MICHAEL E. BULSON*

Colorado River Salinity Problem: Has a Solution Been Found?

On September 24, 1973, Herbert Brownell, President Nixon's special representative for Resolution of the Salinity Problem With Mexico, announced the signing of a new agreement between the United States and Mexico for a solution to a problem which has plagued relations between the two countries for over a quarter century.[1] The problem is the salinity of the waters of the Colorado River which flow into Mexico and the proposed new solution is the construction of a technologically advanced desalination plant in Arizona. The proposal, which would include such features as a concrete lined canal running to the Gulf of California, carries a price tag of $115 million and would reduce the salinity of the water to a level nearly equal to that at Imperial Dam in Arizona.[2]

For the estimated 10,400 farmers[3] cultivating the land along the 100 mile stretch of river in Mexico, the agreement represents new hope for a revitalized economy. Damages from salinity in the past few years have been estimated as high as $150 million[4] with only 15 percent of the irrigable land being used because of the lack of good water.[5] But the agreement is significant for more academic reasons as well. It is significant for the contribution it makes to the body of international law and policy which exists for the resolution of international river disputes. It will be the purpose of this paper to analyze that contribution, to show in what way it differs from past U.S. policy and in what way it can serve as precedent for the amicable resolution of future international river disputes. It will attempt to show that the agreement represents a new trend away from the doctrine of territorial sovereignty which pervaded the first

*B.A., Carroll College—1971; M.A., Graduate School of International Studies, University of Denver—1974; J.D. Candidate, University of Denver College of Law-1976; Managing Editor, *Denver Journal of International Law and Policy.*

[1]'69 DEP'T. STATE BULL. 338.

[2]*Id.* Imperial Dam is the diversion point for most of the irrigation water used in Arizona. The salinity of its water is considered to be close to that of virgin water.

[3]Hundley, *The Colorado Waters Dispute*, 42 FOR. AFFAIRS 495 (1964) (hereinafter cited as Hundley).

[4]DEP'T STATE BULL. 388.

[5]HUNDLEY, DIVIDING THE WATERS 178 (1966).

Colorado River Treaty between the United States and Mexico,[6] and a movement toward the recognition of the rights of lower riparians to have their economic interests protected. Finally, it will be urged that the trend be continued toward the creation of a new treaty based on the integrated river approach.

The Problem

Salinity is a common feature of the Colorado River. Throughout the 1,300 miles[7] that it flows from its source in the Colorado Rockies to where it empties into the Gulf of California its salinity rises steadily. Some of this salinity occurs naturally,[8] a result of runoff waters that carry dissolved minerals picked up from the rocks and soil. However, it is not until the water reaches the more arid parts of the river basin that the salinity problem arises. The arid soils, because of the lack of rainfall to wash away the collected salts, contribute a markedly greater amount of minerals than do the soils in more humid climates. Consequently, the salinity of the Colorado River increases twenty-fold from its source to where it reaches the sea.[9]

But it is the unnatural use of the Colorado's waters which has the greatest impact on its salinity. Irrigation which has brought a new economy to the arid regions of the Southwest has also brought the salinity problem to its crisis stage. The natural collection of dissolved minerals is greatly accelerated when the water is used for irrigation. The water which is used to irrigate the arid lands not only picks up large amounts of minerals but is also affected by evaporation. It is estimated that two-thirds of the water used in irrigation is lost through this natural process.[10] The remaining drainage water returning to the river carries a concentrated mixture of salts and water. Thus, water before irrigation may contain as few as 800 parts per million (ppm) of salt to water, while after it is drained from the fields its concentration may rise to as high as 6,000 ppm. Such high concentration has a profound effect on the quality of the water which continues down the course of the Colorado River. For cities such as Mexicali (pop. 300,000) a rise in salinity over 1,000 ppm means that the water is no longer fit for drinking.[11] For the farmers of Mexico, high salinity means either

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[6]Treaty between the United States of America and Mexico Relating to the Utilization of the Waters of the Colorado and Tijuana Rivers and of the Rio Grande (Rio Bravo) from Fort Quitman, Texas to the Gulf of Mexico, signed at Washington on Feb. 3, 1944 and Supplementary Protocol, signed at Washington on Nov. 14, 1944 (Entered into force on Nov. 2, 1945). 3 U.N.T.S. 314 (hereinafter cited as the 1944 Water Treaty).

