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The All-American Canal: Perspectives on the Possibility of Reaching a Bilateral Agreement

Stephen P. Mumme and Donna Lybecker

INTRODUCTION

Mexico's dispute with the United States over the water that seeps from the unlined All-American Canal (AAC) is one of the most intractable problems in U.S.-Mexican relations. This chapter draws on several analytical perspectives—those of international law, common-pool resource theory, and game theory—to identify possibilities for settling the dispute. Recent development of international law appears to reinforce Mexico's position that the canal lining project is an international issue that may be subject to litigation. Moreover, all three of these analytical perspectives, when applied to the AAC lining dispute, suggest the possibility of resolving the problem through issue linkage and tradeoffs that offer mutual benefits to both countries and reduce the zero-sum, loser pays effects on Mexico. Recent institutional developments at the bilateral level provide new opportunities for crafting a cooperative solution through issue linkage. Recent U.S. unilateral measures, however, limit certain trade-off options. Mexico may need to pursue dispute resolution at the international level to persuade the United States to negotiate the dispute.

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BACKGROUND

In the past 25 years, few transboundary water disputes along the U.S.-Mexican border have proven as intractable as the one involving the groundwater associated with the AAC. This partly earthen canal, which parallels the border with Mexico and tracks within a handful of miles of the international boundary for more than half of its 82-mile reach west of the Colorado River, is the sole fresh-water source for the Imperial Irrigation District (IID) and a partial source for Mexico's rich Mexicali Valley agricultural zone. As such it is a principal marker for the region and a potent symbol of the wealth and prosperity of one of the richest agricultural zones in the continental United States.

When it became fully operational in 1942, the AAC's proximity to the border resulted in steady percolation of water into the sandy substratum, which after time passed to Mexico via the underlying gradient (Waller 1992). This groundwater source replenished existing subterranean water stocks near the border on the Mexican side and became an important water source for the Mexicali Valley as well water was exploited by electrical pumps.¹ The importance of this unintended water source for the Mexicali Valley became apparent in the decade-long Salinity Crisis that erupted in 1961, causing Mexico to turn more heavily to groundwater as an alternative source of fresh water (Mumme 1988). When the Salinity Crisis was settled in 1973, the instrument of settlement, the International Boundary and Water Commission's (IBWC) Minute 242 (IBWC 1973), committed both countries to a diplomatic procedure of limiting withdrawals in the nearby San Luis agricultural zone and reporting any changes in the extraction of transboundary groundwater resources along the entire border with a prospect of eventually reaching a border-wide arrangement for resolving future groundwater disputes.

The settlement of the Salinity Crisis, however, drew U.S. attention to the potential for recapturing this resource. By 1980, competition for Colorado River water supplies in Southern California and pressure for water conservation in the large IID and nearby Coachella Irrigation District led to specific proposals for lining the AAC and its siphon, the Coachella Canal (Waller 1992). These proposals naturally alarmed Mexico, which believed it had established a

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beneficial use of these unclaimed waters and sought to negotiate the question (Waller 1992; Hayes 1991). The United States, dominated by powerful upstream interests, disagreed and proceeded unilaterally through the U.S. Department of the Interior's Bureau of Reclamation (BOR) to advance options for reclaiming lost AAC and Coachella Canal water. In 1988, Congress authorized the U.S. Secretary of the Interior to proceed with the lining project for both canals (Waller 1992). In 1994, a final Environmental Impact Statement, as required under terms of the U.S. National Environmental Policy Act, recommended that the United States construct a 23-mile, concrete-lined canal parallel to the AAC that would reclaim a total of 67,700 acre-feet (AF) of water annually (BOR 1995). This Environmental Impact Statement was reviewed in 1998 and 2002 and determined to have met all legal requirements (Dibble 2005).

