as a major problem since one can hardly expect significant action if there is no perception of the problem. This is the crux of the difficulty for the U.S.-Mexico border: it is highly doubtful that many perceive pollution as a major problem. On the Mexican side concern with development, industrialization, and employment are weighed more heavily and important than pollution.¹⁷ This means that regulation of pollution is in trouble on two counts: 1) the creation of jobs and the development of industry and agriculture must take precedence, and one adds rightfully so, over concern for the environment; and 2) given limited resources, pollution regulation cannot be granted much weight in the distribution of these resources. For example, Mexico can hardly afford the type of air pollution recording devices needed to measure pollutants and, indeed, the U.S. must provide them. One must hastily add that the problem of costs is equally important on the U.S. side of the border. The border is currently one of the most economically underprivileged regions of the U.S. with unemployment running higher than in any other area. Since concern with pollution normally is associated with higher incomes and other middle class attributes, many living along the border simply do not perceive

15. The conflict between the developed and developing countries over the environment is best presented in *Development and Environment*, Report Submitted by a Panel of Experts Convened by the Secretary-General of the United Nations Conference on the Human Environment, Founex, Switz., June 4-12, 1971, U.N. DOC. GE 71-13738 (reprinted as *ENVIRONMENT AND DEVELOPMENT: THE FOUNEX REPORT, INTERNATIONAL CONCILIATION* (1972)); for the Brazilian position, see Castro, *Environment and Development: The Case of the Developing Countries*, in *WORLD ECO-CRISIS*, *supra* note 6 at 237.

16. These air quality standards can be found in *AIR POLLUTION ALONG THE UNITED STATES-MEXICO BORDER*, *supra* note 9, at xv-xxi.

17. The conflict between development and environment is noted by Cuadra, *Aspectos juridicos de la contaminacion atmosferica en el area fronteriza*, *id.* at 120. It should be added that a conflict between environmental management and development is not preordained.

pollution as a major problem.¹⁸ Given the lack of concern on both sides of the border, and the general lack of political clientele, governmental agencies have not been pressed to include pollution as a high priority item on their agendas. Indeed, these agencies seldom feel any public pressure for pollution control because, frankly, no one is much concerned about pollution.

In using the model of the IJC along the U.S.-Canada border, it is obvious that there already exists an international agency along the U.S.-Mexico border which could (and in many respects does) perform similar functions. This agency is, of course, the International Boundary and Water Commission—U.S. and Mexico Sections (IBWC).¹⁹ Indeed, one analyst has already made an excellent comparison of the potentialities of the two agencies for expanded environmental control.²⁰ Smedresman assumes that both the IJC and the IBWC can perform excellently as agencies for control of the boundary environment. With respect to the IBWC he notes that Article 24 of the 1944 Treaty grants the IBWC powers to initiate and carry out research, planning, construction, and supervision of water works. Subsequent agreements have authorized the IBWC to undertake specific projects, but no broad grant of legal or jurisdictional power similar to that for the IJC had been given. The lack of jurisdictional power is critical for the IBWC since, unlike the current status of the IJC, treaty powers would have to be obtained for regulation of air pollution. A new treaty would therefore be required.

Smedresman feels that in its day-to-day operation the IBWC exhibits a high degree of professionalism and efficiency using a practical and basically apolitical approach. The agency simply concentrates on the completion of technical tasks. In this professional and apolitical bent the IBWC appears to conform to the guidelines established by Bilder for successful management of the environment. In its fact-finding function, the IBWC has acquired an enormous amount of information on specific projects, but investigation is limited to those projects. The IBWC does not have the independent and self-sufficient investigative powers of the IJC. Broader investigative powers would be necessary if the IBWC were to manage border air resources.

18. Attitudes towards the environment and income levels are noted in Trop & Roos, *Public Opinion and the Environment*, in *THE POLITICS OF ECOSUICIDE* 52 (L. Roos ed. 1971).

19. As Smedresman points out, there is a dearth of material on the IBWC, especially in comparison with the amount of material available on the IJC. See Smedresman, *The International Joint Commission (United States-Canada) and the International Boundary and Water Commission (United States-Mexico): Potential for Environmental Control Along the Boundaries*, 6 N.Y.U. J. INT'L L. & POL. 499 (1973).

