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The Management of Shared Water Resources in Latin America

ABSTRACT

There are 58 rivers and lakes in Latin America whose drainage basins are shared by two or more countries. There are, however, few examples in the region of institutions actively engaged in the management of shared water resources. This article reviews the state of the management of shared resources in Latin America and attempts to explain, through economic factors, why there is both so little apparent interest in the management of international rivers and why where agreements have been reached they have generally not been effectively implemented.

International boundaries in Latin America are often defined by rivers and other bodies of water. Many other rivers flow across international frontiers.¹ Although many of these shared water resources have been subject to treaties and agreement, there are few examples in the region of institutions actively engaged in the joint management of shared resources. This article reviews the current state of the management of shared water resources in Latin America and attempts to explain why there is so little interest in the management of international rivers in a region with a long history, at least rhetorically, of cooperation.

There are 58 rivers and lakes in Latin America whose drainage basins are shared by two or more countries. Many of these shared water bodies have been subject to some form of international legal arrangement, either specific to them or within some broader instrument dealing with border issues (see Table 1).² In general, with the exception of the

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1. These drainage basins account for over half the area of the countries of the region and the flows in international rivers are equivalent to more than three-quarters of the total run-off. Eighty percent of the total area involved and over three-quarters of the flow is accounted for, however, by only two river systems, the Amazon and the Rio de la Plata. United Nations, Economic Commission for Latin America and the Caribbean, *The Water Resources of Latin America and the Caribbean, Estudios e Informes de la CEPAL, N° 53*, (1985).

2. A detailed and complete account of the agreements made up to 1975 can be found in J. López, *El Derecho y la Administración de Aguas en Iberoamérica* (1975) (paper presented to the International Conference on Global Water Law Systems, Valencia).

Table 1
Latin America: Treaties and Agreements on Shared Water Resources

Basin	River	Signatory Countries	Year signed
Colorado	Colorado	Mexico - United States	1944
Grande/Bravo	Grande/Bravo	Mexico - United States	1906 - 1933
	Chamizal	Mexico - United States	1963
Lake Güija	Lake Güija	El Salvador - Guatemala	1957
San Juan	San Juan	Costa Rica - Nicaragua	1888
Catatumbo	Catatumbo and Zulia	Colombia - Venezuela	1903
Amazon	Basin as a whole	Bolivia - Brazil - Colombia - Ecuador - Peru - Suriname - Venezuela	1978
		Brazil - United Kingdom (Guyana)	1940
Maroni	Maroni	France - Netherlands (Suriname)	1915
Zarumilla	Zarumilla	Ecuador - Peru	1944
Tumbes	Puyango	Ecuador - Peru	1971
Chira	Catamayo	Ecuador - Peru	1971
Rio de la Plata	Basin as a whole	Argentina - Bolivia - Brazil - Paraguay - Uruguay	1969 - 1971
		Rio de la Plata	Argentina - Uruguay
		Argentina - Uruguay	1973
	Paraguay	Argentina - Paraguay	1969
	Paraná	Argentina - Paraguay	1958
		Argentina - Paraguay	1971
		Brazil - Paraguay	1973
		Argentina - Paraguay	1974
	Pilcomayo	Argentina - Paraguay	1939
		Argentina - Bolivia - Paraguay	1941
		Argentina - Paraguay	1945
	Uruguay	Argentina - Bolivia - Paraguay	1972
		Argentina - Uruguay	1938
		Argentina - Uruguay	1946
		Argentina - Uruguay	1961
		Argentina - Uruguay	1969
		Argentina - Uruguay	1975
	Argentina - Brazil	1980	
Mchusuma	Mchusuma, Mauri and Azucarero	Chile - Peru	1929
Lake Titicaca	Lake Titicaca	Bolivia - Peru	1935
	Lake Titicaca	Bolivia - Peru	1955
	Lake Titicaca	Bolivia - Peru	1957

Source: United Nations, Economic Commission for Latin America and the Caribbean, *The Water Resources of Latin America and the Caribbean*, Estudios e Informes, N° 53, Santiago, 1985.

