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U.S.–Mexico Experience in Managing Transboundary Air Resources: Problems, Prospects, and Recommendations for the Future

El Paso, Texas, and Ciudad Juarez, Chihuahua, sit in a valley between the Franklin Mountains in the United States and the Juarez Mountains in Mexico. The boundary separating the two countries is the Rio Grande, called Rio Bravo in Mexico, now a channelized and, except for the summer months, weakly flowing river that ill-resembles its rich historic tradition. Along with the valley and the river, the two cities also share a common air shed and an increasingly common problem of air pollution. This shared problem of air pollution provides an excellent example of how two cities, located in two distinct, separate nation states, may perceive and attempt to solve their common problem.

The El Paso–Ciudad Juarez (EPJAZ) region is one of the few in the world where a developed and a developing country meet in an urban setting. As such, these twin cities present a microcosm of the global conflict between developed and developing countries. A host of issues including law of the sea, trade, foreign investment, energy, food, population, and the environment, have emerged in recent years to be debated in the United Nations, international conferences and organizations, multilateral and bilateral relations. The sister cities, sharing a common border in an urban setting, provide an excellent laboratory in which to assess the possible resolution or handling of global problems, especially environmental ones.¹

Ciudad Juarez is a superb example of the process of rapid urbanization in a developing country, and the city has encountered a host of problems associated with both urbanization and lack of economic development.²

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1. Stoddard, *The United States–Mexico Border: A Comparative Research Laboratory*, 11 J. INTER-AMER. STUDIES 477–88 (1969).

2. Carpenter and Blackwood, *The Potential for Population Growth in U.S. Cities that Border Mexico: El Paso to San Diego*, 17 NAT. RES. J. 545–70 (1977); Alba, *Condiciones y Politicas Economicas en la Frontera Norte de Mexico*, 17 NAT. RES. J. 571–85 (1977); and Hedderson, *The Population of Texas Counties Along the Mexico Border*, in this volume.

Most important of these has been a truly phenomenal increase in population over the last twenty years. A city of about 250,000 in 1960, Juarez is now estimated to have well over 800,000, give or take a floating population of 125,000, and the population is expected to reach one million in the next few years. This rapid rate of urbanization and population increase is primarily the result of an influx of migrants from the interior of Mexico, many of whom have given up prospects of earning a living on the land and are attracted to the border by the potential of employment in border industry, or of moving into the United States.³ However, unemployment and underemployment are chronic problems of the border economy, and are also representative of economic difficulties within a developing nation. Juarez is plagued with a host of other indicators associated with lack of development, including a very low level of educational attainment, high incidence of poverty, and poor health and nutrition.⁴ In spite of the litany of indicators signifying poverty and lack of development, it should be noted that Ciudad Juarez is relatively well-off in comparison with other regions of Mexico, especially in the interior, and therefore it serves as a beacon to attract migrants to the border region. The increased population, naturally, exacerbates a range of environmental problems, including air pollution.

Contrary to Juarez, El Paso is relatively poor in comparison with other metropolitan areas in the United States. Although El Paso is considerably better off than its sister city, it does rank, along with other border cities such as Laredo and Brownsville, among the lowest of the 256 SMAs in the United States. Relative poverty and unemployment are usually higher than national figures.⁵ Yet, El Paso is also a rapidly growing city, ranking third among all cities in the United States in population increase. This rapid growth rate helps to explain the increased air pollution in the city. El Paso's population of about 450,000 places the combined population of EPJAZ at close to a million and a half. El Paso has little heavy industry, aside from some rather prominent sources of pollution to be discussed later. Most of the area's industry is located in Juarez as part of the border industrialization program, known as the twin plant program in the United States and the *maquiladora* program in Mexico. Industries such as apparel or boot-making firms, attracted to the sunbelt and border region by cheap labor, are relatively clean in terms of air pollution; most of the industrial sources of pollution are the older industries.

3. Evans and James, *Employment and Income Distribution in Mexico and Migration to the United States*, 13 INT'L. MIGRATION REV. 4-24 (Spring, 1979).

4. NEW MEXICO STATE UNIVERSITY, INVENTORY OF THE ECONOMIC, SOCIOCULTURAL AND SOCIOECONOMIC RESOURCES IN THE RIO GRANDE VALLEY FROM ELEPHANT BUTTE RESERVOIR, NEW MEXICO, TO FORT QUITMAN, TEXAS (1976).

5. Stoddard, *Patterns of Poverty Along the U.S. Mexico Border*, CENTER FOR INTERAMERICAN STUDIES & THE ORGANIZATION OF U.S. BORDER CITIES & COUNTIES (1978).

Types and Levels of Pollutants in the Twin Cities of El Paso/Ciudad Juarez

Given the geographical and meteorological conditions of the EPJAZ valley, there have always been problems with air pollution. Indeed, public outcry as early as 1915 deplored the smokey conditions prevailing in the city. In addition, during the spring months the valley is besieged by sand storms coming out of the west. The valley-mountains combination leads to inversions, especially during the winter months from November to March, that trap the air pollutants below the inversion level until either the sun burns away the inversion or winds carry the pollutants out of the valley. The conditions are very similar to those prevailing in the Los Angeles area. In the month of November, 1981, ten out of the first twenty-four days were regarded as unhealthy by EPA standards.⁶

One problem that should be mentioned at the outset is that the technology is simply not available to allow for precise measurement of pollutants.⁷ This effort becomes doubly difficult in an international setting when, as in the case of Juarez, technical capacity is lacking or, because of prevailing winds, pollutants indiscriminately cross the border. It should be added that, without adequate knowledge of the sources of pollution, it becomes very difficult to develop an enforcement plan for reduction of emissions.

Total Suspended Particulates (TSP)

Total suspended particulates refers to dust, pollen, or other matter that is largely produced by industrial sources, open burning, cement plants and rock quarries, and by dust storms. An additional problem, often acute in the autumn in the valley, is agricultural burning, particularly of irrigation canals to clear weeds.⁸ While noticeable success has been achieved on the U.S. side in reducing or eliminating the most visible sources of TSP such as cement plants and rock quarries, serious problems still remain, most of them associated with Juarez.⁹ Every indication is that the amount of TSP found in Juarez is on the rise, whereas the amount found in El Paso has remained stable.¹⁰ There is little doubt that much of the TSP in the EPJAZ region does come from unpaved streets and open burning in Mexico. During the winter months, Juarenses burn lit-

6. El Paso Times, Nov. 28, 1981 at Section B, p. 1.

7. C. STEWART, JR., AIR POLLUTION, HUMAN HEALTH, AND PUBLIC POLICY 5-34 (1979).

8. Hanselka, *Air Pollution Potential from Agriculture Along the Texas-Mexico Border*, AIR POLLUTION ALONG THE UNITED STATES-MEXICO BORDER 15-20 (Applegate and Bath, Eds., 1974).