[7]Meyers, *The Colorado River*, 19 STAN. L. REV. 1 (1966-67).

[8]The salinity of virgin water at Imperial Dam is normally 600 ppm., although in recent years it has risen to around 850 and could go as high as 1220 by 2010, a result of planned development on the Colorado. Reynold's, *The Water Quality Problem on the Colorado River*, 12 NAT. RES. J. 480 (1972) (hereinafter cited as Reynolds).

[9]Gindler & Halburt, *Water Salinity Problems: Approaches to Legal and Engineering Solutions*, 9 NAT. RES. J. 390 (1969) (hereinafter cited as Gindler & Halburt).

[10]Reynolds, *supra* note 8, at 483.

[11]Gindler & Halburt, *supra* note 9, at 334.

that the crops must go unwatered or a switch must be made to more saline resistant crops, which are often less profitable.

The peculiar nature of arid soils contributes significantly to the problem. Because of the lack of natural runoff, harmful minerals are not washed out naturally, but must be cleansed through a process known as leeching. This involves the use of large quantities of water to wash out the salts which are then returned to the river. Unless this process is pursued the soil soon becomes as useless as the depleted soils around such old centers of civilization as Ur near the Persian Gulf, where it is believed the soil deteriorated partly because of an ignorance of good irrigation practices.[12]

Irrigation also causes the groundwater under arid soil to rise. When this groundwater is itself salty as it is in parts of the Southwest it can result in the collection of salts in the root systems of plants, thus causing them to die. The remedy, and one which was used in the Welton-Mohawk irrigation project of Arizona, is to pump the groundwater off. However, in the Welton-Mohawk project, the groundwater was disposed of in the Colorado River thus causing its salinity to rise drastically from 1100 ppm in March, 1961 to around 2,700 in November and December 1961.[13] It was this practice which ignited the dispute over salinity.

Thus it seems that a natural consequence of the beneficial use of Colorado River water is a degradation of its quality by the introduction of dissolved salty minerals. When the water supply itself is reduced through evaporation and plant use the salinity becomes even more concentrated and harmful. The remedy for this condition is either the use of more fresh water from other sources to dilute the drainage water or the use of less Colorado River water to lessen the salinity. In the Southwest where good water is precious, neither remedy is readily acceptable.

The result has been an ongoing dispute over the rights of lower riparians, in this case Mexican farmers, and their rights of upper riparians, U.S. farmers. In the early days of cultivation in the Southwest, the problem was not as acute. With irrigated acreage at a minimum, the salinity did not increase greatly enough to affect crop growing. However, beginning in 1961 with the Welton-Mohawk project, the water delivered to Mexico became virtually unusable. The protests of the Mexican farmers at first went largely unheard. But when protest leaders such as Alfonso Garzon gathered more and more support, it soon became obvious that the legal rights of the lower riparians had

[12] *Id.* at 336.
[13] *Id.* at 392.

to be considered.[14] It is with these legal rights under both international law and treaty law that the next section is concerned.

Salinity and the Law

The initial reaction of U.S. officials was to insist that the United States was not responsible for the increased salinity because the 1944 Water Treaty said nothing about the quality of the water which Mexico was to receive.[15] A literal reading of the treaty would tend to support this view. The two articles of the treaty which are pertinent both support the United States position. Article 10, which talks of delivering "waters of the Colorado, from any and all sources. . . ,"[16] if read literally would mean highly saline water returning to the river as drainage and even possible saline groundwater pumped into the Colorado. Article 11 seems to reiterate this point by stating that the "waters shall be made up of the waters of the said river, whatever their origin. . . ."[17]