Shortly after the initial 1988 decision to line the AAC, Mexico informally lodged a protest with the United States through the Comisión Internacional de Límites y Aguas (CILA), its section of IBWC, alleging potential injury to existing uses in the Mexicali Valley and pointing to the U.S. obligation arising from Minute 242 to consult with Mexico on any changes affecting groundwater use along the international boundary (Rohter 1989). Mexico's case centers on the issue of so-called acquired rights. The United States, in turn, denied any intent to alter the groundwater regime, claiming AAC seepage water was, in fact, previously allocated to the United States and its status remained unaffected by any conservation measures the United States should take (Rohter 1989).

These issues remain today. The U.S. government, despite protests in Mexico, has shown no intention of revising its decision to line the AAC. The United States and Mexico are at a diplomatic impasse on how to deal with the Mexican impacts while the AAC project itself has been delayed by funding issues involving the U.S. federal and California state governments. In the meantime, however, pressures on California's water supply and developments in the Colorado River basin have increased the stakes of any resolution at both the international and domestic levels. These developments are various but a short list would include the full operation of the Central Arizona Project, the 1998 San Diego-Imperial Irrigation District

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water conservation and transfer agreement, the 1999 Southern California Water Quantification Agreement, the 2000 California Colorado River Water Use Plan, and BOR's 1999 Interim Surplus Criteria Plan for the Colorado River.² Additionally, some water from the lining of the canal would go to the San Luis Rey Reservation for settlement of a decades-old legal fight (Dibble 2005). In Mexico, the privatization and transfer of water rights, the search for additional water supplies for Mexicali, and planning for a new Colorado-Tijuana aqueduct influence thinking on the use of Colorado River water supplies and the need to conserve existing sources. At the binational level, non-traditional water use concerns have arisen most intensely with respect to the Colorado River delta-estuary, attracting international environmental interest.

In 2002, the California Department of Water Resources and IID signed an agreement that provided \$126 million to construct and line the 23-mile AAC replacement canal and set a completion date of 2006 (Department of Water Resources 2002). Owing to delays the project is now scheduled to begin by spring 2006 and be completed by December 2008 (Dibble 2005). At the international level, the United States and Mexico have formed a working team at IBWC to consider international aspects but with no deviation from original legal arguments on the merits of the situation. On the U.S. side, the official view is reflected in the Colorado River Water Use Plan, which acknowledges no obligation to Mexico but as a matter of "good will" encourages Mexico to consider conveying a part of its 1944 Water Treaty allotment to the Mexicali Valley through the newly lined AAC, thereby providing "a water quality benefit to Mexico" (Colorado River Board of California 2000). Mexico, through CILA, continues to object to unilateral measures in the matter of the lining project and has pressed the United States to continue discussing the impacts, technical aspects, and related water matters such as the management of Colorado River exceedances (flood waters and surge flows) that might figure into a compensatory and cooperative solution to the problem.³

While the two countries have thus far maintained an amicable posture toward each other in this dispute, the progress of events is undoubtedly prejudicial to Mexico, making this issue one of the most intractable problems in border groundwater management. To

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shed greater light on the options for resolving the dispute, this chapter proceeds by examining the case from three scholarly perspectives that may suggest areas of tractability that could be used in the search for a cooperative binational solution. The article begins by reviewing arguments in international prescriptive law that bear on the case. It then considers the problem from the perspective of common pool resource theory to better understand the structural elements of the case that may be conducive to a settlement. These structural arguments are followed with a look at the case from the perspective negotiating theory to identify certain options and leverage points that may improve the prospects for a cooperative solution. The conclusion summarizes the main findings from each of these perspectives and suggests which may be most promising as negotiators search for an accommodation in this case.

INTERNATIONAL LAW AND THE ALL-AMERICAN CANAL LINING DISPUTE

One opportunity for a cooperative solution to the AAC lining dispute is found in international prescriptive law. Recent developments in international law have sought to extend principles of international law to the problem of transboundary groundwater management. Of course, in this instance, part of the dispute lies in whether or not AAC seepage water constitutes “groundwater” as such or remains a part of the surface water regime. Even so, since one of the disputing parties, Mexico, argues seepage should be treated as groundwater, it is worth considering the problem as if this were so. Moreover, as some prominent international legal scholars argue, more general rules also apply whether or not the seepage is considered groundwater.