9. H. APPLGATE, ENVIRONMENTAL PROBLEMS OF THE BORDERLANDS (1979).

10. Herbert, Candelaria, and Applegate, *A Survey of Total Suspended Particulates and Heavy Metals Levels in the Ambient Air of El Paso, Texas, From 1972-79*, AIR QUALITY ISSUES IN THE EL PASO/CIUDAD JUAREZ REGION 8-12 (Gingerich, Ed., 1981).

erally anything they can find for home heating, and this contributes greatly to pollution. Proof of the latter is that the arithmetic mean for benzene solubles found in the particulates analyzed was 3.9 for El Paso, and 28.8 for Juarez.¹¹ It should be stressed that the TSP contributions made by Juarez to the air shed are largely the result of lack of economic development. Funds are simply unavailable for street paving, or centralized home heating, although the recent completion of a natural gas pipeline may eventually permit a cheap source of heating in the city. What is painfully evident is that the TSP arising in Juarez is visible, and that makes it far easier for those in El Paso to blame Mexico for the region's pollution. Indeed, the common complaint pronounced by economic and political elites in El Paso is that Juarez is responsible for the pollution. Their complaints are supported by a phenomena in that, when one drives into the city of El Paso on a winter morning, the smoke and haze seems to start at the river and appears most heavy in Juarez. On the other hand, if one comes into Juarez from the airport, driving towards the river, it appears that the pollution is concentrated in El Paso. Each side, therefore, blames the other. At this juncture the health effects of TSP concentrations are not well-known but, given sulfur oxide levels as well as high benzene levels, it would appear some health consequences are inevitable. What is irrefutable with respect to TSP is that El Paso has been declared a non-attainment area for TSP by the Environmental Protection Agency, and that a good part of the particulates come from Juarez.

Ozone and Carbon Monoxide

El Paso is also a non-attainment area for ozone emissions. Ozone is the new classification used for hydrocarbons usually, but not exclusively, associated with automobile and truck emissions.¹² Ozone and its affiliated hydrocarbons have been on the increase in recent years. The number of vehicles in El Paso is around 300,000, while those in Juarez are estimated to be about 150,000 although the data is difficult to find.¹³ It should be noted that the vehicles in Juarez are far more likely to be older, poorly tuned, and to have had the catalytic converters removed. In fact, a booming business all along the U.S.-Mexico border is the removal of catalytic converters, due to a huge price differential in Mexico between the costs of regular and unleaded gasoline.¹⁴

11. APPLGATE, *supra* note 9, at 3.

12. COUNCIL ON ENVIRONMENTAL QUALITY, ANNUAL REPORT OF THE COUNCIL ON ENVIRONMENTAL QUALITY 54-55 (1979).

13. The number of vehicles in Juarez is variously estimated at between 28,000-160,000. The figure of 150,000 is based on estimates by Mrs. Judy Price of the El Paso City Planning Department.

14. Unleaded sells for about \$1.25 per gallon, whereas regular is subsidized by the Mexican government. In December 1981, PEMEX doubled the price of regular to approximately 87 cents per gallon and, while an admirable move, the price is still subsidized at an unrealistic level which encourages consumption and well may end up eating into revenues from petroleum exports.

El Paso also has been declared a non-attainment area for carbon monoxide, which is, again, largely the product of vehicular emissions. There are clear indications that the border setting is responsible, for carbon monoxide levels in El Paso are highest along the border and a major contributor is the amount of time it takes for vehicles to pass through customs at the international bridges separating the two countries.¹⁵ Since it is estimated that it takes twenty minutes to pass through U.S. customs, and most people leave their cars running, large amounts of carbon monoxide, as well as other pollutants, are emitted. Ironically, then, one federal agency, the Customs Service, in the exercise of its legal responsibilities, causes heavy concentrations of carbon monoxide which another federal agency, the EPA, says violates federal standards.¹⁶

Nitrogen and Sulfur Oxides

Nitrogen oxide levels have not exceeded EPA standards and, in a rarely recorded success story in pollution control, sulfur oxide levels actually have declined in recent years. The major source of sulfur oxides was the American Smelting and Refining Company's (ASARCO) smelter located close to downtown and just across the border from Juarez.¹⁷ The smelter has significantly reduced its emissions of sulfur oxides, although some major problems still remain for other industries such as a Chevron refinery located on the east side of town. However, ASARCO recently applied for permission to change its boilers to coal burners, and this could have a major impact on sulfur oxide levels in the city. As El Pasoans point to the unpaved streets and open burning in Juarez as the major cause of air pollution, citizens of Juarez point at the huge smoke stack of ASARCO as primary polluter for EPJAZ. They are also incensed by the obnoxious smells emitted by the two refineries in El Paso, and a sewage treatment plant on the U.S. side which, unfortunately, emits terrible odors and is located directly opposite the Autonomous University of Ciudad Juarez.

Arsenic, Lead, Zinc, and Cadmium

El Paso has very high levels of all of these pollutants, and most appear directly related to the operation of the ASARCO smelter.¹⁸ Although the

15. Applegate, *Allocation of Vehicular Emissions of Carbon Monoxide Concentrations in El Paso for 1977*, in (Gingerich, Ed.), *supra* note 10 at 14.

16. Using extremely conservative methodology, Applegate estimates that at least 17% of carbon monoxide levels found in El Paso come from either Juarez or Fort Bliss, over which local officials have no regulatory control and, therefore, that the unique situation of El Paso should be considered in establishing standards for the city. Applegate, *Allocation of Vehicular Emissions of Carbon Monoxide in El Paso, Texas and Ciudad Juarez, Chihuahua*, 15 ENVTL SCI & TECH 965 (Aug. 1981).

17. Shoultz, *Air Pollution from United States Industrial Sources Along the United States-Mexico Border*, AIR POLLUTION ALONG THE UNITED STATES-MEXICO BORDER 28-33 (Applegate and Bath, Eds., 1974).

