THE US-MEXICO INTERNATIONAL BOUNDARY AND WATER COMMISSION IN THE SUSTAINABLE DEVELOPMENT ERA

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INTRODUCTION

…the most venerable binational water management agency in North America…the first binational body to tackle border sanitation problems

Along the United States-Mexico border, few agencies provoke debate like the International Boundary and Water Commission (IBWC). With antecedents tracing to 1889, the IBWC, or Comision Internacional de Limites y Aguas (CILA), as it is known in Mexico, is the most venerable binational water management agency in North America, its authority embedded in the 1944 US-Mexican Water Treaty and earlier agreements (Convention Between ..., 1906; Treaty Regarding..., 1944). Tasked with implementing treaty-based territorial and water agreements the Commission was the first binational body to tackle border sanitation problems. As sustainable development has moved to the fore, however, border water stakeholders often see it as an institutional dinosaur, a stodgy brick and mortar agency, dominated by engineers, intractable, defensive; the agent of central government at a time of decentralised solutions to border area problems.

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There is little doubt that the IBWC is a unique, special purpose institution. Its formal duties reflect government priorities at the close of World War II, priorities centred on allocating and reclaiming international river waters, mitigating seasonal floods, and dealing with drought emergencies. Ancillary chores such as hydro-power generation were tacked on to its mission. As an afterthought responsibility for a few nagging binational sanitation problems were also tagged to it. The result was a bureaucratic hybrid, a diplomatic body dominated by engineers, officially the servant of the two foreign ministries, but politically dominated in the US by Congress, with a bipolar mandate consisting of treaty interpretation on the one hand, and operational responsibilities on the other: border maintenance, management of international dams, budgeting and accounting for uses of treaty water, operating several hydro-power facilities, and taking the lead in developing solutions to binational sanitation problems.

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These features shaped an agency, two coordinate agencies really, whose national sections deemed their front line mission the preservation of national water entitlements. With a mandate treaty dividing the waters of the Colorado and Rio Grande, rivers serving the most arid zones of both countries, the IBWC's specified functions are without doubt the most strongly embedded of any binational agency or joint mechanism in play on the US-Mexico border. Changing the mandate has proved beyond the means of any president on either side of the border, singly or in tandem.

It is, in fact, this IBWC feature that is so aggravating to so many environmentalists. The Commission, with its tangle of functions is simply there, an embedded feature of the diplomatic and operational landscape for water management that must be dealt with. It has a virtual monopoly on agreements dealing with transboundary water management – such agreements must be negotiated through the IBWC. Its lead role is acknowledged in every major binational agreement on border water management, the La Paz Agreement, the Border XXI Program, and the Border Environment Cooperation Commission (BECC). Furthermore, its joint agreements are technically exempt from domestic regulations in Mexico and the United States.

Since the North American Free Trade Agreement (NAFTA), however, the IBWC's role in managing border water is hemmed in by binational commitments and agencies whose functions overlap its own. A product, partly, of frustration with the IBWC's limitations and its failure to respond to the border's environmental concerns in the '70s and '80s, the new programs and agencies address a wide range of health and environmental problems many of which lie well beyond the Commission's treaty mandated functions. Now, with new presidents in both countries and a new US Commissioner designate, it is fair to ask what the Commission's role is likely to be, or should be, in the next decade and what reforms, if any, are feasible that would enable it to advance sustainable development in border water management.

WATER QUALITY: CAN THE MARRIAGE BE CONSUMATED?