An important set of arguments is presented by professor Albert E. Utton, who, until his death, was the editor of *Natural Resources Journal* and a keen student of international legal applications to transboundary resource disputes. In 1991, Utton specifically addressed the AAC problem, noting that several principles of international and domestic law should apply to any resolution of the dispute. He first noted that the principle of limited territorial sovereignty clearly applied to the 1944 Water Treaty that governs

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surface water allocation on the Colorado River (Utton 1991). The principle of limited territorial sovereignty, in turn, was fundamental to the rule of equitable apportionment adopted by the International Law Association (ILA) at Helsinki in 1966 and incorporated in solutions to many international disputes over the use of surface waters among co-riparians.

While the Helsinki rules do not formally address groundwater apportionment, as Utton observes, they do have limited application to groundwater (Utton 1991). In 1986, the ILA adopted a rule that incorporated aquifers that “receive water from surface waters of an international basin” as part of the larger river basin in question (Utton 1991). By this provision the Helsinki rules are extended to groundwater basins of the type found in the AAC situation. More recently, the United Nations’ International Law Commission (ILC) reinforced this position in its International Convention on the Law of the Non-Navigational Uses of International Watercourses, a document completed and made available for signature in 1997.⁴ In this case the ILC defined an international watercourse as “a system of surface waters and groundwaters constituting by virtue of their physical relationship a unitary whole and normally flowing into a common terminus” (McCaffrey 1996). The Convention’s General Principles embrace the doctrine of equitable and reasonable apportionment found in the Helsinki rules, and also embraces the principle that nations must avoid “significant harm” in arriving at equitable solutions to international watercourse disputes. Legal theorist Stephen McCaffrey (1996) argues that in balancing the principles of equitable utilization and doing no significant harm, the convention favors a process based on inter-state discussion of all the factors involved that allow flexibility in the resolution of disputes.

These international legal principles, as articulated both by legal professionals and governments, would not apply directly to the AAC case unless the dispute advanced to an international dispute resolution forum like the International Court of Justice at the Hague (World Court) or arbitration under the Inter-American Arbitration Treaty (Hayes 1991). Even so, in the absence of a bilateral agreement clearly sustaining a U.S. right to AAC seepage, they provide general legitimation for treating the AAC dispute as an interna-

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tional, and not strictly domestic, problem and establish the basic principles that apply to any attempt to resolve the controversy at the international level.

As Utton (1991) comments, the directly applicable international law in the AAC case is the bilateral 1944 Water Treaty,⁵ which is silent on the question of groundwater while allocating 1.5 million acre-feet of the Colorado River's surface water to Mexico. The treaty provides that "Mexico shall acquire no right beyond" this specified amount of surface water.⁶ While this language seems definitive, the fact that treaty negotiators were cognizant that groundwater in Baja California was hydrologically connected to the Colorado River but silent as to the potential effects of Mexican use of those groundwaters on the hydrological system constitutes a major ambiguity that the treaty does not resolve in a mutually satisfactory manner (Utton 1991). Indeed, the treaty could be read as "requiring maintenance of the underground flow that existed at the time the treaty was made" (Kishel 1993). This being so, Utton argues, the international doctrine of prescription may apply. Under the rule of prescription, conferral of title of ownership may apply to the case of protracted possession and use of the resource where no original title or proprietary right can be found, or the original possession was wrongful, or the legitimate proprietor failed to assert his right (Utton 1991). Underscoring the U.S. potential liability should it curtail AAC seepage flows to Mexico is IBWC's Minute 242 (IBWC 1973), a protocol to the 1944 treaty that provides that the United States and Mexico "consult with each other prior to undertaking any development of either the surface or groundwater resources, or substantial modifications of present developments, in its own territory in the border area that might adversely affect the other country." While this provision requires only consultation, not consent (Hayes 1991), it has the further effect of linking groundwater to the 1944 treaty, thereby reinforcing the international aspect of the problem.