18. Herbert, Candelaria, and Applegate, *supra* note 10 at 11-12.

EPA has not yet established maximum levels of emissions for these heavy metals, Texas has established lead standards and El Paso has been declared a non-attainment area by the Texas Air Control Board (TACB). In fact, El Paso is the only non-attainment area in the state. There does not appear to be much doubt that lead is especially dangerous to children.¹⁹ In 1971, the city of El Paso filed suit against ASARCO for lead emissions.²⁰ High levels of lead poisoning were found among children living in Smelertown, a small community located in the shadow of ASARCO's smokestack. As a result of the case, Smelertown was razed and the residents moved to other parts of the city. Subsequently, a study conducted by the *Subsecretaria de Mejoramiento del Ambiente* (SMA) in Ciudad Juarez found similar levels of lead in the blood of a significant number of children.²¹ ASARCO has consistently maintained that it is not responsible for the high levels of lead recorded; yet, when the smelter was closed down as a result of a strike in the summer of 1980, El Paso was found in compliance for the first time for lead emissions, and most local officials seem convinced that the smelter is responsible for the high lead levels.²²

Thus, the overall record of these twin cities in terms of pollution control is not good. El Paso exceeds federal emission standards for total suspended particulates, ozone, and carbon monoxide, and state emission standards for lead. If there were any federal standards for lead, arsenic, zinc, or cadmium, the city most likely would be a non-attainment area for them, as well. The only success story during the 1970s is sulfur oxides, and this can be attributed largely to reductions in emissions by the ASARCO smelter. Unlike the rest of the United States which has generally seen an improvement in air quality, El Paso's air quality is not getting better and seems to be deteriorating further. Part of El Paso's problems are the pollutants emitted in Ciudad Juarez. Juarez certainly is no better than El Paso, although that is far more difficult to determine and there has been limited sampling of Juarez's air quality. It does appear that Juarez at least meets and may well exceed the levels of pollutants found on the El Paso side of the border. The situation in Juarez can only be expected to deteriorate further as more and more people move into the city and nothing is done to attack the problem of air pollution. Ironically, as the level of economic development in the city increases, so does the level of pollution,

19. See Landrigan et al, *Neuroepidemiological Evaluation of Children with Chronic Increased Lead Absorption*, LOW LEVEL LEAD EXPOSURE 17-33 (Needleman, Ed. 1980).

20. Ross, *Environmental Law: Air Quality Litigation in the El Paso-Juarez Area*, POLLUTION AND INTERNATIONAL BOUNDARIES 72-84 (Utton, Ed. 1973).

21. Ordonez, Romero, and Mora, *Investigacion epidemiologica sobre niveles de plomo en la poblacion infantil y en el medio ambiente domiciliario de Ciudad Juarez, Chihuahua, en relacion con la fundicion de El Paso, Tejas*, BOLETIN DE LA OFICINA SANITARIA PANAMERICANA, V. LXXX 303-17 (April 1976).

22. El Paso Times, Nov. 19, 1980, Sec. B, p. 1.

particularly the pollutants coming from motor vehicles. The primary reason for the levels of pollution found in both cities is the inability of the respective governments to cope adequately with the problem. This inability, in turn, is at least partially the result of the international boundary dividing the twin cities.

THE UNITED STATES POLICY FRAMEWORK

Air pollution policy in both the United States and Mexico is part of the overall system policy making framework. Environmental policy in general, and air pollution policy in particular, brings into play the dominant features of the United States political system.²³ Perhaps the outstanding structural feature affecting air pollution policy in El Paso is federalism. Federalism always has important consequences for the border region where federal agencies not normally regarded as important in certain policy areas must come into play because of the very presence of the border.²⁴ For example, the State Department is not normally regarded as part of the policy mix for air pollution control in the United States, but along the border the State Department must be included as one of the working agencies.

In an excellent comparative analysis of air pollution policy in the United States and Sweden, Lennart Lundquist characterizes the U.S. as the "hare" in the fight against pollution.²⁵ With its initial burst of enthusiasm, the United States established goals for pollution abatement that were clearly unobtainable given the technology of the time. With the Clean Air Amendments of 1970 and the creation of the Environmental Protection Agency came a radical departure in policy that was fully expected to get rid of problems like air pollution. However, as the "hare" bolted away from the starting blocks it began to encounter substantial technical, scientific, economic, and political hurdles in the pursuit of its goals (not to mention an energy crisis that appeared to counteract those goals). For example, the automobile emission standards established exceeded both technical and economic capabilities and, as a result, there have been endless delays and extensions of the standards. One of the results is that there is considerable confusion among local and state officials, who are chiefly responsible for enforcement actions, about the position of the federal government and the regulatory capabilities of the EPA. They, as well as

23. W. ROSENBAUM, *THE POLITICS OF ENVIRONMENTAL CONCERN* (2d ed., 1977), and P. PORTNOY, *CURRENT ISSUES IN U.S. ENVIRONMENTAL POLICY* (1978).

24. Bath, *An Overview of Environmental Policy Making in the United States*, in (Applegate and Bath, Eds.), *supra* note 8 at 58-69; see also Carter, *Public Organization and Impact: Fragmentation in the Borderlands*, *THE ANALYSIS OF POLICY IMPACT* 3-11 (Grumm and Wasby, Eds., 1981).

25. L. LUNDQUIST, *THE HARE AND THE TORTOISE: CLEAN AIR POLICIES IN THE UNITED STATES AND SWEDEN* (1980).

their federal counterparts, are likely to feel that progress in terms of air pollution abatement is slow and time-consuming and reflects the incremental nature of policy change in the U.S. federal system.

An additional problem with federalism is that enforcement of standards is left to the Regional Offices.²⁶ EPA officials are probably exercising good judgment by not pursuing rigorous regulatory efforts; as will be seen shortly, when federal power is exercised, it is likely to pit federal against state officials. Local officials in El Paso do not feel they receive much support from the regional office of the EPA in enforcement measures; it should be added that the regional office is ill-equipped to deal with international problems.

In Texas, the chief governmental agency responsible for insuring compliance with federal guidelines is the Texas Air Control Board (TACB), although enforcement procedures require the active support of the Attorney General's office. The TACB also carries out monitoring of air pollutants. In general, the TACB has been dominated by industrial interests (industry representatives regularly sit on the Board itself) and reluctant to follow a hard line on enforcement of federal guidelines and standards.²⁷ Indeed, the TACB has disagreed with standards set by the EPA and contended that compliance would lead to economic disaster for the state.²⁸ While some success has been reported by the TACB, it has usually not seriously threatened industries in the state, and there has been a genuine reluctance to resort to stronger provisions provided under the law.²⁹

The requirement to submit a state implementation plan (SIP) also led to a continuous battle between the state of Texas and the EPA. The state contended that the EPA-established non-attainment areas, especially those for carbon monoxide and photochemical smog, were based on faulty data. The federal government then threatened to withdraw federal transportation

26. El Paso is located in Region VI with headquarters in Dallas. Region VI has not been noticeably interested in the problem of air pollution, probably because the political climate in the state of Texas is not especially good for regulation of air pollution. Environmental groups are not particularly strong in the state, or they tend to concentrate on water pollution, and there are very powerful groups, deeply entrenched in the power configuration of Texas, that are not in favor of strong regulatory efforts.