The Commission's role in water quality, after NAFTA, might seem almost vestigial, eclipsed by the BECC and a mix of domestic and binational programs sponsored variously by one or both of the two governments. No other sphere of its mandate has been so influenced by the surge in environmental concern in the past decade and post-NAFTA institutional developments. The BECC-North American Development Bank (NABD) duo has overseen the proliferation of border water infrastructure projects, now more than 40 certified projects with plenty in the pipeline (Audley and Spalding, 1997; Kelly, Reed, and Taylor, 2001). Of these, the IBWC is now directly involved in planning, building, or managing less than a dozen. The Border XXI Program, led by the US Environmental Protection Agency (EPA) and Mexico's Secretaria de Medio Ambiente y Recursos Naturales (SEMARNAT), has focused attention on important technical and process issues like hydrological modelling and training that seem out of sync with the Commission's old brick and mortar image (USEPA, 1998).

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Such appearances can be deceptive. A more accurate reading on the Commission's place is that it has taken up a supporting role in domestic water infrastructure development while continuing to tackle the core problems attached to its treaty mandate. In water infrastructure, the Commission still leads in dealing with sanitation problems that impact the international boundary. It continues to operate and expand its older international wastewater treatment plants at Ambos Nogales and Tijuana-San Diego and has overseen the construction of new wastewater treatment facilities in Cd. Juarez and Nuevo Laredo (IBWC, 1999). It monitors the performance of domestic facilities at Douglas-Agua Prieta, Ambos Naco, and Mexicali where effluents cross the international boundary (IBWC, 1999). It is thus still very much involved in wastewater infrastructure development and operations along the border. It is also now more intensively engaged in monitoring the quality of water in the international streams and rivers. A cursory look at the Border XXI Program's Water Workgroup Activities in 1999 finds the Commission involved in 11 of 19 Workgroup activities ranging from hydrogeologic modelling of Santa Cruz river groundwater, to planning wastewater collection in Nuevo Laredo and Matamoros, to monitoring the South Bay Ocean Outfall's seawater impact near San Diego (USEPA, 1999).

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Much is new and different, however. In a trend preceding the NAFTA accords, the Commission is more engaged with other agencies in discharging these functions, a trend most apparent at its US Section. Whereas two decades past the USIBWC had near total ownership of its budget, functional expansion in this area is now contingent on inputs from a wide range of federal, state, even municipal partners.

With money comes power. For nearly two decades the IBWC's monopoly on planning such projects has been eroding. Through the 1983 La Paz Agreement's Water Working Group, embedded now in Border XXI, the IBWC has been drawn into inter-mestic discussions with a range of federal and state agencies in both countries engaged in border water issues (see, for instance, USEPA, 1998). While the Commission still has clout and usually takes the lead on matters purely international in scope, it strictly plays support where domestic developments are concerned. Through the Water Working Group the IBWC is involved in discussions that were nearly unthinkable 20 years back, ranging from the merits of river basin councils to low cost wastewater treatment alternatives.

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One need only look at the Commission's role in the BECC, where its two Commissioners serve as ex-officio members on BECC's Board of Directors. While something short of a symbiotic relationship, the arrangement has worked better than expected – many attribute this to the close working relationship and skill of recently departed US commissioner, John Bernal, and his Mexican counterpart, Arturo Herrera. Under a memorandum of understanding between the two agencies, the BECC draws on IBWC's technical expertise on a reimbursable basis (IBWC, 2000a). The IBWC, in turn, finds BECC a valuable forum for gauging public needs and demands in border water management. Where BECC – NAD Bank funding is involved, as seen, for example, with NADBank's Border Environmental Infrastructure Fund (BEIF), BECC's certification process is applied to IBWC managed projects, enhancing their viability and public support. The IBWC, in Minute 304, has determined this arrangement to be treaty compatible, finding joint grant contributions for drinking water supply and wastewater infrastructure projects through the BEIF are '*complementary to the Commission's on-going efforts to give preferential attention to the solution of sanitation problems in the border waters'*(IBWC, 2000a).

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While initially resembling a shotgun wedding, this post-NAFTA institutional alliance is likely to endure. The institutional relationships and cooperative practices built up over the past seven years have produced a practical division of labour on water quality issues that, while less than optimal to some stakeholders, satisfies both the treaty requirements and the public's demand for water quality infrastructure. The BECC leads the way in border water infrastructure provision, while IBWC provides technical support and leads in situations with a specific transboundary water component.