That a literal reading of the 1944 treaty supports the United States claim of no responsibility for supplying Mexico with usable water seems clear. In fact, Assistant Secretary of State Dean Acheson, when questioned on the treaty, agreed that Mexico would receive but 1,500,000 acre feet of water regardless of whether it came from seepage or drainage and so saline as to be unusable.[18] About the only support that can be found in the treaty for the Mexican position is by inference. For example, the Preamble does speak of water for beneficial use, and it appears that this would mean usable water. Furthermore, the treaty lists "agriculture and growing" as one of the purposes for which the water will be used by Mexico.[19] This fact has led some authorities to argue that since the treaty guarantees water for agricultural purposes, the delivery of unusable water

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[14]Alfonso Garzon was only one of the Mexican farm leaders whose protests of Yankee Imperialism were heard in the early sixties. He was undoubtedly the most influential, even to the point of obtaining a meeting with President Mateos of Mexico to discuss the problem. Hundley, *supra* note 3, at 500.

[15]The 1944 Water Treaty, *supra* note 6; *Dividing the Waters, supra* note 5, at 175; for a history of events leading up to the treaty *see generally* Meyers & Noble, *The Colorado River: The Treaty With Mexico,* 19 STAN. L. REV. 367 (1966)67).

[16]1944 Water Treaty, *supra* note 6, art. 10.

[17]*Id.* art. 11.

[18]Sobarzo, *Salinity in Colorado: An Interpretation of the Mexican American Treaty of 1944,* 12 NAT. RES. J. 508 (1972), in UTTON, POLLUTION AND INTERNATIONAL BOUNDARIES 31 (1973).

[19]The order of priority for which the water will be used includes: 1. Domestic and municipal uses; 2. Agriculture and stock raising; 3. Electric power; 4. Other industrial uses; 5. Navigation; 6. Fishing and hunting; 7. Any other beneficial uses determined by the Commission (International Boundary and Water Commission).

Because of the minimum delivery of water delivered to Mexico and the maximum use for irrigation, only the first two uses have ever materialized. *Id.* at 32.

represents a violation of the treaty by the United States.[20] Others have argued that the issue of water quality is "so fundamental that its omission renders the treaty meaningless and thus void."[21]

Whether an international tribunal would vitiate the treaty for failure to include a fundamental item such as the quality of the water would depend on its interpretation of the history of discussion that led to the treaty. In this regard, it seems Mexico could find little support for its argument that it was "understood that the water must be of good quality."[22] Strong evidence exists for the proposition that Mexico knew it had no guarantee of receiving quality water. In addition to Assistant Secretary of State Acheson's assertion noted earlier, Royce Tipton, engineer and advisor to the American negotiators, asserts that under the treaty Mexico could be obligated to accept unusable water,[23] and further that Mexico understood "very thoroughly what the language of the treaty means."[24] This is buttressed by Charles Timm, also an American advisor on the treaty, that the treaty said nothing about water quality and Mexico knew it.[25] Clearly, it seems that an arbitrator would have difficulty in finding support for Mexico's claim to an "understanding" in the history of the negotiations.[26]

The question which follows naturally on this is why Mexico allowed itself to be a party to such a seemingly unfavorable treaty. A number of answers have been suggested. Some suggest quite logically that there was no concern at the time about water quality. In 1944, no large irrigation projects of the Welton-Mohawk type were in existence. Thus it is conceivable that the negotiators never seriously considered the possibility of salinity rising to such a level as to make irrigation unproductive.[27]

Another source suggests that Mexico really had no choice but to sign because of the pressures of a serious drought which persisted throughout 1943.[28] The

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[20]*Id.*

[21]Note, *A History and Interpretation of the Water Treaty of 1944*, 12 NAT. RES. J. 607 (1972) (hereinafter cited as Note).

[22]Hundley, *supra* note 3, at 498.

[23]*Id.* at 496. Tipton has indicated, however, that the spirit but not the letter of the Treaty may have been violated by sending drainage water to Mexico. DIVIDING THE WATERS, *supra* note 5, at 176.

[24]Gantz, *United States Approaches to the Salinity Problem on the Colorado River*, 12 NAT. RES. J. 499 (1972) (hereinafter cited as Gantz).