Latin America: Main Shared Water Resources

Countries involved	Basin	Area in km ²
Mexico and United States of America	Río Grande or Bravo	238,600
	Tijuana	3,200
	Concepción	26,635
	Yaqui	50,000
	Colorado	5,300
Mexico and Guatemala	Hondo - Azul and Candelaria	33,500
	Usamacinta - Grijalva	137,310
	Suchiate	1,410
	Coatán - Achute	1,437
Guatemala, Honduras and El Salvador	Lempa	17,423
Guatemala and El Salvador	Paz	2,362
Guatemala and Honduras	Motagua	16,601
El Salvador and Honduras	Goascorán	2,428
Honduras and Nicaragua	Coco or Segovia	26,549
	Choluteca	8,214
	Negro	3,039
Nicaragua and Costa Rica	San Juan	38,904
Costa Rica and Panama	Sixola	2,930
	Changuinola	3,135
	Juradó	1,100
Panama and Colombia	Total Area of Shared Basins in Mexico and Central America	619,227
Colombia and Venezuela	Catatumbo	30,956
	Orinoco	982,000
	Essequibo	155,000
Venezuela and Guyana	Amacuro-Barima	12,400
Guyana and Suriname	Courantyne	78,590
Suriname and French Guiana	Maroni	68,990
French Guiana and Brazil	Oiapoque	31,100
Brazil, Colombia, Ecuador, Peru, Venezuela, Bolivia, Guyana and Suriname Colombia and Ecuador	Amazon	6,059,100
	Patía	22,500
	Mira	11,000
	Zarumilla	1,000
Ecuador and Peru	Tumbes-Puyango	5,645
	Chira-Catamayo	17,150
	Lagos Titicaca and Poopó	138,400
Peru, Bolivia and Chile	Laguna Blanca	—
Peru and Chile	Zapalerí	—
Chile, Bolivia and Argentina	Cancosa, Todos los Santos, Cauca and Cosapilla	22,000
Bolivia and Chile		
Bolivia, Brazil, Argentina, Paraguay and Uruguay	Río de la Plata	3,092,000
Brazil and Uruguay	Laguna Merín	60,650
	Calle Calle-Hua Hum, Puelo-Manso, Yelcho-Futaleufú, Palena-Carrenleufú, Pico, Aysen-Simpson, Baker-Lago Buenos Aires-Lago Pueyreddón, Pascua-Lago San Martín- Lago Mayer and Serrano-Vizcachas-Don Guillermo	106,320
Chile and Argentina	Penitente	3,818
	Zurdo, Ciake-Chico, Cullen, San Martín, Chico, and Grande	15,800
	Lago Fagnano	4,062
	Total Area of Shared Basins in South America	10,874,831
	Total Area of Shared Basins in Latin America	11,494,058

Source: United Nations, Economic Commission for Latin America and the Caribbean, *The Water*

agreements between the United States of America and Mexico, the institutions contemplated under these agreements have not actually been created or, where they have been given life, have operated only to a very limited extent.

The Nature of International Agreements on Shared Water Resources in Latin America

The existing agreements on shared water resources in Latin America exhibit a variety of legal forms. International agreements on the joint study and development of shared resources cover fifteen of the region's international river basins, including multilateral agreements on both the Rio de la Plata and the Amazon.³

The majority of agreements have been bilateral typically covering either frontier waters, specific projects or tributaries within larger river systems.⁴ Such agreements range from formal treaties (accomplished through the exchange of notes, joint declarations, and memoranda of agreement) to informal acts or summary records included within the formal minutes of meetings between the interested parties. These bilateral agreements tend to be on specific questions concerning the use of a shared water resource. A survey of existing agreements shows that most agreements in effect have been for joint hydroelectric power projects and that, curiously, all of these are within the Rio de la Plata basin. The only agreements covering other matters are those on navigation of the Rio de la Plata between Argentina and Uruguay and between Argentina and Paraguay.⁵