THE NEW POLITICS OF WATER ALLOCATION: DROUGHT AND BIODIVERSITY

At its core, the IBWC's mandate has been about, to steal a phrase from the title of historian Norris Hundley's book, '*dividing the waters,*' or, as agricultural economist Henry Vaux likes to put it, '*securing endowments*' (Hundley, 1966; Vaux, 2000). It is difficult to find a border issue as controversial as this. Before the1944 Treaty ink dried, well before Bureau of Reclamation estimates of Colorado river runoff were shown to err, and decades before scientists fingered global warming's threat to regional water stocks, diplomats understood regional water supplies could not satisfy all potential water demands in the border area.

This preoccupation with endowments in a region of scarcity exerts a profound impact on the Commission's behaviour. Since 1944 virtually every binational water matter reaching its docket has been vetted for impact on national endowments. Endowment review underlies the Commission's notorious confidentiality and it figures prominently in the Commission's greatest challenges; the Colorado River salinity crisis in the '60s and '70s is a case in

point. Until the 1970s, in fact, the Commission's clientele in the US and Mexico was almost exclusively comprised of stakeholders – today's 'water buffaloes'– concerned with defending endowments.

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This, of course, has changed. Environmentalists, poverty advocates, 'smart growthers', and other constituencies for sustainable development are today influential stakeholders in the border water community. These groups want water used differently, envisioning more efficient uses of water resources, better water conservation, long-term forecasting and contingency planning, and reallocations favouring urban needs and non-traditional uses. They share a higher threshold of concern with water quality. And where transboundary water is concerned they expect the Commission to be on-board.

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New stakeholders' clout is seen in the IBWC's 1990s agenda where drought management, groundwater management, and ecological preservation figure prominently. The IBWC is handicapped here by a treaty that failed to anticipate much of this and underestimated the magnitude of problems it did foresee. Among its more glaring omissions are groundwater allocation, sharing the waters of lesser streams and rivers, and ecologically based water needs. The IBWC has reluctantly tackled this new agenda, mindful to anchor its activities in the treaty and sensitive to the risks of appearing to advocate changing the law of the rivers. Even so, there are signs of progress.

DROUGHT

Sustained drought in much of the border area in the 1990's has driven this issue to the forefront of the agency's concerns. While the treaty provides a formula for rationing Rio Grande and Colorado River water in times of drought it is deficient in many ways. Its failure to define the operative phrase '*extraordinary drought*' is a major weakness that, at minimum, politicises and delays the implementation of drought mitigation procedures (Utton, 1982). The treaty's application to tributary streams is debatable (Mumme, 1999). The IBWC has little discretion to initiate drought proceedings. And there is no provision for long-term structural adjustment to climate change (Glieck, 1988).

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Even so, some modest progress had been made. In 1995, in response to urgent conditions on the Mexican side of the Rio Grande, the IBWC, with the Texas governor's consent, negotiated Minute 293, an emergency water loan to Mexico to meet municipal needs (IBWC, 1995). Though its provisions are largely circumstantial, it sets at least a limited precedent for water sharing to meet the most critical needs of border residents. It also provides for regional cooperation on water conservation between the two countries and encourages binational data sharing on water availability between federal and state agencies (Mumme, 1999). Much more needs to be done, of course, but this classic apportionment issue puts IBWC in the hot seat (Lopez, 1997). Last year, irate Texas state congressmen pushed through a congressional joint resolution demanding Mexico immediately repay its water debt (Bonilla, 2000). An agreement (Minute 307) was worked out by which Mexico, in a very unpopular decision at home, agreed to partly repay the debt (IBWC, 2001a). Such national posturing helps little in working out long term binational solutions to climate induced scarcities.

