



International Rivers and Lakes

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River basin strategy: the basin approach at the Linköping Seminar ^{1/}

The International Seminar on the Relevance of the River Basin Approach for Co-ordinated Land and Water Conservation and Management was held at the University of Linköping in Sweden from 4 to 8 June 1984. The Seminar aimed to clarify the validity and limitations of the river basin approach in the different phases of land and water development and control.

While it was accepted that the river basin was a natural physical and environmental unit, it was noted that conventional administrative boundaries formed socio-economic borderlines of equal importance from a managerial viewpoint. This was particularly true in developed societies, where the availability of energy, capital and technology facilitated man-made modifications of the natural basin boundaries.

One aim of the Seminar was to arrive at conclusions that would serve as guidelines to develop criteria for: (a) environmental planning; (b) solution to conflicts among water and land users, urban and rural areas and different water users; (c) control and conservation of land and water; and (d) monitoring of changes in the ecosystem.

Some authors, writing from the perspective of the United States, felt that the basin had lost momentum as a unit for development. Others maintained that the basin was still the basic unit for development, particularly where water was the key to the development effort. Obstacles to integrated land and water management arose where the basin did not coincide with existing administrative or economic units. The relationship between certain forms of social organization and the success of management plans was emphasized in some papers. Thus, the co-operative system in China and farmers' associations used as transactional organizations were suggested as examples of local institutions through which management plans could be successfully implemented.

With regard to the solution of conflicts, one author pointed out that in situations where there were no reciprocal bases for trade-offs between different water users, the only alternatives were government intervention or acceptance of inequities. Several papers analysed the role of legal and administrative tools. The need for comprehensive legal regulations and well-defined water policies and the necessity of removing legal or structural rigidities were emphasized. It was considered important to use national macro-economic criteria to solve conflicting interests among different water users. It was noted that there were a wide variety of conflict-solving mechanisms, ranging from the use of a free market to legal and administrative regulations. Each mechanism offered different advantages and disadvantages. For example, a market system might be highly resilient, but could generate uncertainty; an administrative system might offer more security but might also become too rigid, generating resistance to change and a lack of adaptive capacity.

As regards the relationship between urban areas and the river basin, it was noted that urban development had an important impact on the river basin. The relationship between an urban area and the basin was a socio-ecological

one, with the basin providing the resources and the sink needed for the satisfaction of human needs. However, conflicts could develop between rural and urban areas as regards water quantity and quality. Urban areas might require waters needed for irrigation, while rural areas might be damaged by effluents coming from urban industries. Thus, the participants in the Seminar suggested that it was essential to develop some sort of institutional control over resource allocation and transfer of externalities, as well as to formulate conflict-solving procedures for resolving problems among different sections of the same system.

Preliminary talks on the Limpopo, Komati and Lomati Rivers ^{2/}

The easing of tensions in southern Africa following the recent conclusion of the Mozambique-South Africa non-aggression agreement (the Incomati Accord) has been reflected in the revival of a plan to build a water storage dam on the Limpopo River, between South Africa and Zimbabwe, just downstream from the river's exit from Botswana. The Water Resources Minister of Zimbabwe, Cephass Msipa, said that civil servants from the three countries, plus Mozambique, had held talks on the scheme.

When it was first mooted more than a decade ago, the cost was estimated at \$US 10 million, but the cost would since have risen three-fold. The dam would store water during the rainy season and prevent the Limpopo from running dry for part of the year.

Johannesburg Radio disclosed that after an engineering study, proposals were also being submitted to the Governments of South Africa and Swaziland for construction of two dams on the Komati and Lomati Rivers. Further meetings had been held with Lesotho on the Highlands Water Scheme; farther afield, still under investigation were the Okavango, Chobe and Zambezi Rivers. The report noted that those were the first signs of movement in this field since the signing of the Incomati Accord.

Health programme in a segment of the Nile ^{3/}

A health improvement programme for the Blue Nile is currently under way. The Blue Nile is part of the overall basin of the River Nile. The project objective is to control and prevent the major water-associated diseases, primarily malaria, schistosomiasis and diarrhoeal diseases, in the Gezira-Managil and Dohal Irrigation Schemes along the Blue Nile River basin. The project is the result of an agreement between the World Health Organization and the Government of the Sudan to undertake these activities within the decade 1979-1989. The project is nationally co-ordinated and integrated at an international level.