[25]Hundley, *supra* note 3, at 497.

[26]In sharp contrast to the Mexican treaty is the 1909 Water Treaty between the United States and Canada. This treaty views the waters flowing between the two countries as a natural resource to be shared by both countries. It speaks specifically of water quality and says, "that the waters herein defined as boundary waters and waters flowing across the boundary shall not be polluted on either side to the injury of health or property of the other." Lester, *River Pollution in International Law*, 57 AM. J. INT.L. L. 838 (1963) (hereinafter cited as Lester). It is curious that a treaty signed 35 years later than the Canadian one should give no consideration to water quality.

[27]Sepulveda, *Mexican-American International Water Quality Problems: Prospects and Perspectives*, 12 NAT. RES. J. 488 (1972) (hereinafter cited as Sepulveda).

[28]Note, *supra* note 21, at 608.

severity of this natural pressure may have caused Mexico to believe that insistence on quality might jeopardize her chances of getting what she really needed—an assured quality of water on a regular basis. In addition, such factors as pressure from outside economic interests and an inadequacy of technical expertise and resources have been suggested as possible reasons for Mexico's apparent acquiescence.[29]

All of these suggested reasons probably explain Mexico's acceptance of the treaty. Probably the key reason Mexico did not insist on specific quality standards in the treaty was its unstated belief that customary international law would not allow the United States to fulfill its treaty obligation by sending unusable water to Mexico.

The possibility of Mexico taking its case to the International Court of Justice (ICJ) and winning was quite real at the time of the dispute. Under the Inter-American Arbitration Agreement of 1929 both sides agreed to submit to arbitration any disputes that arose between them. Although the United States could have invoked the Connally Amendment to its Reservation on the ICJ Statute[30] and thus escaped litigation of jurisdictional grounds, the adverse effects of such a move would have strongly militated against it.

Once submited to the jurisdiction of the ICJ it is likely that international legal principles and case law would have supported a recovery for Mexico. The pertinent legal principle can be stated as *sic utere tuo ut non alienum Laedas.*[31]

The key test seems to be one of reasonable use, though the lower riparian cannot expect water of the same quality as the upper riparian, he could expect water reasonably usable for the purpose intended.[32] In this case, water of several thousand ppm of salt could not be considered reasonably usable for irrigation. Two authorities, McDougal and Schlei, in writing of the damages caused by nuclear testing, confirm that reasonableness is the test to be employed by balancing the " 'utility of the conduct' causing damage and 'the garvity of the harm' to the injured party."[33]

The case law relevant to river pollution is scanty. It seems there has never been a case of international river pollution decided by a tribunal. Again, however, some analogous cases of damage to one country caused by activities in another can be cited. Perhaps the most pertinent is the well-known *Trail Smelter*

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[29]*Id.* at 610.

[30]The United States reservation to the Statute of the ICJ, as originally approved by the Senate Committee on Foreign Relations, had excluded disputes falling within our domestic jurisdiction. Under the Connally Amendment, the determination of whether a dispute came within this exclusive domain, was to be determined by the United States.

[31]Lester, *supra* note 26, at 830.

[32]*See generally* M. WHITEMAN, 3 DIGEST OF INTERNATIONAL LAW 924-25 (1964).

[33]McDougal and Schlei, *The Hydrogen Bomb Tests in Perspective: Lawful Measures for Security,* 64 YALE L. J. 648, 684 (1955).

decision.[34] This proceeding arose from the operation of a smelter in Canada whose sulfur dioxide fumes were allegedly harming farms in northern Washington state. The tribunal imposed an injunction on the Canadian plant and avoided indemnity to United States farmers saying in part:

> Under the principles of international law no state has the right to use or permit the use of its territory in such a manner as to cause injury by fumes in or to the territory of another or to the property or persons therein, when the case is of serious consequence and the injury is established by clear and convincing evidence.[35]

The principle which is clearly established in *Trail Smelter* is that countries can be liable for extra-territorial damages. It is reasonable to believe that the same principle could be relied on in a case charging damage from overly-saline water.