20. *Id.*

On the other hand, Smedresman notes that the IBWC has power that the IJC also could use. The reference procedure employed by the IJC could result in either the government ignoring or refusing to comply with the recommendation of the IJC. Under IBWC procedures the decisions reached are binding on both governments unless a government formally objects within one month—an unlikely occurrence given the close cooperation which exists prior to the actual decision. This enforcement provision would appear far better for eventual resolution of environmental problems. Another recommendation for procedures to follow in environmental management is that both agencies continue the practice of hiring outside experts to conduct investigations. In the current climate in the U.S. of opposition to government expansion, it would be politically wise not to advocate an expansion of powers of the IBWC that would also require a large increase in staff.

The IBWC and the IJC both have long traditions of successful settlement of disputes, but Smedresman adds that both commissions have been unable to act effectively when the political spirit was lacking, as was the case of the IBWC and the Chamizal dispute.²¹ He also notes that when disputes arise as part of judicial proceedings it becomes very difficult to resolve them. In fact the recommendation is to take every possible measure to keep disputes from going to judicial bodies. In this regard, one of the more important roles of the IJC and IBWC is to cut off possible disputes by providing information which allows the governments to discuss and negotiate potential problems before they escalate. In his subsequent discussion of the need for environmental control by the two agencies, Smedresman buttresses his argument with the evolving international law which makes a nation-state responsible for harmful results beyond its border. He cites the Trail Smelter Arbitration, the Lac Lanoux Arbitration between France and Spain, and the refutation of the Harmon Doctrine by the U.S. Supreme Court as evidence of this growing body of international law.²²

He adds that while the IBWC in its everyday operations puts into effect the rules of international waterways, it has had no contact with

21. *Id.* at 513. Larman C. Wilson holds that interpretations of the role of the IBWC in the "power politics approach" are not basically correct; that, in fact, the IBWC has carried out policy in a generally apolitical vein. See L. Wilson, *The Settlement of Boundary Disputes: Mexico, the United States, and the International Boundary Commission* (paper presented to the International Studies A. Meeting, Toronto, Feb., 1976); for a different perspective, one that supports the contention that the Chamizal discussions followed the general pattern of relations between the two countries, a view supported by this writer, see Jessup, *El Chamizal*, 67 AM. J. INT'L L. 423 (1973).

22. Smedresman, *supra* note 19, at 518-19.

pollution problems. Furthermore, the IBWC apparently does not *want* any contact with air pollution regulation.²³ Stressing the need for further cooperation to resolve air pollution problems, Smedresman concludes²⁴

The obvious question is whether or not the IBWC, as an established mechanism for international cooperation involving boundary questions, is suited for such a role. One side of the question is the Commission's own position that such problems are not its concern, as well as preference for leaving problems to unilateral treatment if possible. On the other side of the question is the availability of the Commission's pool of engineering talent and the simple fact that it is an existing organization with a tradition of impartiality and expertise. If the Commission's existing powers and jurisdiction are inadequate, they can be expanded, even if on an ad hoc basis as in the Chamizal dispute. While treatment of a particular source of pollution is best handled by the nation in which it originates, the formulation of criteria and standards, the prosecution of investigations, and the exchange of information can be meaningfully carried out by the two nations working together. The IBWC, it is submitted, is well-situated to take an active role in such work.

This writer, in a reversal of previous criticism of the IBWC as a potential environmental regulator, now supports the conclusion that the IBWC is "well-situated to take an active role in such work."²⁵ There are, needless to say, some fundamental problems that should be recognized in an expanded role for the IBWC, not the least of which is a rejection of the IBWC itself of an expanded role for the agency in environmental matters. This problem could be handled relatively easily by simply ordering the two bi-national sections to work together under the spirit of friendship and cooperation endorsed by the two new Presidents, Jimmy Carter and Jose Lopez Portillo. Indeed, expanding the role of the IBWC to include environmental management is the type of symbolic gesture which would be widely supported by many environmentalists at small expense to both governments. It is the type of political act—low cost, high symbolic value—heartily accepted by most politicians. In the atmosphere of increased tension likely to build along the border, it also would serve

23. *Id.* at 526. He quotes a letter from the Executive Officer of the U.S. Section to the effect that air pollution is not within the existing jurisdiction of the IBWC.