Ground-water regulation: the international dimension ^{4/}

A review of trends and needs in the field of ground-water regulations has been prepared by the Economic Commission for Europe (ECE). Recent treaty

practice in the ECE region shows that some attention has been paid to ground-water resources shared by two or more ECE countries. The list, which does not purport to be exhaustive, includes the 1947 Peace Treaty containing mutual guarantees given by Italy and Yugoslavia concerning the use of springs in the city of Gorizia and vicinity; the agreement between Yugoslavia and Bulgaria on water-economic questions of 1958; the Yugoslav-Hungarian Agreement with Statutes of the Water Economy Commission of 1955; the agreement between Poland and the USSR concerning the use of frontier water resources of 1964; and a similar agreement between Czechoslovakia and Poland of 1958. While ground water in those treaties tends to be a secondary issue, in 1967 there was a specific agreement on ground water between Poland and the German Democratic Republic.

In August 1977, for the first time since the Commission's inception in 1909, the Canada-United States International Joint Commission was asked by the two Governments to look into a transboundary ground-water question. Although the 1909 Canada-United States Boundary Water Treaty does not explicitly mention ground waters, article 9 of the Treaty is generally understood to include them by implication.

More recent treaty and negotiating practices show specific concern for ground-water problems, in conjunction with surface waters. An agreement between Upper Savoy (France) and the Canton of Geneva (Switzerland), concluded in 1977, lays down detailed rules for the controlled exploitation and the protection from pollution of the Lake Geneva (Lac Lemman) aquifer, and provides for a programme of artificial recharge of the aquifer. A draft agreement between Spain and France concerning the allocation of water in the Err River reflects awareness of a link between surface-water abstractions and ground-water levels. In 1971, France and Belgium reached an understanding on curtailing the withdrawals of ground water from a shared aquifer on both sides of the frontier. Furthermore, both parties recognize the polluting impact of the border river Espierre on the underlying aquifer mentioned above and are attempting to solve this problem.

Most of the above-mentioned agreements provide for the establishment of mixed or joint commissions of representatives of countries that are party to the respective agreements. The 1972 convention between Italy and Switzerland on water pollution control, for instance, established a mixed commission to investigate the origins, nature and magnitude of the pollution of surface and ground water against pollution caused by certain dangerous substances (17 December 1979).

Despite relative inactivity in the field of international ground-water law in the past, for two major reasons, international relations concerning ground-water resources are now likely to develop rather fast. First, the nature of the resource itself makes it an ideal subject for international co-operation. Secondly, countries are attaching increased importance to water in general and to ground water in particular. Thus, international co-operation may become increasingly vital. The greater desire of countries to protect this precious resource more effectively against pollution and over-exploitation, coupled with a rapidly rising demand for its use, will further induce riparian countries to negotiate.

Drought periods and international co-operation: cases reported by the Economic Commission for Europe 5/

ECE reports the following cases of international co-operation on drought management:

"An example of international co-operation, not limited to drought periods only, is the regulation of the two Swiss-Italian lakes of Lugano and Maggiore. The outflow and the levels of these two lakes are regulated according to rules agreed upon by the two countries, aimed at improving the overall conditions on the lakeshores and downstream of the lakes. In addition, the Italian storage reservoirs in the catchment area built for energy-production can be called upon during drought periods to release water for agricultural uses.

Bilateral agreements exist between Poland and the German Democratic Republic to increase the flow of water during drought periods and generally to co-operate and participate in the cost-sharing of water resources projects which will provide beneficial conservation of water for the two States.

Apportionment of the natural flows of boundary waters between the United States and Canada is subject to the Boundary Waters Treaty of 1909. Administration of the treaty provisions is carried out by the International Joint Commission. A number of transboundary rivers in the Pacific and Prairie regions (Columbia, St. Mary, Milk and Souris Rivers) encounter low flows during drought periods. Storage, diversion and apportionment of water are adjusted and agreed upon by both countries annually or as necessary to benefit both countries."

Cases decided by the International Water Tribunal 6/

Previous issues of the Newsletter of the International Water Tribunal have contained information on cases brought before the Tribunal. Before adjourning, the Tribunal reached a number of decisions. Verdicts were given in some 19 cases of water pollution presented to the Tribunal by environmental organizations. The defendants were invited to be present at the Tribunal to conduct their defence.