The typical outcome of these bilateral agreements is well illustrated by the results of the attempted agreements between El Salvador and Guatemala for hydroelectric works on Lake Guija and between Costa Rica and Nicaragua for the canalization of the Rio San Juan. In the first case,

3. Despite the great publicity surrounding the signing of both agreements, their real achievements have been very limited. The Rio de la Plata Treaty (1969) envisaged active international management of the development of the river basin and established an elaborate, if cumbersome, management system including a permanent secretariat in Buenos Aires. *Tratado de la Cuenca del Plata*, April 23, 1969, OEA, Documentos Oficiales, OEA Ser.I/IV, pp.167-178. In contrast, the Amazon Cooperation Treaty (1978) did not contemplate the formation of a permanent secretariat or any other type of permanent institution. Rather, it relied on the national institutions of signatory countries. *Tratado de Cooperacion Amazonica*, July 3, 1978, *Integracion latinoamericana*, August, 1978, No. 27.

4. In part, this is because multilateral agreements are more difficult to negotiate, but it is also due to there being only six river basins in Latin America shared by three or more countries. Only two of these six basins are of significance, the Amazon, shared by seven countries, and the Rio de la Plata, shared by five countries.

5. G.J. Cano, *Argentina, Brazil and the de la Plata Basin: a Summary Review of their Legal Relationship*, 16 *Nat. Resources J.*, 877 (1976).

after some years of negotiations, Guatemala failed to ratify the treaty and, in the second, the agreement was voided when the works were not begun within the specified period.⁶

The Failed Agreement on the River Lauca

The River Lauca has its source in the Parinacota Marsh in Northern Chile in a desert area, at an altitude of over 4,400 meters. After 75 kilometers, the Lauca flows across the border into Bolivia and eventually enters Lake Coipasa. The Lauca is the principal source of water for the lake.

In 1939, the government of Chile announced that it would extend an irrigated area inland from the city of Arica, on the border between Chile and Peru, using the waters of the River Lauca.⁷ Following this announcement, the Bolivian government publicly reserved its rights to the waters of the Lauca under the terms of the Declaration of Montevideo.⁸ Chile replied that the proposed diversion, given its limited size, would not affect Bolivian interests. In 1947, Bolivia requested that a joint commission be established to oversee the project and to propose the basis for a joint agreement on the use of the river. Chile agreed to this request. In 1949, the report of the joint commission informed the two governments that the diversion would cause no damage to Bolivian interests.

Chile did not begin to construct the diversion works until 1953. At that point Bolivia again protested and continued to do so until Chile agreed to a new joint commission which reached the same conclusion as the first commission. Nevertheless, Bolivia continued to protest and notes passed between the two governments. In the face of Chilean refusal to continue negotiations, Bolivia proposed taking the matter to the Organization of American States. In the meantime, the works had been inaugurated. In 1962, after further exchanges, Chile agreed to take the matter to the International Court of Justice. This did not happen because by that time Bolivia had broken off diplomatic relations with Chile; relations have yet to be restored between the two countries.

6. A. Viladrich, *Cuencas hidrográficas compartidas multinacionales: una nueva frontera eléctrica*, (UNDP-OPEC Special Fund, Proyecto energético del istmo centroamericano, 1978).

7. This description is based on the account in F. Constantini, *El perjuicio sensible en el derecho internacional fluvial*, Estudios Paraguayos, Vol.VII, N° 2 (1979).

8. Under the LXXII Declaration of the Seventh Inter-American Conference, it was agreed that no state should make any change in an international water body prejudicial to another state without that state's permission. Organization of American States, *Rios y Lagos Internacionales*, Documentos Oficiales, OEA/Ser.I/VI, (4th edition, revised, 1971).