International law, then, provides a substantial basis for treating the AAC lining project as a legitimate international dispute to which international legal principles should apply. If the AAC dispute can be legitimately treated as an international dispute, and not simply as a domestic matter, as U.S. interests frequently assert, then Mexico may have recourse to international and multilateral dispute

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resolution mechanisms should the United States proceed with its plan to line the canal. Raising the dispute from the bilateral to the international level has risks for both parties that should create incentives favoring negotiation rather than confrontation.

COMMON POOL RESOURCE THEORY AND THE ALL-AMERICAN CANAL LINING DISPUTE

Yet another perspective on avenues for a cooperative solution of the AAC lining dispute may be drawn from the writing of common pool resource theorists. Common pool resources (CPR) theory aims to establish the institutional conditions that favor either cooperative or conflictive solutions to CPR-based disputes. One of the principal exponents of this school of thought, Elinor Ostrom (1990), identifies four factors conducive to cooperative solutions in CPR disputes:

- The resources are not depleted beyond recovery
- Resource conditions can be reliably determined
- The resource is sufficiently predicible
- Resource distribution is localized such that it can be evaluated and regulated

For the AAC, most of these conditions apply. However, the existence of different appropriation rules at the national and subnational levels, based on notions of divisibility and subtractability, complicate arrival at common management approaches. Binationally, the asymmetrical control of surface and groundwater resources in the Colorado River basin adds a strong disincentive to cooperation. National variations in appropriation rules constitute what Ostrom and others call a “constitutional” problem (Ostrom 1990; Burger and Gochfeld 1998), where different rules create different sets of expectations and engender uncertainty as to the application of the rules on either side of the border. This, in turn, adds an incentive to deplete the resource. The problem of constitutional uncertainty is amplified by national asymmetry of control that allows one community of users to deny others access to the resource.

CPR theorists argue that certain variables work as incentives to promote cooperation in settling common-pool disputes. These variables include, according to Burger and Gochfeld (1998):

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- Embracing the opportunity for incremental change
- Developing a common frame of reference for the design of rules and regulations at the constitutional and collective action levels
- Increasing the quality and accessibility of information for the community of users, publicizing the mutual benefits and harms arising from current or status-quo rules and practices, as opposed to proposed rules and practices

To some degree, progress has been made along the border in meeting these conditions, particularly in the areas of developing better technical knowledge of groundwater basins and improved access to that information. The two countries remain far apart, however, in their construction of harms and benefits regarding the use of transboundary groundwater basins and in developing a common frame of reference on the rules and regulations that should apply to the use of the resource.

Viewed from the CPR perspective, the AAC lining dispute does not appear very amenable to solution. The quality of information available to the parties remains unequal because the two countries have been fairly reluctant to share the basic hydrographic information bearing on the dispute. The two nations also differ on the costs and benefits of the lining itself. Groundwater management practices differ substantially across the border, providing little basis for cooperation arising from a sense of mutual norms. And the unilateral character of the U.S. decision to recapture seepage from the AAC takes the form of a non-incremental, abrupt alteration of the status quo that is conflictive and not conducive to building bilateral commitments.

Even so, CPR theory does point to certain actions that could improve the prospects for a cooperative solution in the AAC lining dispute. First, CPR certainly lends support to the need to build a common and mutually acceptable database on the transboundary impacts of the lining project and related technical aspects of water use in the region that may be relevant in fashioning solutions to the dispute. Second, CPR suggests that efforts to publicize the adverse effects of the project while simultaneously advancing mutually beneficial options for resolving the dispute would help in reframing

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public perceptions of the problem. Third, CPR lends support to the value and importance of strengthening international legal norms applicable to the case, which occurred with the United Nations Convention on Non-Navigational Uses of International Watercourses. In this aspect, CPR points the way to the types of initiatives most likely to steer the conflicting parties toward a mutually acceptable settlement, if one is to be found.