Throughout the debate, which concentrated particularly on the chemical pollution of western and northern European seas and rivers, issues were made quite accessible to both the press and the public. Industry and authorities reacted in many cases by taking concrete measures. Also, certain water pollution issues were raised in the Parliaments of Denmark and the Netherlands. In addition, several companies announced environmental measures in press releases.

Interstate water dispute decided by the United States Supreme Court 7/

Cases decided by the United States Supreme Court are important to the field of international rivers and basins, since many of the conflicts at an interstate level are similar to the problems arising at an international level, dealing essentially with the allocation of water. The case of Colorado vs. New Mexico et al. was decided on 4 June 1984 by the United States Supreme Court. The main issues involved are summarized below.

In its original action, Colorado sought an equitable apportionment of the waters of the Vermejo River, which originates in Colorado and flows into New Mexico. Historically, all the river waters have been used exclusively by farm and industrial users in New Mexico. It was held in this action, relating to equitable apportionment, Colorado's position was to be judged in the light of clear and convincing evidence.

Specifically, the Court held that:

"Requiring Colorado to present such evidence in support of its proposed diversion is necessary to appropriately balance the unique interests involved in water rights disputes between sovereigns. The standard reflects this Court's long-held view that a proposed diverter should bear most, though not all, of the risks of erroneous decision. In addition, the standard accommodates society's competing interests in increasing the stability of property rights and in putting resources to their most efficient uses."

For the following reasons, Colorado failed to prove that a diversion should be permitted:

(a) Colorado did not demonstrate, by means of clear and convincing evidence, that reasonable conservation measures could compensate for some or all of the proposed diversion. For example, though Colorado alleged that New Mexico could improve its administration of water supplies, it did not point out what specific measures New Mexico could take to conserve water. Society's interest in minimizing erroneous decisions in equitable apportionment cases requires that hard facts, not suppositions or opinions, should be the basis for interstate diversions. Moreover, there was no evidence that Colorado had undertaken reasonable steps to minimize the amount of the diversion that would be required.

(b) Nor did Colorado sustain its burden of showing that any injury to New Mexico would be outweighed by the benefits to Colorado from the proposed diversion. Colorado did not commit itself to any specific long-term use for which future benefits could be studied and predicted. By contrast, New Mexico attempted to identify the harms that would result from the proposed diversion. Asking for absolute precision in forecasts on the benefits and damages of a diversion would be unrealistic, but a State proposing a diversion should have conceived and implemented some form of long-range planning and analysis of the diversion proposed, thereby reducing the uncertainties with which equitable apportionment judgements are made.

(c) The mere fact that the Vermejo River originated in Colorado does not automatically entitle Colorado to a share of the river's waters. Equitable apportionment of appropriated water rights hinges on the benefits, damages and efficiencies of competing uses, and thus the source of the river's water is essentially irrelevant to the adjudication of those sovereign competing claims.

It was held that the equities favouring the protection of existing economies would usually be compelling and that the harm that might result from disrupting established uses was typically certain and immediate, whereas the potential benefits from a proposed diversion might be speculative and remote. New Mexico exceptions were sustained by the Court and the case was dismissed.

United Nations publications on international rivers: African treaties

The Department of Technical Co-operation for Development has issued a new publication on international rivers, entitled Treaties concerning the Utilization of International Water Courses for Other Purposes than Navigation: Africa. 8/ The publication falls within the framework of activities undertaken by the Department in the collection, analysis and distribution of information concerning international river and lake organizations, following the mandate conferred on the Department by a 1981 resolution of the Economic and Social Council of the United Nations.

The publication is in three main parts: General Conventions, Multipartite Treaties and Bipartite Treaties. It embodies the text of the agreements concluded in the African continent after 1960. Some agreements reached before this date, but not included in previous publications, are also included because of their particular importance.