GROUNDWATER

Though neglected in treaty, the IBWC has had a partial mandate to explore mechanisms of binational cooperation on transboundary groundwater since the Salinity Crisis drew attention to the problem in the late 1960s. Minute 242, signed in 1973, charged the Commission with monitoring groundwater withdrawals in the San Luis Rio Colorado –Yuma area and required the two governments to inform each other of any new developments that might affect

the other party (IBWC, 1973). It went even further, and contemplated the need for a comprehensive agreement on border groundwater.

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While a comprehensive agreement has proven elusive, the IBWC has moved in the past decade towards mapping and monitoring critical groundwater areas along the border. The La Paz Agreement's Water Working Group, now part of Border XXI, has highlighted the urgency of gaining a handle on groundwater extractions in highly dependent areas like El Paso-Cd. Juarez and Nogales. The La Paz process has also spawned binational resource management models such as the El Paso-Cd. Juarez Joint Air Quality Task Force that may be adapted to managing transboundary groundwater in urban areas (Annex V, 1989). While fact finding and diplomacy still moves at a trickle, some agreements may gel in the next decade based on studies and initiatives now underway. Unfortunately, unilateral measures now in play are sure to hinder progress in other localities.

BIODIVERSITY

Biodiversity preservation is hardly new on the IBWC's agenda though it has gained greater purchase in the 1990s. In the 1970s, the Environmental Impact Statement provisions of the US National Environmental Policy Act provisions forced USIBWC to reckon with these issues. By 1976, the first serious binational pressure to address this class of problems arose with smelter contamination of San Pedro river waters. The Commission's lacklustre response helped mobilise national environmental agencies more directly in border environmental management through the 1983 La Paz Agreement.

The Commission's reluctance to act on these issues certainly tarnished its reputation. Its stodginess partly traces to one of the principal anachronisms of the 1944 Water Treaty, whose stated water priorities fail to recognise habitat preservation or environmental uses of treaty waters while privileging navigation and hunting (Treaty Regarding,.., 944). Over-appropriation of treaty waters is the core problem, however, as bio-diversity protection demands attention to in-stream flows as well as water quality. Building consensus for modification of the treaty river in-stream flow regime may very well be the toughest political challenge the Commission confronts.

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Look no further than the Colorado Delta for evidence. In the past decade Delta conservation gained prominence on the agendas of major conservation groups and government agencies. The Delta provides critical habitat on the Pacific flyway and sustains a rich melange of aquatic life in the upper California Gulf (Culp, 2000). Despite zero water allocated for this purpose, its vitality exists due to highly saline brine discharge from US and Mexican irrigation projects, and periodic surge flows down the river's main stem. Recent US policies upstream aimed at settling inter-state water claims threaten to reduce even these meagre resources (Culp, 2000; Pitt *et.al.*, 2000). Any conceivable solution for Delta restoration and maintenance thus requires some real location of existing uses and entitlements.

Minute 306, while Delta specific, links IBWC biodiversity activities to the 1944 Treaty and provides a basis for further effort in this area.

In 1998 the IBWC set up a binational technical task force to study the Delta and ascertain its water requirements. The IBWC moved cautiously to formalise the process late last year with an agreement on a conceptual framework for binational cooperation in Delta restoration analysis. That agreement, Minute 306, while Delta specific, links IBWC biodiversity activities to the 1944 Treaty and provides a basis for further effort in this area (IBWC, 2000b). In the case of the Delta, it calls for undertaking '*joint studies that include possible approaches to ensure use of water for ecological purposes'* in the Delta reach of the Colorado river '*based on the principle of equitable distribution of resources*' (IBWC, 2000b).

Despite these positives, the Commission can do little if upstream stakeholders steadfastly hoard their entitlements. Recent studies show just 32,000 acre feet of water annually – about half that saved from a controversial project to staunch seepage from the All-American Canal – may be sufficient to restore the Delta's ecology (Pitt, *et.al.*, 2000: Castro, 2001). Under Minute 306, if this figure stands, half the amount, or 16,000 acre feet annually, must come from the US Thus far, US up-basin states adamantly oppose concessions and as they go, so too goes the Bureau of Reclamation. This impasse inspired a US Endangered Species Act lawsuit by the Defenders of Wildlife and the Southwest Center for Biological Diversity last year (Stoduto, 1999). The case is still pending.