24. *Id.* at 527.

25. C. Bath, *supra* note 14. The same conclusion was reached by other commentators at the First Bi-National Symposium. See, e.g., Sepulveda, *Metodos intergubernamentales viables para la cooperacion en el control y eliminacion de la contaminacion del aire a lo largo de la frontera Mexico-Norteamericana*, in AIR POLLUTION ALONG THE UNITED STATES-MEXICAN BORDER, *supra* note 9, at 131.

as a cooperative mask for more pressing and urgent problems between the two countries. A new treaty, of course, would be required and perhaps it could be tied to resolution of another thorny boundary question, the extension of the 200-mile economic zone in the Pacific and Gulf of Mexico.

A second major difficulty is to recognize at the outset the limited nature of such bi-national cooperation and the political overtones new functions for the IBWC would have. There can be little doubt that cooperation for management of transboundary air resources would be at the lowest possible common denominator—least cost level with very little impact on actual air pollution regulation. The lessons to be learned from the IJC noted by Professor Bilder would be especially appropriate. Another limitation is to know beforehand that other political relations of great importance will dictate effective cooperation and regulation of environmental problems. The overall nature of relations between the two countries is particularly important since the IBWC is an agency within the State Department and the Foreign Ministry and it tends, therefore, to reflect in its actions the major critical issues affecting the two countries at any given period. In spite of the claim that the IBWC is a “neutral” and/or “apolitical” agency, it still reflects basically the political climate emanating from the respective foreign offices.²⁶ This means that the role of the IBWC will be consistently affected by factors other than environmental matters along the border. For example, the State Department initially opposed any discussion of air pollution along the border until it felt that Mexico responded adequately to water pollution problems in the Gulf of Mexico.²⁷ As will be seen below, it is likely that tension will continue to build along the border and, if this is the case, air pollution regulation will not be regarded as a high priority goal by either the U.S. or Mexico.²⁸

A third, but by no means final, problem to be considered in assigning the IBWC responsibility for managing air resources, is to recognize that the IBWC would have very little enforcement power, especially on the U.S. side of the border. The primary reason is the nature of federal-state relations. Although there are federal air quality standards, it must be recognized that the enforcement measures in the

26. *Supra* note 21.

27. C. Bath, *Air Pollution Policy Formulation in the U.S. and Mexico: The El Paso-Juarez Region* (paper presented to the W. Pol. Sci. A. Meeting, Denver, April, 1974).

28. Another factor to be considered in terms of subsequent regulation of air resources are the recent finds of gas and oil along the northern tier of states in Mexico. Large deposits have been discovered in Baja California, Chihuahua, Coahuila, and Tamalipaus, all close to the border. Production would greatly aid the economically depressed border, but it might also lead to greater problems with air pollution. *See* Christian Science Monitor, Feb. 22, 1977.

U.S. normally are left up to the states. (Mexico does not have this particular problem of the same extent.) Most of the states, especially Texas, have left enforcement of air pollution regulation to local and municipal authorities. One obvious difficulty is that enforcement patterns are then likely to differ decidedly depending on the state: California, for example, is normally regarded as a much more stringent enforcer of environmental controls than Texas. The federal regulatory agency, the Environmental Protection Agency, also differs in terms of its regional offices and their primary interests. Region VI which includes New Mexico and Texas has concentrated almost exclusively on water pollution and largely ignored air pollution.