Managing Shared Resources: the Rio de la Plata Experience

No other shared water resource in Latin America has excited so much interest, politically and academically, as the Plata basin.⁹ In 1969, the foreign ministers of the basin countries signed the Rio de la Plata River Basin Treaty (Tratado de la Cuenca de la Plata) and the Brasilia Declaration in which they agreed to develop statutes for the use and management of the water resources of the basin.¹⁰

The foreign ministers, acting as the Intergovernmental Coordinating Committee (CIC), designated a group of experts to develop the proposed work program. The experts, meeting in Rio de Janeiro in August 1969, could not agree on the content of the work program and referred the matter back to the CIC. The CIC attempted to agree on a work program at its next meeting in October 1969, but this effort also failed. The government of Brazil wished to proceed with only the technical studies, but Argentina wanted the simultaneous development of a legal framework for the management of the basin.¹¹ The exchange between the two governments, which lasted until April, 1970, ended without any decision being taken on the legal studies. The experts continued to develop proposals for a program of technical studies which were approved by the CIC, but the question of the legal framework was not resolved.¹²

The proposed technical studies were not carried out. This was undoubtedly partly due to specific disagreements between Argentina and Brazil. Additionally, the cumbersome organization of the CIC (all decisions must be taken unanimously) and the failure of the governments to finance CIC activities beyond the absolute minimum were also important contributing factors.¹³ Moreover, it had been originally agreed that each government would establish a national commission for matters related to the Plata Basin, but only Argentina actually established a separate commission. The

9. The Parana-Plata river system, which enters the Atlantic Ocean through the Rio de la Plata Estuary, is the second largest in Latin America and drains more than 3,000,000 km² in five countries.

10. J. A. Barberis, *El aprovechamiento industrial y agrícola de los ríos de la Cuenca de la Plata y el derecho internacional*, Derecho de la Integración, Vol. VII, Nº 16 (1974).

11. *Id.* at 57.

12. G. Del Bosco, *Propuesta institucional para la Cuenca del Plata*, Integración Latinoamericana, 161-162, INTAL (1990).

13. In 1986 the total annual budget of the Secretariat was only US \$106,000. G.J. Cano, *La Cuenca del Plata: Resena de los aspectos politico-juridicos del proceso de su aprovechamiento y de los conflictos envueltos*, Academia Nacional de Ciencias Morales y Politicas, Anticipo Anales, Tomo XV (1986).

other countries assigned the responsibility to existing institutions within their bureaucracies.¹⁴

Despite the tremendous growth in the use of the water of the basin, there have been no further significant changes in the work of the CIC. Of the 230 resolutions adopted by the CIC up to 1989, only 22 dealt specifically with water compared to over 100 dealing with organizational matters.¹⁵ From the viewpoint of water management, the Plata Treaty and the CIC remain largely irrelevant. Water resources are managed nationally, except for joint projects for hydroelectric power generation which have been built under agreements negotiated outside the Treaty.

Disagreements continue over the use of water. For example, for many years Brazil and Argentina had considerable differences of opinion over the projects at Itaipú and Corpus on the Parana River. After Brazil and Paraguay signed an agreement to build the hydroelectric power plant at Itaipú, Argentina requested information on the project to assist in designing a bilateral hydroelectric project with Paraguay contemplated at Corpus, some 250 kilometers downstream. The size of the two projects meant that a strong probability of interference in operations existed. (Although Paraguay was party to both projects, the government of Paraguay did not, at first, support the Argentinean request.¹⁶)

The general atmosphere of mutual distrust prevailing between Argentina and Brazil meant that an agreement to avoid conflicts could be signed by the three countries only after a series of diplomatic exchanges. This tripartite agreement, signed by Argentina, Brazil and Paraguay in October 1979, does not consider the possibility of the combined operation of the two projects.¹⁷ It merely provides for measures to prevent one project from interfering with the other.¹⁸ The agreement was also negotiated outside the terms of the Rio de la Plata Basin Treaty, although reference is made to the Treaty in the agreement.¹⁹

Rivers at the Margin

The general failure to institutionalize the management of shared river systems in Latin America cannot be explained by the specific

14. *Id.*

15. L. C. del Castillo de Laborde, *El tratado de la Cuenca del Plata, un sistema en busca de definición*, in XVII Curso de Derecho Internacional (Comité jurídico interamericano, 1990).