GAME THEORY APPLICATIONS TO THE AAC LINING DISPUTE

Additional insights on the prospects for resolving the AAC dispute in a cooperative fashion have been drawn from game theory. In a very useful article, Frisvold and Caswell (2000) argue that the AAC lining dispute, as it presently stands, can be modeled as a two-player non-cooperative/prisoner's dilemma game with unidirectional externalities. As they observe, victim-pays regimes should be regarded as unsatisfactory on several grounds, including the fact that income-poor downstream parties may be unable to offer side payments to prevent upstream parties "from polluting or diverting transboundary waters" (Frisvold and Caswell 2000). In the AAC case, Mexico is victimized by U.S. unilateral actions upstream.

One option available to downstream parties seeking to avoid side payments or avoid suffering the alternative of accepting negative externalities is issue linkage. In the language of game theory, issue linkage is expressed as an interconnected game or two-level game in which outcomes at one level are contingent upon outcomes at another. As Frisvold and Caswell (2000) put it, "this allows for equilibrium solutions not attainable in isolated games that may yield higher joint payoffs." They note that the logic of this type of game structure suggests the utility of linking negotiations on the canal lining project to other water-related concerns of binational interest. Water transfers, water conservation, pollution control and mitigation, and eco-system protection would all fit into this category. Linkage may also be made to other issues of binational import, though this might introduce greater risks in the incentive structure for binational negotiations.

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In the AAC lining case, a wide range of linkage options certainly present themselves. Kishel (1993) lists the transfer of fresh water produced from the Yuma Desalination Plant by pipeline to Mexicali, groundwater banking, U.S. assistance with water conservation in the Mexicali Valley, effluent exchange opportunities, and the environmental benefits to the United States to be derived from any of the above, as potential negotiating points (Kishel 1993). To this could be added improved water conveyance through the newly lined canal, assistance with the proposed Mexicali-Tijuana-San Diego aqueduct, transfers (including effluents) to the Colorado River delta ecosystem, links to potential benefits in settling U.S. tribal nation water rights claims, endangered species claims, and other claims related to U.S. and California administrative solutions to meet California's federally mandated water conservation targets by 2015.

In sum, game theorists point in the direction of a negotiated solution to the AAC based on a strategy of issue linkage. When combined with the advice from CPR theory and international legal scholars a clear preference can be seen for efforts at steady institution building (CPR theory), negotiated solutions (CPR and game theory) and, failing that, for international litigation or arbitration (international law). The next section offers suggestions toward a practical course of action consistent with these perspectives on the dispute.

TOWARD A NEGOTIATED SOLUTION TO THE ALL-AMERICAN CANAL LINING PROJECT

While the specific features of the AAC lining dispute are certainly not optimal for conflict resolution, all three perspectives outlined above point to some aspects that could be used in a cooperative solution. From an international law perspective, there is sufficient ambiguity at the level of interpreting the 1944 Water Treaty and Minute 242 to argue that Mexico does have a basis for raising the issue to the level of international dispute settlement mechanisms should the United States persist in implementing a unilateral outcome. This is true regardless of whether the water is treated as surface or groundwater—and it bears mentioning that some agreement on the area's transboundary groundwater is necessary regardless of

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the specific problem of seepage influx from the AAC. But a legal solution, much like the unilateral outcome itself, amounts to a zero-sum, loser pays, sub-optimal solution that entails high risks for both parties. While in a narrow technical sense justice might be done by litigating the dispute, a litigated outcome is hardly the best mechanism for advancing binational cooperation or achieving a management outcome consistent with the emerging norms of sustainable development of the region's water resources.

The three perspectives also point to opportunities for achieving a negotiated solution. All three perspectives, for instance, point to the importance of linking related issues in ways that generate benefits for both countries. And all three encourage the provision of better information and transparency in negotiating any solution.

Short of a litigated outcome, then, a number of options exist for linking related water management issues that can contribute to the sustainable development of water resources in the region. In point of fact, two of these options have been proposed by representatives of the IBWC's national sections. Within the context of Minute 242, the IBWC's national sections have informally agreed, for instance, to study the potential technical and ecological impacts of groundwater reduction related to AAC lining and to consider any cooperative measures that could be taken to mitigate adverse effects.⁷ IBWC has also offered to allow some delivery of Mexican treaty water through the lined canal (Colorado River Board of California 2000). While these measures are not sufficient to meet Mexico's demands and expectations for a cooperative solution to the dispute, they should be treated as a useful expression of international comity that effectively recognize the issue as a critical point of binational concern and try to address that concern.