The only other international decision which would have been relevant to an arbitration between the United States and Mexico is the *Lake Lanoux* case between Spain and France. This case involved Spain's claim that her interests would be harmed by France's proposed diversion of the waters of the river Carol. The Court held that Spain had to show actual damage to the quality or quantity of the water she received before any action could be taken.[36] This principle would have proved no serious problem to Mexico because it has been generally conceded that she suffered damage estimated by some in the millions.[37]

United States case law would also support Mexico's claim. For example, the United States Supreme Court has held in regard to river pollution between two states:

> The contention . . . that . . . a state rightfully may divert and use, as she may choose, the waters flowing within her boundaries in this interstate stream, regardless of any prejudice that this may work to others having rights in the stream below her boundary cannot be maintained. The river throughout its course in both states is but a single stream wherein each state has an interest which should be respected by the other.[38]

Nor would Mexico have any difficulty in getting the Court to accept the United States decision. In *Trail Smelter* the Court stated that it could "follow by analogy in international cases" the precedents of United States law when there existed "no contrary rule of international law and no reason to reject such precedents based upon the United States Constitution."[39]

The writings of a number of publicists too would support Mexico's case. A few examples include H.R. Fornham who states:

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[34] 33 AM. J. INT'L. L. 183 (1939).
[35] 3 INT'L. ARB. AWARDS 1965 (1949).
[36] 53 AM. J. INT'L. 160 (1959).
[37] 69 DEP'T. STATE BULL. 388.
[38] 29 U.S. at 466.
[39] 3 INT'L. ARB. AWARDS 1964 (1964).

> A river which flows through the territory of several states or nations is their common property. . . . It is a great natural highway conferring, besides the facilities of navigation, certain incidental advantages, such as fishery and the right to use the water for power and irrigation. *Neither nation can do any act which will deprive the other of the benefit of those rights and advantages.*[40]

Another authority says:

> Most definitions of the general duty of a state not to pollute the waters of an international drainage basin flowing within its territory prohibit such pollution if it causes injury—usually substantial injury—to another state.[41]

The United States defense in the case probably would have rested on the so-called Harmon Doctrine which, simply put, says that because of territorial sovereignty recognized in international law the upper riparian is under no obligation to lower riparians for any adverse effects from water flowing across their common border. The doctrine was first asserted in 1895 by U.S. Attorney General Judson Harmon in response to Mexico's protest against diversion of the Rio Grande. Harmon stated:

> The case presented is a novel one. Whether the circumstances make it possible or proper to take action from considerations of comity is a question which does not pertain to this department; but that question should be decided as one of policy only, because, in my opinion, the rules, principles, and precedents of international law impose no liability or obligation upon the United States.[42]

That the ICJ would have been persuaded by this doctrine seems highly unlikely in face of the previously cited international law which supports the doctrines of reasonableness and avoidance of harm to lower riparian interests. The Harmon Doctrine would have been "a slender reed"[43] to lean upon and it can be reasonably concluded that no court would have found it to be a generally recognized principle of international law.[44]

In sum, it seems that the preponderant weight of international law would have been on the side of Mexico in any arbitration before an international tribunal. Mexico had a right to the reasonable use of water for irrigation from the Colorado. Mexico's farming interests had clearly been damaged by the unsuitable water delivered and even the Harmon Doctrine would not have

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[40]H. R. Fornham, *The Law of Water and Water Rights* (1904) in Berber, Rivers in INT'L. L. 22 (1959) (emphasis added).

[41]Gantz, *supra* note 24, at 506.

[42]21 OP. ATTY. GEN. 274, 283 (1895). Ironically, Canada has invoked the Harmon Doctrine against the U.S. in a dispute over the waters of the Columbia. Lester, *supra* note 26, at 831.

[43]Missouri v. Holland, 252 U.S. 416, 434, 435 (1920). This case, which involved a test of the constitutionality of the federal regulations of migratory birds, suggests an analogy to international river disputes. The United States Supreme Court found that the flight of wild birds was too transitory for any state to have an exclusive claim to them. Conceivably, the same could be said of the transitory nature of water in an international river.