The border presents peculiar problems to federal agencies since it does not represent the normal pattern of legal responsibility. The EPA has exempted El Paso from compliance because of the international situation. Strange situations exist along the border in terms of government relationships. For instance, in the development of the joint air monitoring service in the El Paso-Ciudad Juarez region, the representative of the *Subsecretaria de Mejoramiento del Ambiente*, a federal agency, meets with the air pollution control officer of the El Paso City/County Health Unit, a local agency with tenuous ties, at best, to federal agencies. Obviously, normal patterns of bureaucratic ebbs and flows do not fit well in that type of relationship. One often gets the impression, in certain cases, that both the State Department and the Foreign Ministry would prefer that the border disappear and relations be conducted normally as they are with other countries from capital city to capital city. Most certainly, an effective management role for the IBWC on the U.S. side of the border will necessitate some type of federal-state agreement over the extent of its powers.²⁹ This conclusion leads us logically to the next section, consideration of national policy, since in reality it will be the primary responsibility of the national governments to handle environmental matters within their respective boundaries.

THE NATIONAL APPROACH

One must recognize, whether it is pleasant or not, that final jurisdiction over environmental matters will reside with the nation-

29. Several different approaches have been suggested to handle the complex federal-state relations for the border. Representative David Finney of Texas has suggested using an interstate compact as a device to permit coordination. See Finney, *Federal Interstate Compact: An International Economic Solution to the Border Problem*, EL PASO ECON. REV. (special issue, May 1975). Recently the Mayor's Border Conference, operating under the Economic Development Act established a commission for border development. Another device which could be used is Title V of the Regional Development Act which could result in a planning agency for border development. All of these would be primarily concerned with economic development, and less with border environmental problems.

state. Sovereignty is hardly at bay when it comes to air pollution. Regulation of air pollution as a national policy issue is quite complex and I would simply like to point out some aspects that appear most relevant for the border. What is needed is some sort of classification scheme that will permit some degree of prediction of future events. Political scientists tend to classify interaction between nation-states along broad continuums that attempt to place certain types of actions or behavior on either a conflictual or cooperative scale or mode.³⁰ On the conflictual side of the behavior mode one begins with threats, threats with demonstrations, and passes up the scale to war. Similarly, on the cooperative side one moves up the scale from simple promises to full structural and functional integration of the community (the global ecosystem in the case of the environment). While there is no assumption that one must pass sequentially either up or down the scale of the behavioral mode, it appears to this writer that future relations between the U.S. and Mexico along the border are far more likely to move up the conflictual side of the behavioral mode than they are on the cooperative side. It is within the framework of increasing conflict that management of air resources for the border must be discussed.

The U.S.-Mexico border now appears, especially after the economic shocks to the Mexican economy in the fall of 1976, to be similar to a seismic recording station to measure earthquakes, only the border is apolitical recording station to measure the intensity and frequency of political shocks between the developed and developing countries. The border is not only one between the United States and Mexico; since September it stands as an unmarked border between consuming nations of the North and the aspiring nations of the South. For many years the "miracle" of Mexican economic growth disguised major differences of wealth between the two countries. The peso devaluation and recent economic difficulties have demonstrated the skewed economic growth which has occurred. For the border region unemployment and the problem of the illegal alien are but two manifestations of economic crisis—a crisis that in the short-run can only become more volatile.

Evidence of increasing tension along the border continues to mount. The peso devaluation, while showing the economic interdependence of the border economies, also brought forth calls for economic retaliation and countermeasures against the other side of the border. Recent events in the El Paso-Juarez region point out how

30. See Price, *Behavior Modes: Toward a Theory of Decision-Making*, 37 J. POL. 417 (1975); see also R. MANSBACH, Y. FERGUSON & D. LAMPERT, *supra* note 8.

tenuous peaceful conditions actually are and how potential outbreaks of irrationality have become. An attempt to enter the U.S. illegally in broad daylight across a railroad bridge resulted in the death of a Mexican citizen in the plain view of citizens of both countries. For two days groups gathered on the Mexican side demanding some action against the INS official involved. Chicano groups in El Paso denounced the Border Patrol for the death. In this atmosphere an attempt to "run" the Rio Grande by a jeep loaded with 550 pounds of marijuana produced a moment of jocularity.³¹ The jeep bogged down in the middle of the river and the two riders escaped to the Mexican side. Crowds gathered on both sides of the river, tow trucks from both sides hooked up the vehicle, and a two-hour tug-of-war took place with U.S. helicopters hovering overhead with marksmen prepared to respond to possible snipers. Eventually, the U.S. side brought in a huge tow truck far outmanning the Mexican truck, the Mexican tow cable broke, and the U.S. "team" won the battle. While the event was treated in a comedy tone by the local U.S. mass media—but not by the Mexican media—it is wise to take note of just how close a true international confrontation may have been. One wrong act by either side could have turned a happening into a disaster.