Moving beyond these limited measures most likely requires some linkage among related issues of binational concern. Following Kishel's (1993) lead and updating his argument for a constructive regional water planning approach to settling the AAC dispute, several options certainly appear to have merit in developing a linked strategy of tradeoffs or compensation in a negotiated solution to the dispute. One such option links a compromise on AAC seepage water to a proposed binational aqueduct linking the Colorado River to Tijuana-Ensenada and San Diego on the Pacific Coast. The two

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countries are seriously concerned with achieving greater capacity in delivering Colorado River water to these areas (IBWC 2000b). In 1999 IBWC concluded Minute 301, aimed at developing strategies for constructing such an aqueduct (IBWC 1999). One of the leading alternatives calls for building a parallel line to the existing Mexicali-Tijuana aqueduct and transferring San Diego water through that conveyance (San Diego Dialogue 2001). Such a plan would significantly reduce engineering and construction costs to the United States. Mexico's cooperation could be linked to U.S. proposals to replace all or part of the 67,000 AF of lost seepage to Mexico, or to some form of monetary compensation in support of Mexican infrastructure development in various forms, including increasing conservation in irrigated agriculture or subsidizing aqueduct construction costs.

Tradeoffs aimed at achieving a sustainable solution to the water requirements of the Colorado River Delta are also an opportunity for a cooperative solution. Upstream conservation measures in the United States, particularly BOR's Interim Surplus Criteria master plan for cushioning California's transition to a reduced volume of Colorado River water over a period of 15 years, will diminish so-called pulse flows, possibly one of the few sources of water sustaining the delta's ecosystem (Culp 2000). The delta's plight has aroused the concerns of international environmental groups who fear the potential loss of wildlife habitat and adverse effects on aquatic species in the upper Gulf of California.⁸ This mobilization of environmental concern has, in turn, led to a search for alternate water sources that might compensate for reduced Colorado River flows to the delta (Pitt, et al. 2000). Environmentalists on both sides of the border say that without compensation, lining the canal threatens wetlands and important border habitat (Dibble 2005).

The problem of delta conservation is linked to the general hydrology of the lower Colorado River, including groundwater flows in the region. This fact provides a practical trace to the AAC seepage dispute. The two countries agreed in December 2000 to a framework agreement for the study of delta conservation options (IBWC 2000b), placing the issue within the broader language of sustainable development. Current options under consideration include mixing agricultural wastewater with treated wastewater as a means of

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replenishing pulse flows, conserving Mexicali Valley agricultural water and transferring savings to the delta, purchasing and retiring water rights in Mexico or the United States and dedicating these to delta conservation, or some combination of these (Pitt, et al. 2000). In the case of the delta, what is certain is that monetary compensation alone is incompatible with a solution; some additional water is necessary to replace pulse flows and save the ecosystem. This, in turn, suggests the possibility of trading reclaimed seepage water for monetary or other compensation and using the water either directly or indirectly (through a system of water trades and transfers in the Mexicali Valley) to augment delta water stocks (Pitt, et al. 2000). Such a solution has the advantage of directly connecting the use of AAC seepage water to a recognized binational objective of substantial benefit to both countries.

Another option is found in current Mexican proposals to develop desalination facilities to augment area water supplies. As Kishel (1993) argued more than a decade ago, reclamation of water through desalinization remains an option for dealing with water shortages in the region (Kishel 1993). However, piping water to Mexicali from the long delayed Yuma Desalinization Plant, as Kishel (1993) suggested, is now a less-viable option. The plant became operational in 1992 but after a year was shut down due to cost (Clinton, et al. 2001). BOR has recently indicated it may resume operations, but if resumed, any processed water discharged to Mexico will count against its treaty quota to free up additional water for U.S. clients (Pitt, et al. 2000). In the context of the new Interim Surplus Criteria management plans, changing these practices would be quite controversial. However, the fact that Mexico's Comisión Nacional del Agua (in English National Water Commission) is now beginning to look at long-term desalinization solutions for Baja California's urban centers suggests a possible solution whereby the United States helps finance Mexican desalinization through the North American Development Bank (NADBank), the Interamerican Development Bank, or World Bank, with the clear understanding that such financing is in compensation for Mexico's lost seepage water and that in some fashion the enhanced water supply would be linked to the binational effort to restore the delta ecosystem. The authoriza-