The following documents are included within the text:

- (a) General conventions: African Convention on the Conservation of Nature and Natural Resources (Algiers, 15 September 1968) and Convention for Co-operation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region (signed at Abidjan on 23 March 1981);
- (b) Multipartite treaties:
 - (i) Act regarding Navigation and Economic Co-operation between the States of the Niger Basin (done at Niamey on 26 October 1963);
 - (ii) Convention and Statutes relating to the development of the Chad Basin (signed at Fort Lamy on 22 May 1964);
 - (iii) Agreement concerning the River Niger Commission and the Navigation and Transport on the River Niger (Niamey, 25 November 1964);
 - (iv) Agreement concerning the Statute of the Senegal River (signed at Nouakchott on 11 March 1972);

- (v) Agreement on the Creation of the Organization for the Amelioration of the Senegal River (signed at Nouakchott on 11 March 1972);
 - (vi) Accord on the Creation of Funds for Development of the Chad Basin Commission (signed at Yaoundé on 10 October 1973);
 - (vii) Accord on the Creation of the Organization for the Management and Development of the Kagera River Basin (signed at Rusumo on 24 August 1977);
 - (viii) Convention Relating to the Status of the River Gambia (signed at Kaolack on 30 June 1978);
 - (ix) Convention Relating to the Creation of the Gambia River Basin Development Organization (signed at Kaolack on 30 June 1978);
 - (x) Agreement Reached between Mali, Mauritania and Senegal on the Legal Status of Joint Works (signed at Bamako on 21 December 1978);
 - (xi) Convention creating the Niger Basin Authority (signed at Faranah on 21 November 1980);
 - (xii) Protocol Concerning Development Funds of the Niger Basin (signed at Faranah on 21 November 1980);
 - (xiii) Accession of Uganda to the Accord on the Creation of the Organization for the Management and Development of the Kagera River Basin (Bujumbura, 19 May 1981);
- (c) Bipartite treaties:
- (i) Belgium - United Kingdom of Great Britain and Northern Ireland:
Exchange of notes accepting the Protocol signed at Kigoma on 5 August 1924, relative to the Tanganyika-Ruanda-Urundi Frontier (Brussels, 17 May 1926);
 - (ii) Germany - France: Agreement to define the frontiers between Cameroon and the French Congo (signed at Berlin on 18 April 1908);
 - (iii) Germany - United Kingdom of Great Britain and Northern Ireland:
 - i. Agreement between Great Britain and Germany respecting the boundary between British and German Territories from Yola to Lake Chad (London, 19 March 1906);
 - ii. Agreement between Great Britain and Germany respecting the settlement of the frontier between Nigeria and the Cameroons, from Yola to the sea and the regulation of navigation on the Cross River (London, 11 March 1913);
 - (iv) Italy - United Kingdom of Great Britain and Northern Ireland:
 - i. Exchange of notes between the United Kingdom and Italy respecting concessions for a barrage at Lake Tsana and a railway across Abyssinia from Eritrea to Italian Somaliland (Rome, 14 and 20 December 1925);

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Sub-heading (viii) should read as follows: Portugal - South Africa: Agreement between the Government of the Republic of South Africa and the Government of Portugal in regard to the first phase of development of the water resources of the Cunene River Basin (signed in Lisbon on 29 January 1969); it is followed by sub-heading (ix) Sudan - United Arab Republic: Agreement between the Republic of the Sudan and the United Arab Republic for the full utilization of the Nile waters (signed in Cairo on 8 November 1959).

11. Exchange of notes setting out an agreement between His Majesty's Government of the United Kingdom of Great Britain and Northern Ireland and the Government of Italy regarding the boundary between Kenya and Italian Somaliland, together with the agreement adopted by the Boundary Commission and appendices (London, 22 November 1933);
- (v) Liberia - United Kingdom: Convention between Great Britain and Liberia, supplementary to the Convention of 21 January 1911, respecting the boundary between Sierra Leone and Liberia (London, 25 June 1917);
- (vi) Northern Rhodesia - South Africa: Exchange of notes between the Union of South Africa and Northern Rhodesia regarding the eastern boundary between the Caprivi Strip and Northern Rhodesia and the grant of privileges to Northern Rhodesia natives on the Caprivi Islands (Pretoria, 4 July, and Cape Town, 25 July 1933);
- (vii) Northern Rhodesia - Southern Rhodesia: Agreement relating to the Central African Power Corporation (signed at Salisbury on 25 November 1963);
- (viii) Portugal - South Africa: Agreement between the Republic of the Sudan and the United Arab Republic for the full utilization of the Nile waters (signed in Cairo on 8 November 1959).