27. R. Bailey, *The Implementation of Federal Air Pollution Control Policy in the State of Texas* (unpublished Master's Thesis, University of Texas at El Paso, 1979).

28. TEXAS AIR CONTROL BOARD, BIENNIAL REPORT, 1976 (1976).

29. In the city of El Paso, aside from monitoring responsibilities, the chief activities of the TACB appear to be the granting of variances to industrial polluters such as ASARCO and Chevron to avoid compliance with existing standards. The TACB has carried out a running battle with the EPA over the last few years over adoption and enforcement of federal requirements. For instance, the 1970 provisions for the establishment of National Ambient Air Quality Standards (NAAQS), requiring states to submit plans for implementation of federal standards, was rejected by the state of Texas on the grounds that the standards imposed were unrealistic and the criteria needed could not be established because of poor technical data. Texas did not submit a NAAQS and, in 1973, a U.S. District Court ordered the EPA to promulgate a state plan. This was done in 1975.

funds from several cities, including El Paso, if efforts were not made to comply with EPA standards in the submission of the SIP. In late 1980, the SIP was finally accepted, but one product of the prolonged struggle was that state officials remain wary of their federal counterparts. The current administrator of the EPA, Anne M. Gorsuch, as part of the entire deregulation effort of the Reagan administration, does not appear overly supportive of strong regulatory efforts. Since the 1970 Clean Air Amendments are up for renewal in the Congress, her attitude may play a key role.³⁰ While environmental groups are strongly entrenched, and the public does support reduction of air pollution, the current climate does not appear very good for effective pollution control and abatement.

Several additional factors should be noted in the relationship between state agencies and the city of El Paso. First, the TACB does handle much of the monitoring and recording of air pollution levels, but the staff and technical capabilities of the agency are severely limited, and there are not enough monitoring sites or equipment to adequately measure pollution in different parts of the city. Second, the TACB in Austin has been unusually sympathetic to granting variances to El Paso industrial polluters, and this seems to have created some friction between the TACB and local officials who usually oppose the granting of variances. Third, El Paso is located over 500 miles from the capital in Austin, and the city traditionally has lacked much political strength in the state; a genuine sense of isolation and alienation often pervades among those who are supposed to help state agencies fulfill their legal obligations. Finally, local enforcement of air pollution regulations requires an active role by the Attorney General's office in Austin, and the perceptions of local officials are that oftentimes, in spite of evident support from staff lawyers, the Attorney General of Texas does not rank air pollution as a major problem requiring diligent efforts on his part.

Local control over air pollution resides with the Environmental Section of the City-County Health Unit and the Public Health Attorney of the City Attorney's office. Each must work closely with his respective state counterpart in the TACB and the Attorney General. There have been some political problems with the enforcement of air pollution regulations. Normally, the City Attorney requires the active support of the Mayor and City Council before he can rigorously enforce the standards. With few exceptions, there has been in the city government a noticeable lack of enthusiasm, which some would call downright hostility, towards effective air pollution control and abatement. Only one mayor during the 1970s

30. Gorsuch openly stated that the 1970 Amendments were unrealistic, and "We have to get back to reasonable environmental programs or else the whole system will simply collapse of its own weight." *Christian Science Monitor*, Nov. 20, 1981, p. 7.

actively discussed air pollution, or attempted to follow a hard line with polluters. A major difficulty is the constant turnover of political office-holders. No mayor in the last 14 years has been reelected to office, and turnover in the City Council has also been high. The people involved constantly change; the new ones must learn the problems and seldom have time to develop the necessary expertise and experience to be effective regulators. They also must meet and develop cordial relations with their state and federal counterparts, as well as those in Ciudad Juarez.

Air pollution control policy in the United States, then, has been plagued from the outset by unrealistic goals established by the federal government. Various enforcement problems are encountered within the federal structure of the U.S. political system, most noticeably the lack of cooperation and coordination between federal, state, and local officials. Severe problems are caused by lack of adequate facilities, equipment, personnel, and other budgetary considerations. The general political climate in the United States, Texas, and El Paso does not appear deeply supportive of strong regulatory efforts by governmental agencies. In El Paso itself, there does not seem to be much public support for effective air pollution control. In sum, in the policy framework on the U.S. side of the border there has not been an effective air pollution abatement and control policy.

THE POLICY FRAMEWORK IN MEXICO

Mexico is, in theory, a federal state but, in reality, it is a strongly centralized political system with power emanating from Mexico City.³¹ It should be stressed that the border does not fit well into the Mexican political structure in terms of policy making, either, although once a decision is reached in Mexico City, it is far easier to implement given the policy commitment and overwhelming power of the federal government. In the Mexican political system, a significant amount of local decision making would constitute a challenge to the way in which the entire political system operates and therefore is rarely permitted.

An important exception to this perceived challenge of authority is the informal agreements worked out by agencies along the border.³² These informal agreements do not constitute perceived threats and, therefore, provide the basis for much of the governmental interchange that takes place along the border.

In the early 1970s, Mexico jumped into the battle for environmental quality with all the enthusiasm of its northern neighbor. In 1972, the

31. S. Purcell and J. Purcell, *State and Society in Mexico: Must a Stable Policy Be Institutionalized?*, XXXIII WORLD POLITICS 194-227 (January, 1980).

32. Jamail, *Voluntary Organizations Along the Border*, MEXICO-UNITED STATES RELATIONS 85 (S. Purcell, Ed. 1981).

Subsecretaria de Mejoramiento del Ambiente (SMA) was created within the Ministry of Health and Welfare. Then President Luis Echeverria even named his brother as head of the technical council, which is the equivalent of the Council on Environmental Quality in the United States. President Jose Lopez Portillo has continued the tradition, and his cousin now heads the council. A comprehensive environmental law was rapidly passed which attempted to combine the best of U.S. regulations with those from European countries. It is regarded as one of the finest environmental laws in the world.³³ Federal emission standards for air pollutants were passed that bore striking resemblance to those adopted in the United States.³⁴ In spite of the strong legal and administrative steps taken by the Mexican government to enhance the environment, the fundamental question is, to what degree is the Mexican government actually committed to employing resources to achieve pollution control objectives?

Mexico has basically endorsed the Third World position adopted at Stockholm.³⁵ Pollution is normally regarded as the natural result of the industrialization process and when a certain level of economic development is reached, say about the same level as the United States when it suddenly became interested in the environment, then the environment can be considered a proper recipient for the hard-earned currency that now must be plowed back into industrial growth. An outstanding example of this attitude is the current growth of the oil and petrochemical industry, especially in the states of Chiapas, Tabasco, and Vera Cruz, that is being rapidly expanded without concern for environmental impact whatsoever. Another example is the recent relocation in Mexico of several asbestos plants closed in the United States due to cancer threats to workers.