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tion of NADBank to lend to border projects with a clear environmental component makes this a serious option in dealing with the seepage problem (NADBank 2000).

Yet another option is relying on market mechanisms to deal with water availability problems. Water markets and water banking have been suggested as options for augmenting delta water supplies and are bearing serious examination by major environmental organizations involved in delta conservation efforts (Pitt, et al. 2000). A market solution to the AAC dispute would probably entail purchasing a volume of water equal to or in some proportion to the volume of reclaimed seepage water and making that available to Mexico or, conversely, simply compensating Mexico directly with a cash settlement for the AAC water withheld by the United States. Both these alternatives are highly controversial as stand-alone policies. They take the form of zero-sum solutions (only one party gets water) that are likely to raise both substantive and symbolic objections in Mexico and the United States. At the very least, any market-based solution would need to be linked to other offsetting benefits to make the deal more attractive to one or both parties.

Banking surplus flows of Colorado River water as groundwater, as Kishel (1993) suggested, has been built into BOR's Interim Surplus Criteria Plan but in a manner adverse to Mexico and the delta rather than one conducive to the settlement of the AAC dispute—the storage is upstream in the United States rather than in Mexico (Colorado River Board of California 2000). Thus, the solution he envisioned seems less viable today. Even so, particularly where wastewater reclamation is concerned, there may be some options for banking reclaimed water in a manner that permits greater flexibility in extraction and use in the region. The potential sources of reclaimed wastewater in the region are various and include agricultural sources, urban sewage and drainage in both countries' border cities, and as Kishel (1993) observed, possibly even sources as distant as Riverside, California, and the Los Angeles metropolitan area should the financing become available to support the necessary infrastructure.

Other linkage options certainly exist and could be explored. As Frisvold and Caswell (2000) argue, the Border XXI and Border 2012 Programs that operates under the authority of the 1983 La Paz

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Agreement provides an institutional framework for exploring a range of mutual interests involving water-related and other environmental concerns that could be used to identify and prioritize potential policy links that are advantageous for both countries and contribute to border sustainable development objectives. The same can be said for the Border Environment Cooperation Commission and NADBank, whose mandates have recently broadened beyond water infrastructure projects to embrace environmental protection and natural resources conservation (NADBank 2000). It is certainly true that the maturation of these border institutions has strengthened the institutional bases of mutual understanding and communication that common pool resource theorists deem essential to achieving negotiated solutions to problems like the AAC lining dispute.

CONCLUSION

A number of linked solutions are available for consideration should the two countries choose to seek a cooperative solution to the AAC lining dispute. As others have argued, it makes sense to look at this dispute through the lens of greater economic integration and mutual cooperation rather than through the narrow slit of issue-specific, zero-sum, loser-pays outcomes. Unfortunately, bilateral discussion of the AAC lining dispute has thus far framed the issue in zero-sum terms, if only by default. Apart from the limited commitments made at the level of IBWC, there is little evidence of a willingness in the United States to consider Mexico's concerns. Even the Environmental Impact Statement on the canal lining project, completed in 1994, did little to incorporate Mexico's concerns in its final recommendations, proceeding on the assumption the legal and international issues were essentially settled (Jones, et al. 1997). They are not. Both California and BOR have proceeded unilaterally to take measures that have the effect of foreclosing certain options for settling the dispute and this, in turn, strengthens the prospect of a victim-pays outcome to the controversy.