The increased tension has also effected the on-going joint air monitoring program, the longest-standing cooperative action between the two countries in terms of air pollution.³² First, Mexican officials, for some inexplicable reason, refused permission for trucks from the City/County Health Unit to enter Mexico to collect the samples from the recording stations. Collection of samples had alarmed no one in the five years of the program. Then in apparent retaliation, the Mayor of El Paso refused to allow the trucks to return to Mexico at all, ostensibly because they lacked the required insurance to do so. Subsequently, a joint program for mosquito eradication was endangered, as well as other long-standing cooperative actions in the field of health. One hopes this tension will not increase, but at the national level the Rodino bill and the complaints of General Chapman, head of the INS, of the need for more border patrolmen to stem the "invasion" from Mexico indicate that the issue will increasingly concern national decision-makers.³³ Indeed, border patrolmen in the El Paso area believe they are in a war, and the methods they are employing are the same as those used against infiltrators in Vietnam.

31. El Paso Times, Feb. 18, 1977.

32. See Davila, *Joint Air Monitoring Program Developed in the Cities of Juarez, Chihuahua, Mexico, El Paso, Texas and Las Cruces, New Mexico*, in AIR POLLUTION ALONG THE UNITED STATES-MEXICO BORDER, *supra* note 9, at 155.

33. Christian Science Monitor, Feb. 17, 1977.

The AFL-CIO is taking aim at another border problem, the twin plants operating all along the border. Organized labor established the goal of eliminating these off-shore plants and if they are successful it would contribute to hostility along the border. In such an atmosphere, then, tension between the two countries is likely to escalate. The short-run conclusion is that increasing conflict between the two countries is the more likely behavioral pattern.

What will happen to management of air resources in such an atmosphere? One good possibility is that air pollution would be ignored, but here is a scenario that could occur and should be treated. If economic conflict increases, and if the differences between the two countries become wider, there is a good possibility that Mexico could resort to international law as a tactic. International law traditionally is used by the weaker nations, and if Mexico feels increasingly slighted by the U.S. and a target for discriminatory legislation against its citizens, then recourse to international law would be a legitimate weapon with which to counterattack. A case is readily available if Mexico wants to use it. In 1970-72 the American Smelting and Refining Co. (ASARCO) plant in El Paso was found responsible for lead poisoning of children residing in areas close to the smelter.³⁴ Subsequently, ASARCO paid damages. Officials from the Center for Disease Control of the U.S. Public Health Service conducted the study and took blood samples from the children involved.³⁵ Environmental engineers in El Paso believed that because of the prevailing wind patterns there was a good possibility that the heavy metals, including lead, had been transmitted to Juarez. Accordingly, a wind tunnel project was built which verified the existing wind pattern into Juarez. This meant that children in Juarez were probably affected by lead poisoning. Accordingly, under the guidance of the CDC out of Atlanta, the Subsecretaria de Mejoramiento del Ambiente conducted a study of Juarez and took blood samples from different zones in the city.³⁶ In 1974 the data was acquired and the report concluded that on the basis of the study, more than 8,000 children between the ages of one and nine had suffered lead poisoning directly attributable to the smelter.

Obviously, here is a parallel case to the Trail Smelter Arbitration

34. Foss, *Environmental Law: Air Quality Litigation in the El Paso-Juarez Area*, in *POLLUTION AND INTERNATIONAL BOUNDARIES*, *supra* note 9, at 72.

35. See P. Landrigan, *Epidemic Lead Absorption Near an Ore Smelter: The Role of Lead in Dust* (mimeographed paper for Center for Disease Control, El Paso, 1973).