International river basin co-operation in Latin America: developments since the Mar del Plata Conference

A report prepared by the Economic Commission for Latin America and the Caribbean (ECLAC) 9/ highlights the main development on co-operation with respect to shared river basins since 1977. A permanent intergovernmental arrangement for co-operation has been established in the region: the Sessional Committee on Water of the Economic Commission for Latin America and the Caribbean. A number of initiatives have been launched on horizontal co-operation both for the region as a whole and for different subregions. Similarly, co-operation on shared basins and international co-operation in investment have brought about innovation.

The majority of agreements, like the ones concerning the Uruguay River, are bilateral in scope, not only because multilateral agreements are more difficult to negotiate, but also because in the region there are only six river basins shared by three or more countries, of which the most important are the Amazon (shared by seven countries) and the River Plate (shared by five countries). Most bilateral agreements are concerned with the delimitation of rivers and lakes which mark political boundaries between national or with questions of navigation. Agreements dealing with irrigation, hydropower and integrated or multi-purpose river basin research and development are perhaps more of a novelty, and, with the exception of those between Mexico and the United States, date from the second half of this century.

The levels of co-operation and the degree of institutionalization vary widely. In general, agreements are limited to an exchange of information and preliminary research and joint studies. Usually, a joint (or mixed) commission is created, with equal representation of technical personnel from each nation. There are many examples of this type of agreement. Among the most important are those between Brazil and Uruguay on the Quarai and Mirim Lagoon, the one already referred to between Argentina and Uruguay on the Uruguay River, and another between Peru and Ecuador for the use of the resources of the Puyango-Tumbes and Catamayo-Chira basins.

There are several other examples of agreements that contemplate the formulation of joint projects apart from joint studies. An example is the agreement between Bolivia and Peru on Lake Titicaca. Several recent agreements also include joint construction and operation of projects. Such is the case, for instance, for the agreements between Brazil and Paraguay on the Itaipú hydropower development, and between Argentina and Paraguay for the Yacyretá and Corpus hydropower development, all on the Paraná River. A higher level of co-operation also requires a higher level of institutionalization. With respect to joint construction and operation of projects, binational enterprises were created which have decision-making powers greater than those of mixed commissions.

An analysis of existing agreements reveals that there is a general reluctance on the part of national Governments to delegate power to an international body over which they do not have full control. In general, mixed commissions and other institutional entities are given authority to decide only on strictly technical matters. Differences of opinion that cannot be reconciled by consensus within such entities are settled through traditional diplomatic procedures.

Many initiatives have not, however, gone beyond the stage of preliminary research. Practically all implementation projects have been the result of bilateral agreements. Progress can be attributed to a great extent to the atmosphere of intercountry co-operation which has been reaffirmed by the meetings of the foreign ministers of the countries sharing the River Plate basin.

One of the major achievements has been the establishment of the Plate Basin Financial Fund in 1977, with resources of \$US 100 million drawn from the five signatory countries. The fund has been active since its initiation in financing studies and design of various integration projects.

In the River Plate basin other multilateral agreements have been reached which to a great extent are also the result of this spirit of co-operation - for example, the agreement between Bolivia, Paraguay and Argentina on research and development in respect of the Pilcomayo River.

The most recent "Amazon Pact" was signed by the Foreign Ministers of Bolivia, Brazil, Colombia, Ecuador, Guyana, Peru, Suriname and Venezuela on 4 July 1978. The Amazon Pact has wider and more numerous objectives than the agreements on the River Plate. In particular, the Pact refers to co-ordination among the signatory Governments in many areas of development,

not just in relation to water resources. Institutionally, however, the Amazon Pact is less well-defined so far, lacking a permanent secretariat or working groups on particular topics, such as exist under the River Plate agreements.

The notion of a continental convention on international rivers has been discussed on many occasions. The idea of establishing principles for the development and use of international rivers in Latin America can be traced to some of the early meetings of the Inter-American system. The Seventh Inter-American Conference, held in Montevideo in 1933, adopted a ten-point declaration on the industrial and agricultural uses of water resources. The principles established in that declaration are not binding; nevertheless, they have not only inspired other attempts at regional conventions but have been taken as a basis for many bilateral and multilateral agreements among Latin American countries. With a view to perfecting the 1933 declaration, the Second Special Conference of American States, held at Rio de Janeiro in 1965, decided to convene a specialized conference to formulate recommendations and standards for the exploitation of international rivers and lakes. However, the conference was not held.