Within Mexico concern for air pollution seems to be directly related to levels of pollution found in the three major cities, Guadalajara, Monterrey, and Mexico City, one of the dirtiest in the world today in terms of air pollution. This means that federal government initiatives are concentrated in those cities, with not much attention focused on others,

33. Juergensmeyer and Blizzard, *Legal Aspects of Environmental Control in Mexico: An Analysis of Mexico's New Environmental Law*, in (Utton, Ed.) *supra* note 19 at 101-20.

34. (Applegate and Bath, Eds.) *supra* note 8 at xvii-xxi.

35. Cuadra, *Aspectos juridicos de la contaminacion atmosferica en el area fronteriza* (Applegate and Bath, Eds.) *supra* note 8 at 120-23. Here we run head on into the perceived (and perhaps wrongfully so) conflict between economic development and pollution control. This basic question, hotly debated at the Conference on the Human Environment held in Stockholm in 1972, has emerged as a persistent stance of the Group of 77 (or South) for the last ten years. The perception is that if pollution is part of the development process and higher levels of economic development can only be bought by increased levels of pollution, then so be it. Many Third World countries, therefore, accept pollution and environmental damage as the price that must be paid for economic growth. See also Report of a Panel of Experts of the United Nations Conference on the Human Environment, *Environment and Development* (the Founet Report) (1972).

including border cities. Even in Mexico City the degree of actual commitment to pollution abatement is debatable.³⁶

An important new development deserves attention and should not be buried in a footnote. In late 1979 the Economic Commission for Latin America, called CEPAL for its Spanish acronym, held a conference in Santiago to discuss the relationship between the environment and economic development.³⁷ There was a decided change of attitude on the part of the leading economic thinkers in Latin America as witnessed by the following statement by Anibal Pinto:

At the onset, I wish to refer to and reiterate the position taken by Osvaldo Sunkel and Enrique Iglesias, that for an economist of my generation, as for many in succeeding ones, it is almost unbelievable that this vital relationship of man to the environment or of society to its physical surroundings remained unnoticed for so long, not even appearing tangentially in our discussions. We must acknowledge and recall, modestly and even repentantly, that those who were ringing warning bells and sounding the alarm on this issue were not only listened to indifferently but often considered well-intentioned eccentrics dealing with more or less irrelevant problems compared with those which really mattered to us.³⁸

This is an extraordinary change of attitude by one of the leading dependency thinkers in Latin America.

Such a national framework does not provide much optimism about the prospects of the local effort in Ciudad Juarez to control air pollution. The Juarez office of the SMA consists of three persons: a Director (Delegado), a Subdirector, and a secretary to handle all the environmental problems

36. For example, there does not appear to be any national or municipal contingency plan to shut down transportation and industry in the event of a prolonged inversion, yet such an inversion is a distinct possibility. One of the problems may be indicated by statements made by Dr. Blanca Raquel Ordonez, Director of the Air Pollution Section of the SMA who, in 1978, argued that smoking is worse for one's health than pollution, that no correlation can be found between pollution and respiratory diseases, and that carbon monoxide causes no harm to health. *New York Times*, January 30, 1979. She is basically correct, with the possible exception of the health consequences of carbon monoxide, but one hardly expects to see these kinds of statements from the officer chiefly responsible for controlling the nation's air quality; these types of statements are usually made by those who do not want to clean up the air.

37. See the entire 12 CEPAL REV. (Dec. 1980).

38. A Pinto, *Comments on the Article "The Interaction Between Styles of Development and the Environment in Latin America,"* 12 CEPAL REV. 21 (Dec. 1980). Pinto chastised his fellow economists for their "generational blindness" towards the environment. In the same conference other thinkers such as Sunkel, Iglesias, Fernando Cardoso, and even the dean of Latin American economists, Paul Prebisch, recanted their previous lack of concern for the physical environment and adopted a new approach that damage to the environment must be an important consideration in the developmental process. Given the enormous prestige of the CEPAL group throughout Latin America, this change of attitude may have very important consequences for the 1980s and perhaps challenge the fundamental position taken by the majority of Third World countries, including Mexico, at the Stockholm conference.

of a city nearing one million in population. The SMA is a multifunctional agency that must deal with all environmental problems. One wonders what percentage of time, resources, and personnel can be devoted to the singular problem of air pollution; the quick answer is probably not much. There is no technical capability at all, unless it is provided by U.S. officials. SMA local activities are directed chiefly at distribution of pamphlets printed in Mexico City, lectures given in local schools, participation in the Binational Environmental Health Committee, coordination of the joint monitoring effort by the local universities, and a much-heralded, if low-impact, inspection program of automobiles to detect illegal emissions.³⁹ The basic problem for industrial pollution in Juarez is that no large industrial polluters can be singled out, most of the pollution coming from a host of small industries and factories that make enforcement of air pollution standards very difficult. Substantial reduction of TSP would require the paving of streets and controls over open burning, neither of which can be accomplished currently without an enormous increase in revenues and a basic switch in governmental priorities. For some unknown reason, although governmental support for the timber industry may be the motive, Mexican officials have decreed that the planting of large numbers of trees is the solution to air pollution problems. In December 1981, the Director of the local SMA stated that they were going to plant 100,000 trees to alleviate the problem of air pollution in Juarez. One hopes it will work but, if Mexico City is any indication, the young trees planted there are being killed off by air pollutants. In sum, the policy framework for air pollution control and abatement in Mexico as a whole and for residents of EPJAZ in particular does not provide an effective means for reducing pollution.⁴⁰

THE INTERNATIONAL/BINATIONAL CONTEXT FOR AIR POLLUTION CONTROL IN EPJAZ

Citizens of El Paso–Ciudad Juarez have long recognized the international nature of their pollution problem. Indeed, each side blames the other side, and the border has proven to be the chief excuse for doing just as little as possible to clean up environmental damage. Nonetheless, it should be pointed out that there has been a continuous history of joint efforts to resolve air pollution difficulties through binational cooperation.

39. Under this last program, which is most often mentioned by Juarez officials as effective in eliminating air pollutants, permits are required on automobiles showing that they do not exceed accepted limits of emissions. cursory examination of automobiles parked in Juarez indicates a large number of autos without stickers. It also was discovered that the permits may be obtained by paying thirty pesos to a local police official, and it is not necessary to bring the auto for inspection in order to receive the sticker.