As construction nears on the canal lining project, now slated for completion in 2008, it appears increasingly necessary that Mexico take its case to the World Court to receive a fair hearing on the issue. Where other mechanisms fail, litigation remains a reasonable

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option in the quest for an equitable resolution to the problem. It bears noting that part of the difficulty in pressing for a negotiated solution is the culture of water ownership in the United States, where water rights are a critical part of the private property regime and jealously defended, with disputes over allocation typically resolved in court. Nowhere is this more true than in the Colorado River basin where over-allocation of water supplies, rapid urbanization, and the emergence of non-traditional claims on water supplies ranging from the quantification of Native American water rights to environmental conservation have led to all-out competition for the basin's water. As others have argued, international water disputes in which the predominant or upstream party is accustomed to litigating its domestic disputes over water allocation and also has the capability of unilaterally withholding the resource from the disputing party, are the very cases that are most likely to result in international litigation.

In the AAC lining dispute, should Mexico elect to press for international dispute resolution, there is some question as to whether the United States could exempt itself from the World Court's jurisdiction under the Connolly Amendment. The Connolly rule allows the United States to exclude itself from the court's compulsory jurisdiction in those cases of "disputes with regard to matters which are essentially within the domestic jurisdiction of the United States of America as determined by the United States of America" (Von Glahn 1992). Even if the court could claim compulsory jurisdiction, Mexico would run the risk of vacating its claim to seepage water should the court find in favor of U.S. arguments. However, the heightened risk to both parties of losing important values in a litigated outcome might persuade the party resisting negotiation to seek a negotiated settlement. In the absence of alternatives, a strategy of using litigation to force the United States to the bargaining table may be Mexico's only option, though Mexico, as it did in the 1960's in the Salinity Crisis,⁹ will need to weigh the risk of confrontation against its broader bilateral objectives. Against this gloomy prospect, the good news is that many linkage options exist that could be explored in the search for a negotiated solution and that recent institutional developments at the bilateral level should facilitate the search for mutually beneficial tradeoffs.

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ENDNOTES

¹ In fact, Colorado River water, originally conveyed to the Mexicali and Imperial valleys through Mexico's Alamo Canal, has seeped continuously into the Mexicali Valley. After the AAC came fully online in 1942, Mexico, by contract with IID, continued to receive its portion of Colorado River water through the Alamo Canal by means of an unlined diversion from the AAC. This practice continued until the 1950 completion of Morelos Dam, Mexico's diversion dam and the lowest dam on the Colorado River. After 1950, Mexico continued to receive a small part of its Colorado River water allotment through the AAC under agreement with the U.S. Bureau of Reclamation and IID. This fact, coupled with IID's long ownership and operation of the Alamo Canal after 1916, greatly complicates the question of assigning responsibility and ownership of the seepage. See, Ward (2003) and Enriquez-Coyro (1975).

² A discussion of these various developments may be found in Colorado River Board of California 2000.

³ This is according to an interview with Arturo Herrera Solís of CILA on May 30, 2001.

⁴ This can be found in volume 36 of *International Legal Materials*.

⁵ Officially called the *Treaty Respecting Utilitization of the Colorado and Tijuana Rivers and Rio Grande*, it was signed February 3, 1944 between the United States and Mexico.

⁶ This provision appears in Article 10, Section b.

⁷ This is also according to Arturo Herrera Solís.

⁸ For a list of major groups involved in delta restoration see Varady, et al. (2001).

⁹ Declassified State Department documents available in the U.S. National Archives show that State Department and Interior Department officials very much feared that Mexico would take its case to the World Court in 1969 and 1970. These reckonings indicate that under threat of litigation, the United States preferred to negotiate an outcome to the problem of salinity. See U.S. National Archives, Record Group 59, Subject-Numerical Files 1967-1969, Box 2347, Pol 33-1 Mexico-United States. It is worth noting that Mexico's threat to take the salinity problem to the World Court was taken very seriously as early as 1964. See Thomas C. Mann,

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Assistant Secretary of State, letter to Steward Udall, Secretary of the Interior, April 30, 1964. Washington, D.C.: Department of the Interior, Identification No. 2884. Classified Confidential. Stewart Udall Papers, Special Collections, Library, University of Arizona.

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