International concern over acid rain ^{10/}

The transfer of pollutants to water resources is no longer restricted by the limits of river basins. Since international pollution of water can occur through the atmosphere, contaminating waters located far from a source of pollution, an international meeting of ministers was called to deal with the problem. The ministers for the environment from 10 countries met in Ottawa in March 1984. These countries -- Austria, Canada, Denmark, Finland, France, Federal Republic of Germany, Netherlands, Norway, Sweden and Switzerland -- committed themselves to undertaking reductions of annual sulphur emissions by at least 30 per cent as soon as possible, and at the latest by 1993.

They also agreed to urge other signatories to the Convention on Long-Range Transboundary Air Pollution of ECE to take similar action. The ECE encompasses the whole of Europe, the United States and Canada. The Convention was signed in Geneva in 1979 to provide a framework for co-operation on acid rain and related problems.

The countries represented in Ottawa, recognized that environmental conditions might warrant a further reduction in sulphur emissions beyond the agreed 30 per cent. An effective reduction of emissions of nitrogen oxides (NO_x) from stationary and mobile sources will be undertaken by these countries as soon as possible, but not later than 1993.

The issue is relevant for national and international river basins at a global level, since they are the catchment areas of precipitation potentially contaminated by atmospheric releases from sources located elsewhere.

Niger Basin 11/

The problems of the Niger Basin Authority (ABN) were discussed and analysed at the eleventh meeting of the Council of Ministers of the Basin and several corrective measures were adopted. At the meeting, held at Niamey, on 10 and 11 August 1984, it was decided to reorganize the Executive Secretariat of the ABN and to create an ad hoc commission to evaluate its performance, the Executive Secretariat not having fulfilled the expectations of the member countries.

Nine countries (Benin, Burkina Faso, Cameroon, Chad, Guinea, Ivory Coast, Mali, Niger and Nigeria) decided to create the ABN to promote co-operation among the member countries, for the integrated development of the natural resources of the Niger Basin. At the eleventh meeting of the Council of Ministers, however, the performance of the ABN was criticized. The budget presented by the Secretariat was reduced from 375 to 290 million CFA francs, while the project for "nouveau siège", deemed too costly, was rejected.

The Protocol of Measures and Principles of the ABN is to be changed, and proposals for improving the organization have been requested from Member States. A new protocol must be ratified at the meeting to be held in May 1985.

The management of the Executive Secretariat was criticized by some members of the Council, who were concerned about the credibility of the ABN vis-à-vis international financing institutions, and even by some Member States, who refused to pay their contributions to an organization whose performance did not satisfy its constituency. However, many members favour measures to rescue an institution which has undertaken numerous programmes for the long-term development of the Niger Basin.

Argentina: first case brought before the Argentine Supreme Court on the use of interprovincial waters

A case to decide on the allocation of the waters of the Atuel River has been brought before the Argentine Supreme Court. The Plaintiff is La Pampa Province, while the defendant is the Province of Mendoza. Argentine rivers are in the public domain of the provincial (state) governments, including those that cross the borders or serve as boundaries. The Federal Government's power extends only to regulation of interprovincial navigation and trade. Jurisdiction on other uses of the waters of shared rivers pertains to the provincial governments. The provinces can prevent or settle disputes through interprovincial compacts, not requiring the consent of Congress. The Argentine Federal Supreme Court has jurisdiction to solve disputes among provinces, relating to rivers, boundaries and other matters.

The Atuel River rises in the Province of Mendoza in the Andes Mountains and flows into the Atlantic Ocean. The neighbouring Province of La Pampa contends that the Atuel is an interprovincial river and in 1979 sued Mendoza to seek a share of the waters. The Atuel River has an average flow of 32 cubic metres per second and is used in Mendoza for hydropower generation (400 MW), irrigation (65,000 - 90,000 hectares), municipal supply (100,000 habitants) and some minor industrial uses. Mendoza denies that the river

is interprovincial, arguing that its flow to La Pampa is intermittent, and there have been successive periods (one lasting 12 years) during which no water reached la Pampa.