40. *Excelsior*, December 9, 1980.

The International Boundary and Water Commission (IBWC) with its two national sections, specifically charged with demarcation of the boundary line between the two countries as well as allocation of water supplies in the Rio Grande and other international rivers, has dealt with environmental issues, although it has been reluctant to pick up the issue of air pollution.⁴¹ Initially those who believed an international agency would be the best instrument to regulate air pollution along the United States–Mexico border looked to the IBWC as the agency best-equipped to handle the problem under a binational approach.⁴² The IBWC, however, is a technical agency primarily concerned with surveying and engineering problems and there appears to be a genuine reluctance within the IBWC to become involved in such politically controversial issues as air pollution.

The major impetus for international, or rather binational, efforts to resolve environmental issues came from the Pan American Health Organization's (PAHO) Field Office located in El Paso.⁴³ Within the organization several Binational Health Councils have been established in the various twin cities along the border, El Paso–Ciudad Juarez being one of them, in an effort to coordinate activities towards health matters between the cities. These Councils are strictly binational in the sense that their role is solely for the exchange of information and personal communication between the officials involved; actual policy remains the sole province of the respective nation-state. These Councils make no claim to being international organizations. Under the auspices of the El Paso–Juarez Council a Binational Environmental Committee was established, and meeting in the PAHO offices in El Paso, it successfully worked out an agreement in 1972 for a joint air sampling and monitoring program in the two cities.⁴⁴ A second effort to sample air pollution was arranged and continues today under the direction of Dr. Howard Applegate.⁴⁵

41. Mumme, *Continuity and Change in U.S.–Mexico Land and Water Relations: The Politics of the International Boundary and Water Commission*, THE WILSON CENTER OCCASIONAL PAPER NO. 77 (1981).

42. Bath, "Cesar Sepulveda, Metodos intergubernamentales viables para la cooperacion en el control y eliminacion de la contaminacion del aire a lo largo de la frontera Mexico–Norteamericano" (Applegate and Bath, Eds.) *supra* note 8 at 131–35.

43. PAHO serves as the permanent secretariat for the United States–Mexico Border Public Health Association which consists of local, state, and federal public health officials from both sides of the border who have met regularly since 1943. The Border Public Health Association meets annually with representation from the different governmental levels and one of its sections is devoted to environmental health. ALVAREZ, *HEALTH WITHOUT BOUNDARIES* (1975).

44. Davila, *Joint Air Pollution Monitoring Program Developed in the Cities of Juarez, Chihuahua, Mexico, El Paso, Texas, and Las Cruces, New Mexico*, in (Applegate and Bath, Eds.) *supra* note 8 at 155–69. Several sampling stations were established in Juarez with equipment and technicians provided by the United States. In addition to PAHO officials, members of the Environmental Committee included representatives from the Centro de Salud "A" of the Ministry of Health and Welfare, and the local director of the SMA office in Juarez. A key role is played by the Environmental Health Engineer of the El Paso City–County Health Unit.

45. A major catalyst in the development of the sampling program, as well as in subsequent joint

The second major organizational effort of the Binational Environmental Committee was to arrange and carry out the First Binational Symposium on Air Pollution Along the United States–Mexico Border held in El Paso in September, 1973.⁴⁶ A second binational symposium was held in Nuevo Laredo in 1975, and environmental issues remained an important item at the annual conference of the United States–Mexico Border Public Health Association.

Environmental issues, including air pollution, have thus become part of the working agenda in discussions between the two countries. This agenda extends to negotiations between the Presidents of Mexico and the United States and, as a result, a Memorandum of Understanding was signed between representatives of the two countries in 1978.⁴⁷ One can be genuinely impressed with the cooperative efforts to deal with environmental issues such as air pollution along the border, but hard-pressed to find any concrete evidence of a reduction of air pollution in EPJAZ. Sanitation and sewage problems dominate public discussions of environmental issues. It is somewhat ironic that one of the major impetuses for placing environmental issues on the public agenda for discussions between the two countries (and this is not to ignore the salinity of the Colorado River) was the level of air pollution in EPJAZ, but so far little has been accomplished to ease that problem.

Interestingly enough, air pollution is also on the agenda of an entirely different set of public officials, the Border Governors Conference. First convened in 1980, the meeting consisted of governors from the states on both sides of the border. At the October 1981 meeting in El Paso, the

efforts to develop programs and information about air pollution in EPJAZ, was and is played by Professor Howard Applegate, a civil engineer with the University of Texas at El Paso who, although he holds no official position, is largely responsible for providing both the equipment and technicians (students) for measuring pollutants. The program enjoyed initial success, but broke down when access to U.S. trucks was denied by Juarez officials. See Applegate and Bath, *Air Pollution Along the United States–Mexico Border with Emphasis on the El Paso–Ciudad Juarez–Las Cruces Air Shed*, 18 NAT. RES. J. 91–100 (1978).

46. Prominent scientists, technicians, lawyers, professors, and government officials from all levels of both governments attended the conference. There was general agreement that much more data was needed about the nature of air pollution along the border; also considerable effort was devoted to possible institutional arrangements to deal with air pollution. The attendance of both EPA officials from Washington and their counterparts from the SMA in Mexico City assured that border pollution was part of the public policy concern of both organizations. Papers from this symposium can be found in (Applegate and Bath, Eds.), *supra* note 8.

47. This Memorandum called for cooperative efforts between the EPA and the SMA to resolve environmental problems along the border, for parallel activities as well as joint actions to be taken, annual conferences to be held, and other exchanges of technical information and personnel. The Memorandum also stressed that costs were to be borne by the respective governments within their boundaries. The document goes a long way towards providing the legal framework for mutual efforts to curb air pollution. The Memorandum went into force in September 1979, and a Border Working Group on Environmental Matters under the Consultative Mechanism was established and reportedly held several meetings. As far as can be determined after discussions with State Department officials, this Working Group, like others established under the Consultative Mechanism, is no longer operative.

Conference adopted the report of its Environment Committee. This report is of more than passing interest, especially to compare the different approaches found within the two nation states, but also because it is difficult to understand how border governors would possibly implement the recommendations without the active support of both federal governments. The United States suggested joint action to prepare studies, adopt legislative and budgetary measures to attack problems, encourage effective management of resources, and rid ourselves of pollution. The Mexican recommendations were couched in terms that suggest national solutions to national problems, cooperation with international organizations, and the adoption of ecological plans. To those familiar with the differences in approach, this is the pragmatism of the United States versus the general reluctance of Mexicans to engage in mutual efforts until they are absolutely sure of the rules. The Committee proceeded to recommend thirteen points.⁴⁸ While one is not quite sure of what is meant by the "existing highly successful air quality monitoring programs,"⁴⁹ the adoption of the committee's recommendations by the Governor's Conference is an interesting development and one that could provide one more path of effectively dealing with environmental issues along the border.