[44]*See* Lester, *supra* note 26, at 847.

deterred a tribunal from finding in her favor. The evidence and law lead one to conclude (as did the Washington D.C. law firm retained by Mexico to represent her), that, "the United States would probably be held responsible under customary international law" for damages caused by the increase in the salinity of the Colorado River.[45]

But perhaps the strongest indication of the United States awareness of its liability under international law for damages caused by the salinity is that it never allowed the dispute to be arbitrated. Instead it took a number of practical steps to reduce the salinity and to resolve the dispute.

Attempts to Reduce Salinity

Since 1961 the United States has made a fair and consistent effort to find practical solutions to the salinity problem. The first temporary agreement was contained in Minute 218 of the International Boundary and Water Commission (IBWC), signed on March 22, 1965.[46] The agreement provides for the United States to build a 13-mile drainage channel from the Welton-Mohawk project to a point below the Morelos Dam where Mexico's diversion for irrigation takes place. It also provides for the release of 50,000 acre feet of fresh water from the Imperial Dam in Arizona to dilute the salinity more. To lessen the adverse effects of the pumping of ground water, the agreement provides for a selective pumping of wells in the Welton-Mohawk project to be coordinated with the levels of water delivered to Mexico.[47]

The agreement appears to have worked fairly well. The projects undertaken supplied Mexico with 325,000 acre feet of fresh water for diluting purposes from 1965 to 1971.[48] These efforts which cost the United States around $11 million[49] did lower the salinity from 1,375 ppm in 1965 to 1,245 ppm in 1971.[50] The minute, which ran for five years, was renewed in 1970 and 1971.

On July 14, 1972, Minute 241 of the IBWC was signed.[51] This agreement continued the drainage canal from Welton-Mohawk and provided for the supply of 118,000 acre feet of fresh water annually from Imperial Dam and from wells at Yuma Mesa. Through these efforts it was hoped that the salinity would be decreased by 100 ppm.[52]

Though the two agreements provided some transitory practical solutions to the salinity problem, they both specifically sought to prevent any altering of the

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[45]DIVIDING THE WATERS, *supra* note 5, at 847.
[46]IV. INT'L. LEGAL MATERIALS 545 (1965).
[47]For a brief discussion of Minute 218 *see* Friedkin, *The Colorado River: International Aspects*, 12 NAT. RES. J. 598 (1972) (hereinafter cited as Friedkin).
[48]Gantz, *supra* note 24, at 502.
[49]Friedkin, *supra* note 47, at 598.
[50]Gantz, *supra* note 24, at 502.
[51]Sepulveda, *supra* note 27, at 492.
[52]*Id. See also* Gantz, *supra* note 24, at 491.

legal position of the two parties. Thus none of the provisions of the 1944 treaty was interpreted and it was clearly established that the agreements were not "precedent, recognition or acceptance affecting the rights of either party."[53] The agreements were only a recognition of responsibility by the United States for the quality of the water delivered to Mexico.

One other significant agreement relates to the salinity question and that is the signing in June, 1972 of a pledge by President Nixon and President Echeverria of Mexico to find a permanent solution to the problem.[54] It was apparently as an outgrowth of this pledge that Minute 242 was signed.

The Significance of 242

Minute 242, in addition to being another practical solution to the salinity problem, can be cited as recognition of the principle that an upper riparian owes a duty to the lower riparian to insure the delivery of water that is of a quality that will not harm the lower riparian's interests and will allow the lower riparian to make a reasonable use of that water. Viewed in this manner, the latest agreement reiterates what has been manifested in U.S. policy since 1961—a recognition of Mexico's right to quality water. Though the 1944 treaty still continues as the basis for the United States' legal position, the series of agreements during the past few years have in effect modified that document. Thus it can be argued that the expectations created by the agreements have created new customary law to replace the unworkable law embodied in the treaty.