36. B. Ordonez, L. Romero & R. Mora, *Investigacion epidemiologica sobre niveles de plomo en la poblacion infantil y en el medio ambiente domicilia—Rio de Ciudad Juarez, Chihuahua, en relacion con una fundicion de El Paso, Texas* (paper presented to U.S.-Mex. Bi-National Border Health A. Meeting, Los Angeles, April, 1975).

between Canada and the U.S. but one that involved injury to human beings rather than cattle.³⁷ Further legal support for the Mexican position could be taken from Principle 21 of the Statement of Principles adopted by the U.N. Conference on the Human Environment.³⁸

States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other states or of areas beyond the limits of national jurisdiction.

In the case of lead poisoning of children in Mexico, it would appear that the U.S. is in violation of the spirit of Principle 21. It should be added that under the Clean Air Amendments of 1970 a foreigner has standing in court to sue for damage inflicted by pollution arising in the United States. We also need to add, however, that recourse to the courts by Mexico would probably result in a long-festering sort of litigation similar to El Chamizal. It would also result in a procedure of judicial arbitration, one decidedly opposed by Smedresman. One must honestly hope that it could at least result in state and local agencies responsible for enforcement looking more carefully at their regulatory role. Litigation is mentioned here only as a likely result if escalation continues on the conflictual side between the two countries.

A far more useful long-range projection of relations between the two countries would call for cooperative action in terms of management of air and water resources. One would have to recognize, naturally, that this cooperation would occur at a very low level of interaction and may be more rewarding if undertaken primarily by private individuals and groups working with the tacit, and occasionally active, support of governmental units. Indeed, it may prove most practical to permit non-state actors such as the U.S.-Mexico Public Health Association, university professors, private groups, and local governmental agents to bear the brunt of much of the research and acquisition of data under the general guidelines established by the IBWC. The various symposiums conducted, including this one, have provided some background and collaboration between interested persons from both sides of the border. Another significant contribution

37. The Trail Smelter Arbitration is discussed by literally everyone concerned with pollution across boundaries. The most recent treatment is Handl, *Territorial Sovereignty and the Problem of Transnational Pollution*, 69 AM. J. INT'L L. 50 (1975).

38. U.N. DOC. A/CONF. 48/14 (July 1972).

to long-range cooperation is the recent agreement reached between border universities for the exchange of information and personnel, mutual research studies, and the training of the necessary technicians to conduct environmental investigations.³⁹ This program would help to alleviate a major drawback to successful environmental regulation, the lack of trained personnel. Both federal governments should provide research funds and other support for this worthwhile project.

One recognizes that this level of interaction is both unexciting for those who are most concerned about cleaning up the environment, and unlikely to make thrilling improvements in the border environment. Nonetheless, it would avoid the kind of confrontation that could destroy any cooperation whatsoever; at the same time, it would provide the type of information, personnel, and human interaction which could subsequently be used to actually regulate environmental matters along the border.

SUMMARY AND RECOMMENDATIONS

The basic points of this paper may be summarized in the following recommendations:

1. At this juncture, because of both a worldwide and border perception that air pollution is not a critical problem, it appears unlikely that a major governmental effort to regulate air resources will result. While not ignoring the possibility of a change in attitudes (perhaps as a consequence of a major eco-catastrophe), in the short run the low level of concern means inter-governmental cooperation will be at a minimum level.
2. Thus a superagency or functionally specific international agency seems improbable for resolving air resources management along the U.S.-Mexico border at this time.
3. Yet participation of federal agencies is indispensable for any subsequent resolution of air resources problems. While active roles of national and local agencies are necessary, an agency which is either international or bi-national is required to handle the problems between the two countries.
4. Such an agency is the on-going International Boundary and Water Commission. The role of the IBWC should be expanded to include supervisory management over both air and water pollution with an understanding that other environmental matters might also fall under the jurisdiction

39. The agreement is presented in H. Applegate & C. Bath, *Air Pollution Along the United States-Mexico Border with Emphasis on the El Paso-Ciudad Juarez-Las Cruces Air Shed* (paper presented at First Meeting of U.S.-Mexico Transnational Resources Study Group, San Diego, Nov. 1976).

of the Commission. Indeed, a change in title to the International Boundary and Environmental Commission (IBEC) appears appropriate.