DIPLIMACY AND POLITICS: ARE THE TWO COMPATIBLE?

The IBWC's diplomatic mandate lies beneath its reputation as a monopolistic, secretive agency with a penchant for controlling and hoarding vital data on border water dynamics. Constituted with a diplomatic brief at a time that federal governments dominated the border policy stage, the IBWC's national sections adopted a classic diplomatic stance, aimed in the case of treaty water issues at establishing a binational consensus on facts on the ground and avoiding undue politicisation that might complicate agreement. The value of such practices was repeatedly driven home by such protracted controversies as the Chamizal dispute and the Salinity Crisis.

Times are different. Not only is IBWC's agenda less dominated by allocation problems but the political context has changed. New stakeholders are now on-board in border water management. Informal mechanisms of contact and cooperation now exist that rival centralised approaches in border management. Heightened emphasis on water quality comes with political demands for institutional accountability, greater public participation, and a programmatic emphasis on the basic human needs of border residents. Meshed now in Border XXI and BECC, the IBWC can no longer dominate the water agenda or sidestep grassroots politics. Fewer issues can be solved top-down.

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While scepticism may still be in order, such changes have moved the Commission. Since 1994, its national sections have stepped up public relations, fielding new personnel to respond to inquiries and deal with the public. Critics may doubt the PR but there is substance too. Both sections established environmental offices in the 1990s and the USIBWC's environmental staff rose from 4 to 12 between 1990 and 2001 (IBWC, US Section, 2001). The IBWC still holds its facts close to the vest; the public, however, now has greater access to some of its data. All minutes and most reports are publicly released and web-accessible (see IBWC website: www.ibwc.state.gov).

Even the Commission's identity is changing. Under John Bernal's guidance, the USIBWC has developed a new Strategic Plan (IBWC, US Section, 2000). In what is certainly a first, it now aims '*to provide environmental sensitive, timely, and fiscally responsible boundary and water services, while applying sustainable development principles*.' The Plan's preamble statement of organisational values speaks to performance, people, and process, the latter emphasising openness, teamwork, and participative goal setting in bottom-up fashion. In matters of substance, the Plan commits agency water managers to '*a visionary United States–Mexico environmental policy…in a manner that is responsive to stakeholders…*' (IBWC, US Section, 2000). The two Sections are exploring a Minute that would consolidate these values.

Whether the Commission will now incorporate these values is an open question. Environmentalists are justifiably suspicious of the agency's centralising norms

and practices – as University of California, Irvine political scientist Helen Ingram puts it, the IBWC is still '*essentially a closed shop*' (Ingram, 2001). The Treaty is still there, exposing IBWC to the slings and arrows of its traditional stakeholders, the irrigation districts, state and federal water agencies, and the Rio Grande and Colorado river basin states' policy committees that historically shaped its institutional practices.

It falls to the Commission's managers – in the US case former El Paso Mayor Carlos Ramirez whose appointment is still unofficial – to consolidate the IBWC's recent reforms and deepen its institutional transformation (Crowder, 2001). While its operational functions must be ably discharged, it must continue to grapple with the need for binational groundwater management, equitable responses to prolonged drought, cementing its role in environmental protection, establishing new protocols for involvement in transboundary environmental impact assessment, and continuing to partner with BECC – NADBank and other agencies to develop financially viable and environmentally sustainable means of developing water infrastructure in the border region. What is certain is that it will be pressed to do more of this more transparently, and more politically, crafting multi-stakeholder coalitions in support of binational agreements. For border sceptics there is a shred of optimism when even the IBWC calls for sustainable development.

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