16. Del Bosco *supra* note 12 at 72.

17. Tripartite agreement on Corpus and Itaipu [Acuerdo Tripartito sobre Corpus e Itaipú], October 19, 1979, *Integración latinoamericana*, December, 1979, No.42.

18. *Id.*, *supra* note 13 at 30.

19. United Nations, *Experiences in the Development and Management of International River and Lake Basins*, Natural Resources/ Water Series Nº 10 (1983).

circumstances of each individual shared water system. Explanations must go beyond the particular, if the general failure is to be understood. There is little doubt that the explanation for the failure lies within those factors behind the unsuccessful attempts to achieve economic integration in the region over the last 30 years. Without entering into debate on the integration question, it is generally agreed that these factors can be summed up as the absence of sufficiently forceful economic and political reasons for integration.

Until the debt crisis of the 1980s led to their collapse, the economies of most of the countries of the region were inward looking, with growth led by import-substitution industries, although an export base was maintained in natural resource products.²⁰ Most governments apparently perceived integration as meaning having to give up some activities to better situated neighbors in exchange for possible, but not certain, export markets. Despite the rhetoric that accompanied the signing of the agreements for the Andean and Central American common markets, general economic integration lacked extensive political support and was without obvious economic advantage.

The countries of Latin America are highly centralized, politically, economically and in the distribution of their populations. A high, and increasing, proportion of the population lives in the principal metropolitan area in many countries (see Table 2). The Latin American Demographic Center estimates that by the year 2000 some 22.5 percent of the total population of the region will live in the 12 largest metropolitan areas.²¹ In the late sixties, the northern border provinces of Argentina accounted for less than two percent of economic output and five percent of the population.²² The provinces within the Rio de la Plata basin in Bolivia only accounted for two percent of output in the same period.²³ There is no reason to suspect that the distribution has changed significantly since then.

20. United Nations, Economic Commission for Latin America and the Caribbean, *Changing Production Patterns with Social Equity*, Santiago, 1990.

21. United Nations, Latin American Demographic Center, *Latin America: percentage urban, 1990*, Demographic Bulletin N°24 (1991).

22. *Id.*

23. *Id.*

Table 2

Latin America: Urban Concentration

Percent of Total Population in the Main Metropolitan Area^{a/}

Country	Main Metropolitan Area	about 1950	about 1960	about 1970	about 1980
Argentina	Buenos Aires	23.3	39.8	34.2	—
Bolivia	La Paz	10.6	11.7	13.0	13.8
Brazil	São Paulo ^b	4.5	5.8	8.5	10.2
Chile	Santiago	24.2	28.0	31.8	34.4
Colombia	Bogota	5.6	9.6	12.7	14.8
Costa Rica	San Jose	18.4	19.4	21.8	25.1
Cuba	Havana	18.8	21.0	20.8	19.8
Dominican Rep.	Santo Domingo	8.5	12.1	24.4	37.1
Ecuador	Guayaquil	8.3	11.7	12.9	15.5
El Salvador	San Salvador	10.3	12.6	—	13.9
Guatemala	Guatemala City	13.5	17.2	19.6	19.9
Haiti	Port-au-Prince	4.7	7.1	11.5	14.3
Honduras	Tegucigalpa	4.6	5.3	7.1	10.3
Mexico	Mexico City	12.2	15.0	18.4	20.0
Nicaragua	Managua	10.4	15.3	—	21.2
Panama	Panama City	21.7	26.9	31.7	33.3
Paraguay	Asuncion	28.2	31.0	34.3	38.5
Peru	Lima	18.4	18.6	16.7	23.3
Uruguay	Montevideo	40.4	48.9	48.2	49.5
Venezuela	Caracas	14.8	18.2	20.4	18.2

Source: ECLAC, Statistical Yearbook for Latin America and the Caribbean, 1991.