5. A formal treaty is required for the expanded role of the IBEC. The formal arrangements agreed upon should be flexible and open-ended and, at the same time, formal recognition should be given to the truly international character of environmental problems.
6. These formal arrangements also should acknowledge that for the near future cooperation is most likely to be at the lowest common denominator/least cost level. Nonetheless, every effort should be made to ensure that the IBEC has broad investigative powers to perform its fact-finding mission.
7. Over the near future the IBEC should keep a low profile and remain as apolitical as possible, especially because of the likelihood of increased tension in the border region.
8. International boundaries should not be permitted as an excuse for other national, state, and local governments to ignore their own responsibilities, especially on the U.S. side of the border. The U.S. should recognize the moral and legal obligation it has to clean up a polluted environment. That moral and legal obligation should be conveyed to local and state leaders in terms of their assigned responsibilities under the law. It is the general responsibility of the U.S. to present a model for Third World countries in terms of environmental management.
9. If the U.S. is unable to provide that leadership, conflict is likely with even less possibility for resolving environmental management problems.
10. On the U.S. side, every effort should be made to incorporate the border state and local governments into a comprehensive planning structure that could assist the IBEC in all possible ways.
11. Both federal governments should assist non-state actors in research and training activities on both sides of the border.
12. Every effort should be made by all concerned to encourage cooperation among government officials, non-state actors such as university professors, students, and private groups to provide a common cooperative pattern for the long-range effort to preserve and protect the environment.

RESUMEN

Debido a la percepción mundial y fronteriza que el problema de contaminación del aire no es crítico, ya no aparece que se resultará en

un esfuerzo mayor gubernamental para regular recursos del aire. Por esto, una "superagencia" o una agencia internacional para funciones específicas no parece ser probable para resolver el manejo de recursos del aire a lo largo de la frontera U.S.-Mexico en el futuro inmediato.

La participación de las agencias federales es indispensable para cualquiera resolución subsiguiente de problemas de recursos del aire. Aunque es necesario que agencias nacionales y locales toman parte activas, se necesita una agencia internacional o bi-nacional para resolver los problemas entre los dos países. Tal agencia es la Comisión Internacional de Límites de Aguas (C.I.L.A.). Se debe extender el papel de la C.I.L.A. para incluir el manejo supervisorio sobre la contaminación del aire y agua con el entendimiento que otros asuntos ambientales tal vez también estarán bajo la jurisdicción de la Comisión. Por esto parece bien cambiar el nombre a la Comisión Internacional de Límites y Ambiente.

Para este papel extendido de la C.I.L.A. se requiere un tratado formal. Los acuerdos formales deben ser flexibles y abiertos y al mismo tiempo deben reconocer formalmente al carácter verdaderamente internacional de problemas ambientales. También estos arreglos formales deben reconocer que, en el futuro inmediato, cooperación probablemente será al denominador común más bajo/menos gasto nivel. Pero se deben hacer cada esfuerzo para asegurar que la C.I.L.A. tiene largos poderes investigativos para hacer su misión de recoger datos. La C.I.L.A. también debe quedar tanto no político como posible debido a la probabilidad del crecimiento de tensión en las regiones fronterizas.

No se debe permitir que las fronteras internacionales sirven como un vehículo para que otros gobiernos nacionales y locales pueden ignorar sus propios responsabilidades, particularmente en los Estados Unidos. Los Estados Unidos debe reconocer sus obligaciones morales y legales para limpiar un ambiente contaminado y para presentar un modelo para los países del mundo tercero, como relaciona al manejo ambiental. Si los Estados Unidos no puede proveer tal dirección, el resultado será conflicto con menor posibilidad de resolver los problemas de manejo ambiental.

En el lado de los Estados Unidos necesita incluir los gobiernos de los estados fronterizos en una estructura de planear que funcionará a asistir la C.I.L.A. en cualquiera manera posible. Los dos gobiernos federales deben asistir en actividades de estudiar y disciplinar en ambos lados de la frontera y todos interesados deben facilitar cooperación entre oficiales gubernamentales, profesores, estudiantes y otros grupos para proveer un modelo de cooperación para el esfuerzo de larga distancia de proteger y preservar el ambiente.