LEGAL MEANS TO CONTROL AND AVOID TRANS-FRONTIER POLLUTION *

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INTRODUCTION

Trans-frontier pollution is usually regarded as a "'regional" problem, since it concerns relations between neighbouring states. There is a growing realization however, that the problem has further dimensions: partly because recent scientific evidence indicates that the transnational effects of pollution are beginning to be felt far beyond geographically contiguous states (e.g., the acidification of Scandinavian freshwater lakes by long-distance air pollution from Western and Central Europe, as reported to the 1972 UN Conference on the Human Environment at Stockholm and partly because boundaries are, of course, a universal phenomenon, and the local problems of trans-frontier relations therefore are "common problems" to all states. In particular, they are of equal relevance to developed and developing countries and while the nature of environmental issues between two or more neighbouring countries may to some extent be conditioned by their respective stage of economical development, the legal means to deal with these trans-frontier issues are remarkably interchangeable. The present paper is intended as a survey of methods available for this purpose. I should like to emphasize from the outset that the survey is *not* conceived as a study in international law; on the contrary, it will attempt focus on the much-neglected range of "domestic" legal procedures (legislative, judicial, administrative) for the settlement and/or avoidance of trans-frontier pollution disputes. The approach will thus be predominantly *comparative* rather than "international"—although the interdependence of national and international remedies in this field is quite obvious. In order to place our

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study of methods in context, I will start out with a brief inventory of existing institutions for the solution of trans-frontier pollution problems.

I. Institutions and cases

While the settlement and avoidance of transnational environmental disputes do not necessarily depend on the prior existence of specialized institutions (one of the notable features of the 1974 Scandinavian Convention on Environment Protection, reproduced in the Annex to this paper, is that it does *not* set up any permanent body of inter-governmental arrangements and commissions have traditionally played an important role in this field. The inventory which follows here will provide some illustrations of existing institutions in North America and Europe. It is not meant to be exhaustive, and deliberately omits general regional or universal organizations whose activities include environmental cooperation, unless they are specifically oriented towards frontier problems.

North America:

The International Joint Commission established by the 1909 US-Canadian Boundary Water Treaty, with its Great Lakes Water Quality Board established by the 1972 U. S. Canadian Agreement on Great Lakes Water Quality; and the International Boundary Water Commission established by the 1944 US-Mexican Water Treaty, as supplemented by the 1973 Agreement on the Permanent and Definitive Solution to the International Problem of the Salinity of the Colorado River.

Eastern Europe:

The Danube Commission established in 1948, and several commissions set up bilaterally pursuant to the 1963 Basic Principles on Agreements to be Concluded and COMECON Member States Relating to Cooperation in the Field of Water Quality Conservation; e.g., the Boundary Water Agreement between the USSR and Poland (1964), and between Poland and the GDR (1965, in force 1967). Similar commissions empowered to deal with boundary water pollution questions were established between Yugoslavia and Rumania (1955), Yugoslavia and Hungary (1955), Yugoslavia and Bulgaria (1955).

East-West Europe:

Besides the multilateral Commission for the Protection of the Marine Environment of the Baltic Sea Area, established by the 1974 Helsinki Convention (between Denmark, Finland, FRG, GDR, Poland, Sweden and the USSR), mixed commissions were set up bilaterally by the Boundary Treaty between Finland and the USSR (1960), by water management conventions between Austria and Hungary (1956), Italy and Yugoslavia (1957), Bulgaria and Greece (1964), by the Treaty on the Basis of Inter German Relations (FRG and GDR 1972) and by the 1974 Agreement between Italy and Yugoslavia on Collaboration for the Protection of the Waters of the Adriatic and Coastal Zones Against Pollution.