One final development along the United States–Mexico border deserves some comment for the implications it may have for the EPJAZ region. Apparently the San Diego–Tijuana region has pursued a similar path in relations over air pollution in the area.⁵⁰ Soon after the El Paso–Ciudad Juarez joint air sampling program was initiated, San Diego–Tijuana began a similar program, under the auspices of PAHO. The course of the relations between these two cities has been very similar to that found in EPJAZ: mutual suspicion among officials, a constant turnover of personnel, differing perceptions of the basic problem, and a lack of full cooperation with federal and state agencies, but there are some interesting differences as well. For example, San Diego–Tijuana do not have the same air shed problems. Although there is movement of some pollutants,

48. The highest priority amongst the thirteen points went to the elimination of raw sewage and toxic chemicals from water resources, effective water management, identification of underground water aquifers, exchange of information on the hazards of pesticides and herbicides on the Border, and a tracking system for hazardous materials. Point 4 of the recommendations reads:

Expand existing highly successful air quality monitoring programs in the border states, and continue the introduction of more modern monitoring equipment. Also develop techniques for monitoring that provide quality data acceptable to all investigators. Primary emphasis will be on monitoring the following pollutants: Toxic materials, sulfur dioxide, carbon monoxide, and ozone.

The recommendations also call for the exchange of personnel and training programs to "facilitate the use of environmental sampling and analysis equipment."

49. *Id.*

50. Nalven, *A Cooperation Paradox and an 'Airy Tale Along the U.S.–Mexico Border* (mimeographed, San Diego: Community Research Assoc. 1981).

especially particulates, between the two cities, the major threat to the air quality of San Diego seems to be the polluted air coming from Los Angeles and Orange County. One of the more interesting aspects of the analysis by Dr. Joseph Nalven is the animal perceptions held of the participants by their counterparts across the border. Those in the United States view the Mexican officials as *tortugas*, or turtles, in terms of the caution with which they move. On the other hand, Mexicans look upon the U.S. officials as *tiberones*, or sharks, about to devour sardines.⁵¹ The cultural differences are obvious, and may present enormous barriers to effective human relations between the two groups of officials.

But what is extraordinarily important, and as far as can be determined unique for the border, is an agreement reached between the San Diego Air Pollution Control District and the State of Baja California Department of Environmental Improvement and Control, signed in April 1981. This formal memorandum calls for cooperation between the two governments for air quality monitoring and control. While chiefly endorsing the concept of parallel activities, and protecting the integrity of each nation's decision making process, the agreement does recognize the superior technical ability of the APCD in terms of it providing technical assistance to the SMA in Tijuana. It is interesting to note that the document represents "a major departure in Mexican federal policy."⁵² This makes the document unique, and it also provides a legal framework for other areas such as EPJAZ to form regional arrangements to deal more effectively with local problems. The memorandum deserves careful study by officials in El Paso and Ciudad Juarez.

SUMMARY AND RECOMMENDATIONS

El Paso and Ciudad Juarez share a common air shed that has become increasingly polluted over the last few years. The pollutants, to a certain extent, reflect the differences in the level of economic development: those from Juarez, primarily particulates, stem from poverty; those from El Paso from industrialization and higher standards of consumption. Neither city has been especially successful in handling the problem of air pollution. A chief reason is that the existence of the international boundary itself offers a convenient excuse for inaction, and both sides are more than willing to blame each other for the pollution.

In the United States, idealistic and unenforceable goals led to endless delay in the enforcement of air pollution standards. Recently the federal government has backed off from implementation of standards and enforcement has lapsed. In sum, the personnel, equipment, legal expertise,

51. *Id.*

52. *Id.* at 20.

and regulatory enthusiasm are simply not available for El Paso to cope adequately with its problem. In Mexico the situation, if anything, is worse. After an initial arduous outburst that included the creation of the SMA and the passage of comprehensive legislation, the implementation of air pollution policy in Mexico has languished. One reason may be the belief that concern with pollution might hamper economic growth. In any case, in Juarez itself pollution control and abatement policy consists of little more than passing out pamphlets. In a comparative policy sense, both countries have proved to be failures in preventing or alleviating air pollution along the border.

In spite of the failure within each nation state, there has been a remarkable record of binational activities aimed at helping resolve the air pollution problem. The binational committees have worked towards common knowledge about environmental conditions and have facilitated healthy exchanges between the officials involved. The problem of air pollution in the borderland has been elevated to the federal agenda for both countries, something that was not true only ten years ago. Even the border state governors regard the problem of air pollution as important. It is safe to say that the issue will remain an important concern of officials and citizens at all levels.

Where do we go from here? It might prove worthwhile to review some recommendations made several years ago with respect to the shared air pollution problem in EPJAZ.⁵³ These recommendations appear to be as applicable today as they were then. For example, the international bound-

53. Bath, *Alternative Cooperative Arrangements for Managing Transboundary Air Resources Along the Border*, 18 NAT. RES. J. 197-98 (1978). I was somewhat pessimistic and argued that we could not look for a super agency to handle the environmental issues in the border region. I did argue that the IBWC should be expanded to include the management of both air and water pollution and, indeed, there has been an expanded role for the agency since the Memorandum of Understanding (1979). It is still not terribly interested in air pollution, but it is heavily engaged in water pollution abatement activities. See also J. Friedkin, *The International Boundary and Water Commission: United States and Mexico* (paper prepared for UN Meeting of Int'l. River Organizations, Dakar, Senegal, 1981).

Let me present the remaining recommendations:

8. International boundaries should not be permitted as an excuse for other national, state, and local governments to ignore their own responsibilities. 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.
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 (IBWC) in all possible ways.
11. Both federal governments should assist non-state actors in research and training 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.

ary should not serve as an excuse for either nation state to ignore its own responsibilities. It definitely should not be used as an excuse for not meeting federal standards on either side. Congressman Richard White recently introduced a bill to exclude El Paso from EPA standards because of the international boundary and the contribution of Juarez to pollution.⁵⁴ This will not do. Every effort should be made by both sides each to clean up its own mess. In El Paso, for example, if the ASARCO smelter is clearly responsible for the heavy metals emissions, then it must be forced to clean up. On the other hand, it is imperative that Mexico also take strong measures to reduce emissions. Two suggestions come immediately to mind. First, the federal government of Mexico could come to the aid of Juarez and help construct a natural gas system for home heating. Second, the federal government could and should correct the pricing of regular gasoline.⁵⁵ While politically it may be a difficult decision, economically it is the only realistic one. In December 1981, the Mexican Congress passed a new environmental law that calls for stiff fines and criminal sanctions for polluters.