^{a/} Metropolitan area refers to the city in question plus the high density zones in its environs.^{b/} Until 1960 Rio de Janeiro was the most populous metropolitan area in Brazil.

It is therefore not surprising to find that the border areas of most countries play only a limited role in the economy or in other aspects of national society. Shared water resources are by their location and general social significance both economically and politically marginal. Given the marginal economic significance of border regions, the political attention given to managing shared water resources by Latin American governments has been sporadic at best. Only when there has been a specific need to give attention, as in the example of the River Lauca, have governments bestirred themselves to establish institutional arrangements. Once the issue is past, again as in the case of the Lauca, the institutions fall into disuse, even when one of the governments remains aggrieved.

Only the institutions established to manage joint capital investments as at Salto Grande and Itaipú have been able to become a permanent part of the governmental system. Even in these two examples, the permanent responsibilities of the bilateral institutions have been restricted to managing the joint production of electricity. In the case of Salto Grande, the original intention had been to give wider authority over environmental management and regional development. During the construction phase of its operations, the Joint Argentine-Uruguayan Commission for the construction and operation of the Salto Grande dam and generating station on the River Uruguay developed a major program for environmental management and regional development.²⁴ The program included hundreds of individual studies in more than 18 areas including climatology, wildlife, agriculture, environmental health, transport and land use planning.²⁵ The program, however, has withered away since the dam and generating facilities were completed in 1982.

Mexico-United States of America

These arguments are supported by the exception; the one example of active management of shared water resources in Latin America is the Mexico-United States of America border rivers. International institutions have existed for the management of water resource issues since 1853.²⁶ From its creation in 1889, both governments have given the International Boundary Commission (now the International Boundary and Water

24. Comisión Técnica Mixta de Salto Grande, *Desarrollo Ambiental y Regional en el proyecto Salto Grande* (1979) (paper presented at the II Seminario Interamericano de Hidroelectricidad, Concordia, Argentina).

25. Gilberto Gallopin et al. *The Environmental Dimension in Water Management: the Case of the Dam at Salto Grande*, 2 J. Water Supply & Mgmt. (1980).

26. David J. Eaton & David Hurlbut, *Challenges in the Binational Management of Water Resources in the Rio Grande/Rio Bravo*, Lyndon B. Johnson School of Public Affairs, The University of Texas at Austin, U.S.-Mexican Policy Report No.2 (1992).

Commission) increasing jurisdiction over frontier rivers.²⁷ In 1944, the Commission's functions were amplified to cover the resolution of boundary water and sanitation problems including studies of projects for hydroelectric generation plants, storage dams and flood control. The Commission's work has been an undeniable success in many areas.²⁸

The Mexican–United States border is a center of economic activity of importance to both countries. The Mexican states along the frontier with the United States accounted for 25 percent of income from manufacturing in 1989.²⁹ It is an area which is increasingly being integrated into the economy of the United States and the most important region in Mexico for the location of maquila factories.³⁰ It has been described as one of the two most important border regions of the world in terms of economic and urban growth.³¹

The border is a region of relatively scarce water resources. For example the rainfall in the River Bravo (Rio Grande) basin varies from 350mm. at Chihuahua to 611mm. at Monterey.³² The climate is equally arid in the other border basins and on both sides of the border. However, it is the economic and, therefore, political importance of this border region, rather than its climate, which distinguishes it from the other shared water resources in Latin America.

CONCLUSION

The countries of Latin America adopted the "Declaration on Industrial and Agricultural Use of International Rivers" at the Seventh

27. David J. Eaton and David Hurlbut, Challenges in the Binational Management of Water Resources in the Rio Grande/ Rio Bravo, US-Mexican Studies Program, Policy Report Nº 2, (1992).

28. "By the late 1970s, the Commission has apparently led the two neighbors to settle all major surface water allocation and distribution problems, through the adoption of an incredible number of agreements." Alberto Szekely, *How to Accomodate an Uncertain Future into Institutional Responsiveness and Planning: The Case of Mexico and the United States*, 33 Nat. Resources J. 587 (1993).