In addition, Mendoza argues that in 1941 a treaty was signed with the Federal Government and Mendoza, under which the Federal Government undertook the building and financing of a dam at El Nihuil and three power stations, all fully located in Mendoza. Wells have been drilled since 1941 by the Mendozan farmers to satisfy demand during the peak months (November-March), adding underground water to the surface water covered by the 1941 agreement. In 1941, La Pampa was a federal territory under federal administration and became a province only in 1954. Mendoza contends that the 1941 agreement is binding on the present provincial government of La Pampa, and that no water can be allowed to flow to La Pampa before the 132,000 hectares having water rights prior to 1941 are served.

Litigation is pending, and a final decision by the Supreme Court is expected by the middle of 1985. Both parties are invoking United States Supreme Court decisions and the principles of the Helsinki Rules. This is the first case in Argentine history involving river litigation between two provinces to be decided by the Argentine Supreme Court.

Book review

A new book on international water law was published in June 1984 by Martinus Nijhoff. The book, entitled Pollution of International Watercourses - A Search for Substantive Rules and Principles of Law (ISBN 90-247-2955-6) was written by J.G. Lammers. Its objective is to examine the substantive rights and duties of the riparian States on an international watercourse in respect of pollution as a problem of public international law.

The first part of the book is concerned with parallel international legal developments related to the pollution of international watercourses. In part two, the author considers the possible existence of rules of customary international law or general principles of law in connection with river pollution. State practice relating specifically to pollution of international watercourses, other transfrontier environmental interference involving water diversion, air pollution, noise and radioactive contamination are examined. The final section of the book considers the question of state responsibility and strict liability of States concerning pollution of international watercourses.

Report on the law of non-navigational watercourses ^{12/}

A second report on the law of the non-navigational uses of international watercourses has been prepared by Jens Evensen, Special Rapporteur for the thirty-sixth session of the International Law Commission. A summary of the principal changes vis-à-vis the first report, analysed in Newsletter No. 4, is given below.

In the first report, the Special Rapporteur focused on concrete issues and aspects, trying to strike a balance between the interdependence of riparian States and their sovereign rights to benefit from the natural resources within their borders. The discussion of the first report in the

Sixth Committee of the General Assembly and at the thirty-fifth session of the International Law Commission seemed to imply that the Special Rapporteur was not entirely successful in striking a balance between the different interests involved.

Although his approach to the preparation of a framework agreement received considerable support, the distinctive political, economic, legal and natural characteristics of each international watercourse were stressed. Whereas there are features common to all international watercourses, each watercourse also has its own set of unique characteristics. General conventions must therefore accept the necessity and validity of having specific watercourse agreements, whether concluded prior to or subsequent to the adoption of a general convention. The discussions seem to support the approach that the term "uses" should not be taken in a narrow sense but should also relate to such issues as environmental protection and pollution, prevention and control of water-related hazards and the various aspects thereof.

Some of the proposals of the first draft were analysed in detail - for example, the concepts of an "international watercourse system", a "system state" and a "system agreement". The Special Rapporteur emphasized that a definition of international watercourses based on a doctrinal approach to the subject would be counter-productive, whether the definition was based on the drainage basin concept or on other concepts of a doctrinal nature. The definition of the term "international watercourse" should not have as its purpose the creation of a superstructure from which to distill or extract legal principles. Such an approach would defy the purpose of drafting principles of general applicability that were sufficiently flexible to "allow adaptation to the unique aspects" of each individual international watercourse. It was stressed, however, that it might be useful to attempt to formulate a definition of an international watercourse for the purpose of the draft convention on non-navigational uses of international watercourses.

The Special Rapporteur reverted to that question in connection with his comments to the proposed article 1, entitled "Explanation (definition) of the term international watercourse system as applied by the present draft convention". He stated, inter alia that:

"For several reasons the international drainage basin concept met with opposition both in the discussions of the International Law Commission and in the Sixth Committee. The concern was expressed that the international drainage basin might imply a certain doctrinal approach for all watercourses regardless of their special characteristics and regardless of the wide variety of issues and special circumstances of each case. It was likewise feared that the basin concept put too much emphasis on the land areas within the watershed, indicating that the physical land area of a basin might be governed by the rules of international water resources law."

The purpose of introducing and adopting the concepts of an "international watercourse system" and "system states" and "system agreements" was to apply terms that would not be exposed to the reservation and criticism with which

the concept "international drainage basin" had been met. But those efforts did not seem entirely successful. Certain doubts were raised at the 1983 session of the International Law Commission.