The latest agreement represents as well an example of the amicable relations that can be achieved between the United States and Mexico. In fact if the dispute had gone to the ICJ, one of the results could have been worsened relations between the two countries. In the words of Ambassador Brownell the latest agreement can be seen as:

> [a] milestone in the history of our relationships with the Latin American countries and is a very important, friendly and amicable settlement of a dispute that has been very irritating. . . .[55]

The latest agreement marks, therefore, a continuation of the new trend in United States-Mexican relations initiated by the Chamizal settlement, as well as another source of customary international law. However, it is by no means certain that all the problems of the Colorado River basin have been resolved. The radical new approach of a desalinization plant is still a relatively untried technique and must receive the approval of Congress before it can begin. Nor

[53]Gantz, *supra* note 24, at 491.
[54]69 DEP'T STATE BULL. 394.
[55]*Id.* at 392.

has the problem been confronted as to what approach to take to the growing demands on the waters of the Colorado. As demands grow for use in large metropolitan areas as well as for irrigation projects, the amount of quality water that can be delivered may be greatly lessened. As the salinity level rises, expanded desalinization projects may be needed. In addition the prospect of pollution from industrial wastes or pesticides has to be considered as cultivation and development of the basic area expands. Nor has the difficult question of compensation for Mexican farmers who have suffered losses from salinity been confronted. The clear possibility exists that future water problems may arise that could be just as irritating as the recent dispute over salinity.

With relations between the United States and Mexico at a favorable state, it would be a most opportune time for the convening of a conference to conclude a new treaty dealing with proposals to solve future river basin problems. Such a conference would be a recognition of the need for an imaginative approach to common problems, and also for an integrated river basin approach.

It has been shown that early United States policy toward the river basin was pervaded by the doctrine of territorial sovereignty; the United States felt it was under no obligation to be concerned with Mexico's interests. But recent years and several joint agreements have been witness to an evolution away from that policy and toward the more cooperative spirit of Minute 242. With the embodiment of an integrated river basin approach in a new treaty, a potentially dynamic and beneficial policy could occur.

This new approach, simply stated, would be a recognition that their common resources and common problems require a common approach by the two countries. This concept provides no rigid formula for solving such problems but rather creates an atmosphere, setting a tone for dealing with all problems. Since future litigation over river disputes can only be a cause for damaged relations, an approach that would cut across political boundaries could dissolve potential disputes before they reach the courts.

Support for such an approach has been registered by a number of organizations and individuals. For example, at a 1958 meeting of the International Law Association it was stated: "A system of rivers and lakes in a drainage basin should be treated as an integrated whole (and not piecemeal)."[56] In addition, many publicists have asserted that salinity problems can best be resolved on a regional level,[57] and that an integrated river basin approach is the best way to render the greatest possible service to the whole human community which it serves.[58]

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[56]Shapiro-Libai, *Development of International River Basins: Regulation of Riparian Competition*, 45 IND. L.J. 32 (1969-70) (hereinafter cited as Shapiro-Libai).

[57]Gindler and Halburt, *supra* note 9, at 342.

[58]Shapiro-Libai, *supra* note 56, at 32.

The suggested approach would require a regional agency which in this case already exists in the form of the IBWC. This joint United States-Mexican agency has functioned well in the past in solving many of the border problems. This agency could conceivably be expanded to deal with problems affecting the Colorado River basin, or a new agency could be created. Such an agency could begin drawing up comprehensive plans to meet future needs and to head off future crises. By a mutual exchange of data and technical expertise the precious natural resources on both sides of the border could better be conserved and utilized. Funding of research and planning activities could be shared mutually by the federal governments as well as by the states. One of the first orders of business of such an agency should be to seek a means of compensating farmers whose crops have been damaged from no fault of their own, but merely from the use of water which they had a right to receive in a usable state.

That an integrated river basin approach would go a long way toward preventing future disputes similar to the salinity problem appears evident. With the economies growing steadily each year along both sides of the border, it is time to recognize that the border area is a peculiar area requiring a special approach. The adoption of a new treaty encompassing an integrated river basin approach would not only add an important new source to international law but would provide some workable solutions to the common problems of the Colorado River basin.