29. Mexico, Instituto Nacional de Estadística, Geografía e Informática, XII Censo Industrial, 1989, Mexico (1992)

30. The number of maquiladora plants in Mexico grew from 120 in 1970 to 1396 in 1988; although not all of these are located in the border states, Tijuana and Ciudad Juarez have the largest concentrations. Robert B. South, *Transnational "Maquiladora" Location*, Annals of the Association of American Geographers, Vol.80, No. 4, December, 1990.

31. Lawrence A. Hersog, *International Boundary Cities: The Debate on Transfrontier Planning in Two Border Regions*, 31 Nat. Resources J. (1991)

32. United Nations, Economic Commission for Latin America and the Caribbean, Latin America and the Caribbean: Inventory of Water Resources and their Utilization, Volume I, Mexico, Central America and the Caribbean, U. N. Document LC/G.1563/Rev.1 (1990).

Inter-American Conference at Montevideo in 1933.³³ The Declaration did not lead to the adoption of a formal convention, although it has been used to support government actions affecting shared water resources. The Declaration emphasized the principle of reasonable use to avoid sensible damage to the other party in the case of both frontier rivers and of rivers flowing successively from one state to another.³⁴ In general, the countries have respected this principle in developing shared basin water resources. In almost all cases, any development, however, has been undertaken through individual projects.

It can be claimed that the Declaration has been respected, despite the disagreements between Brazil and Argentina in the 1970s over the system established under the Rio de la Plata Basin Treaty for the harmonious development and physical integration of the Plata basin.³⁵ Much of the discussion of the situation in the Plata is based on the double assumption that, first, some form of active international institution for the management of the river basin as a hydrologic unit was necessary and, second, that it was intended by the governments which negotiated the treaty.³⁶ There seems to be no proof that this was the case. The treaty specifically states in Article V that collective action should not interfere with projects developed nationally.³⁷

Although the development of hydroelectric power generation in the Plata Basin has been extensive over the last two decades, the basin itself has not been central to the economic development of the economies of the countries sharing the basin nor have the hydroelectric schemes been multinational, with the significant exceptions of Itaipu, Salto Grande and Yacereta.³⁸

It would seem, therefore, that the reasons for the failure to develop strong international institutions for the management of shared water resources do not lie in political rivalries or in logical analyses by governments of the risks of integration. The failure lies, rather, in the marginal significance of the shared water resources to most Latin American economies.

History clearly shows that issues related to the management and use of shared water resources only become of significance when there is

33. Organization of American States, *supra* note 10, at 111.

34. *Id.*

35. See the discussion in Barberis *supra* note 10.

36. See the two articles by Cano *supra* notes 5 and 13 and the discussion in J. O. Trevin & J.C. Day, *Risk Perception in International River Basin Management: The Plata Basin Example*, 30 Nat. Resources Jour., 87 (1990).

37. Organization of American States, *supra* note 8 at 169.

38. The Amazon and the Orinoco and the boundary rivers that form the majority of the shared water resources of Latin America have been of considerably less economic importance.

either a specific dispute or when there is a development project of mutual benefit. There have been no general issues of shared water resource management that have excited interest or provoked action on any river except on those shared by the United States and Mexico.

The move towards greater economic integration among the countries of the region which resulted in the formation of the Southern Common Market (Mercosur) may result in a revival of interest in the management of shared water resources. The assignment of tasks (including a study of the institutional infrastructure of the Rio de la Plata Treaty) by the Mercosur to the Intergovernmental Coordinating Committee for the Plata Basin is one example. There is also a recent initiative, supported by the United Nations, for joint management by Colombia and Venezuela of the shared resources within the Orinoco river basin.

Despite the moves within the region towards greater economic integration, it is not certain that the relative importance of shared water resources has changed in any significant way. They remain marginal to the main focus of development for most of the countries of the region. Unless this situation changes radically, it can be expected that the management of shared water resources in Latin America will continue to figure only in rhetorical expressions of political intent.