A number of representatives in the Sixth Committee commended the approach whereby article 1 was drafted in a purely descriptive manner from which no legal rules could be deduced. However, others maintained that the terms "watercourse system" and "system states" were not distinguishable to any appreciable extent from the "drainage basin" concept and should therefore be avoided. Furthermore, no practical advantage seemed to arise from the use of the "watercourse system" concept, according to the views of those representatives. It was likewise stressed that the "unitary approach" inherent in the "drainage basin" concept did not differ much from the approach inherent in the "watercourse system" approach. Other representatives, however, maintained that the approach of the draft, based on the concepts of "watercourse system" and "system states", was an objective and valuable approach that should not be summarily abandoned.

The discussions at the 1983 session of the Sixth Committee of the General Assembly seemed to indicate that the use of the "system" concept approach might be a serious hurdle in the search for a generally acceptable instrument. Accordingly, the Special Rapporteur, in his second report, made tentative suggestions with regard to changes in and amendments to articles of the draft convention contained in his first report.

Since the Special Rapporteur attempted to balance differing views, the second draft presented substantive differences vis-à-vis the first draft. The term "international watercourse system" was generally deleted from the report and replaced by "international watercourse". The term "system state" was replaced by the word "state". No reference was made to hydrographic components and it was expressly stated that the explanations (definitions) given by the draft proposal were valid only within the framework of the convention. Although the importance of ground water was acknowledged, the Special Rapporteur felt that this specific resource must not be included within the general terms of a framework convention.

The Special Rapporteur took special care in stressing that the articles of the convention should not prejudice any special watercourse agreement. According to the Helsinki Rules, the entitlement to a reasonable and equitable share of the use of the waters of an international watercourse is recognized by each watercourse State, within its territory.

In addition to the main philosophical change implied by the deletion of the "system" concept there are several modifications to individual articles. Upon request, the Department of Technical Co-operation for Development will be glad to send a listing of modifications to interested readers.

Call for documents and participation in the information exchange

In view of the scope and purpose of Newsletter, the editor would like to encourage all those who are in a position to do so to contribute to the information exchange exercise with news items or documents of relevance to the Newsletter. The response has been encouraging, and it is firmly hoped

that a growing network of interested readers will be willing to take an active part in this exercise.

Individual copies of the Newsletter are available upon request. Requests should include the names and addresses of offices and officials wishing to receive copies.

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Notes

1/ "River Basin Strategy: International Seminar on the Relevance of the River Basin Approach for Co-ordinated Land and Water Conservation and Management" (pre-seminar publication of contributing papers, University of Linköping, Department of Water in Environment and Society, 1984).

2/ See African Water and Sewage, Industrial and Marine Publications Ltd., Surrey, England, June 1984.

3/ World Health Organization, "Special Report on the Blue Nile Health Project", The Peem Newsletter, No. 9 (July 1984).

4/ Economic Commission for Europe, Committee on Water Problems, "Groundwater Legislation in the ECE Region" (ECE/WATER/R.19).

5/ Ibid., "Flood and Drought Management in the ECE Region", (ECE/WATER/35).

6/ The Stichting International Water Tribunal, Newsletter No. 5 (1983), pp. 2-7.

7/ See Supreme Court of the United States, Syllabus and Opinion, No. 80, orig. State of Colorado, Plaintiff vs. State of New Mexico; and Paul G. Bardacke, Attorney General of New Mexico, on exceptions to special master's report, 4 June 1984.

8/ United Nations publication, Sales No. E/F.84/II.A.7.

9/ Economic Commission for Latin America and the Caribbean, "The Water Resources of Latin America and their Utilization: a Report on Progress in the Application of the Mar del Plata Action Plan" (E/CEPAL/G 1298-E/CEPAL/SES.20/G.6).

10/ "International Conference of Ministers on Acid Rain", Hydata News and Views (American Water Resources Association, July 1984).

11/ See "Bassin du Niger, Autorité du Bassin du Niger, Les difficultés de l'organisation étudiée au Conseil des Ministres", p. 2333, Marchés Tropicaux et Méditerranées, No. 2028, 21 septembre 1984, Paris, France.

12/ See "Second Report on the Law of Non-navigational Uses of International Watercourses" (A/CN.4/381).