Every effort should continue to develop a general and systematic planning structure for the border, and the IBWC would appear to be the best vehicle for such planning. One should not be too optimistic about the possibilities for joint planning and, in fact, it may be better to give some leeway to local officials. Neither federal government has been particularly enthusiastic in supporting research and training programs. Mexico, through CONACYT, probably has been more supportive than has the United States government. Those who are doing research and training may find it more rewarding to go to state agencies in the United States, given the support by the Border Governors' Conferences.

It is with respect to the last recommendation that one can be most optimistic. Government officials from various levels, local, state, and federal, are engaged in active discussion with their counterparts in Mexico regarding environmental issues. It is readily apparent that environmental matters including air pollution are part and parcel of the agenda items in any negotiations between the two countries. There is also considerable activity among non-state actors. In short, a host of groups of scholars, government agencies, and others are actively pursuing the improvement of the environment along the United States-Mexico border. One can only hope they are eventually successful in improving that environment.

54. H.R. 4731, "To Amend the Clean Air Act with respect to the prevention and control of air pollution in border areas of the United States and countries contiguous to the United States, and for other purposes, 96th Cong., 1st Sess. (July 10, 1979).

55. See *supra* note 14.

LA EXPERIENCIA ENTRE MEXICO Y E.U. EN LA ADMINISTRACIÓN DE RECURSOS TRANSFRONTERIZOS ATMOSFÉRICOS: PROBLEMAS, PERSPECTIVAS Y RECOMENDACIONES PARA EL FUTURO

El Paso y Ciudad Juárez comparten un estrato atmosférico común, que ha ido aumentando su contaminación en los últimos años. Desafortunadamente, ni el gobierno de Texas, ni el de México le han dado una importancia práctica al problema de la contaminación atmosférica. Las actividades binacionales, sin embargo, se han empeñado continuamente para resolver los problemas de la calidad del aire. Ambos países deberían asumir su responsabilidad para lograr un medio ambiente limpio.

El Paso y Ciudad Juárez comparten un estrato atmosférico común, que ha ido aumentando su contaminación en los últimos años. Los contaminantes, en cierto grado, reflejan la diferencia en el nivel de desarrollo económico: En Ciudad Juárez, calles no pavimentadas, fogatas para la calefacción de los hogares, arrojan partículas a la atmósfera; en El Paso, las industrias arrojan metales pesados y arsenicales. Los vehículos de ambas ciudades contribuyen a aumentar los niveles de ozono y monóxido de carbono. El Paso rebasa las normas federales de emisión de varios contaminantes, y las muestras del aire de Ciudad Juárez indican lo mismo y en algunos casos niveles más altos de contaminantes que en El Paso. Los gobiernos de ambas ciudades culpan al otro de los problemas de contaminación, y los dos utilizan la existencia de una frontera común como excusa de su falta de acción.

El marco de la política de los Estados Unidos

En 1970, el gobierno de Estados Unidos adoptó metas para disminuir la contaminación, las cuales eran ilusorias debido al tipo de economía y tecnología de la época. Como resultado, los funcionarios locales y estatales se han mostrado reuantes para hacer cumplir las normas federales de contaminación del aire. En Tejas, los intereses industriales dominan al Comité de Control del Aire de Tejas, responsable de garantizar los lineamientos federales, lo que ha ocasionado numerosos desacuerdos con la EPA (Agencia de Protección del Ambiente) acerca de las normas y los esfuerzos para el control de la contaminación. Recientemente ha disminuido el esfuerzo a nivel federal para controlar la contaminación atmosférica. Además, los gobiernos locales no se han compenetrado de sus propios problemas de contaminación del aire. En El Paso, tanto los funcionarios como el personal de los organismos de protección al ambiente son continuamente cambiados, y el público no apoya los esfuerzos para reglamentar este problema. Consecuentemente no se dispone en El Paso de experiencia y entusiasmo para atacar adecuadamente ese problema.

El marco de la política en México

En 1972, la Secretaría de Salubridad y Asistencia creó la Subsecretaría del Mejoramiento del Ambiente (SMA) y rápidamente se promulgó una ley ambiental considerada como una de las mejores del mundo. Sin embargo, el gobierno mexicano percibió un conflicto entre el desarrollo económico y el control de la contaminación, el cual sobrepasa su cometido para iniciar los pasos legales y administrativos. El gobierno fomentó la industrialización petroquímica sin considerar el medio ambiente, y uno de los directores de la SMA ha hecho declaraciones que ponen de manifiesto el grave impacto de la contaminación del aire en la salud del personal de la industria. Desafortunadamente, la actual política utilizada en México se dirige principalmente a la distribución de folletos.

Contexto Internacional/Binacional del Control de la Contaminación del Aire en El Paso-Juárez

Aún cuando los dos países han fallado en la prevención o mitigación de la contaminación del aire a lo largo de la frontera, las actividades binacionales se han encaminado a la resolución de esos problemas. La Asociación Fronteriza de Salud Pública entre México y E.U. permite que los funcionarios locales, estatales y de salud pública federal se reúnan continuamente para intercambiar información. En 1972, la Asociación formó un Comité Binacional del Medio Ambiente, para hacer arreglos sobre un programa conjunto de muestreo y vigilancia para El Paso y Ciudad Juárez. El Comité estableció algunas estaciones de muestreo en Juárez con equipo y técnicas proporcionadas por Los Estados Unidos. El Comité ha efectuado dos simposios de contaminación del aire a la que

asistieron funcionarios de la Subsecretaría del Mejoramiento del Ambiente, desde México. El problema de la contaminación del aire se ha convertido en un asunto importante para el Departamento del Estado y los gobernadores estatales de ambas naciones.

Recomendaciones

La frontera internacional no debe de servir de excusa para que cada uno de los dos países ignoren sus responsabilidades. El Paso debe controlar la contaminación industrial. México también debe de tomar medidas enérgicas para reducir emisiones. El Gobierno Federal puede construir un sistema de gas natural para la calefacción y puede eliminar el subsidio del precio de la gasolina regular. Todos los esfuerzos deben continuar hasta desarrollar una estructura de planeación general y sistemática en la frontera y la Comisión Internacional de Límites y Aguas parece ser el mejor vehículo para esta planeación. Ambos gobiernos federales deberán auxiliar a los individuos y organizaciones no oficiales para la investigación y el adiestramiento, a fin de proveer un esquema común de cooperación para el esfuerzo de largo alcance preservar y proteger el medio ambiente.