Western Europe:

Multilateral commissions have been established for the protection of Lake Constance against pollution (Austria-FRG-Switzerland 1960), for the protection of the Rhine against pollution (France-FRG-Luxembourg-Netherlands-Switzerland 1963), for trans-frontier cooperation in the Polar Circle region (Finland-Norway-Sweden 1966), and for regional planning among the Benelux states Belgium-Luxembourg-Netherlands 1969). Numerous bilateral commissions exist for purpose of frontier region planning (FRG-Luxembourg 1964, Belgium-FRG 1971, France-Belgium 1970, FRG-Switzerland 1974) and for boundary water management and pollution protection (Denmark-Germany 1922, Norway-Sweden 1929, France-Switzerland 1962 for Lake Geneva, FRG-Netherlands 1960, Finland-Sweden 1971, Italy-Switzerland 1972. For a detailed table of trans-frontier cooperation on various levels in Western Europe today, see the background papers for the 1973 European Conference of Ministers Responsible for Regional Planning ("Frontier Regions and Regional Planning Council of Europe Doc. CEMAT/73, Strasbourg 1973).

Before concluding this first part, I shall present four cases illustrating the kind of international and domestic procedures available for the solution of transnational environmental disputes.

1. *The Trail Smelter Case.* US-Canadian Arbitral Tribunal, Montreal 16 April 1938 and 11 March 1941; Reports of International Arbitral Awards vol. 3, p. 1905; American Journal of International Law vol. 33 (1939) 182 and vol. 35 (1941) 716; see also the technical expert opinion by Dean and Swain, US Bureau of Mines Bulletin No. 453 (1944).

— The arbitration arose from claims involving trans-frontier air pollution by a smelter factory at Trail, British Columbia (Canada) about 20

Km from the US-Canada boundary. The factory, owned by the private Consolidated Mining and Smelting Company of Canada Ltd., roasted sulphur-bearing ores and emitted sulphur dioxide fumes into the air, which between 1926 and 1937 caused damage to privately-owned agricultural and forest lands near the township of Northport in the U. S. State of Washington. On 7 August 1928, the issue was initially referred to the International Joint Commission established by the 1909 US-Canadian Boundary Waters Treaty; after the Commission's report of 28 February 1931 was rejected by the United States in 1933, the two countries concluded a *compromise* convention on 15 April 1935, whereby Canada agreed to pay $ 350,000 for damage caused up to 1932, while the question of subsequent liability and prevention was submitted to a three-man arbitral tribunal (chaired by a Belgian lawyer). Meanwhile, the smelter company had already begun to install anti-pollution equipment.

The tribunal held that Canada was responsible in international law for the contamination caused by the Trail Smelter. It awarded $ 78,000 to the United States for damage caused between 1932 and 1937; and, on the basis of observations during a three-years test period, rejected claims for alleged subsequent damage, but imposed heavy pollution control measures on the smelter (including emission standards and monitoring procedure which proved effective enough to preclude further litigation. Other trans-frontier air pollution problems along the US-Canadian boundary have normally been dealt with by reference to the International Joint Commission (e.g., see the joint 1966 reference reported in American Journal of International Law vol. 61, 1967, p. 112).

2. *Société Energie Electrique du Littoral Méditerranéen vs. Compagnia Imprese Elettriche Liguri (also sub nom. Societá Elettrica Riviera di Ponente Ing. Rinaldo Negri)*. Italian Supreme Court (*Corte di Cassazione/ Sezioni Unite*), 13 February 1939 Reported in Guirisprudenza Italiana vol. 91 (1939) I, 1, 518; Foro Italiano vol. 64 (1939) I, 1036, with a note by Bassano; English summary in Digest of International Law vol. 3 (1939) 1050; Annual Digest and Reports of Public International Law Cases 1938-1940 (Lauterpacht ed., London 1942) 120.

— The operators of a private French hydro-electric power plant at Fontan, downstream on the Roya river (French-Italian boundary on the Riviera coast) had brought action in the French courts against a private Italian power plant upstream at San Dalmazzo, for damages in tort and/ or breach of a private contract of 11 February 1924 regarding water allocation between the two firms. After obtaining judgments in 1925 and 1926 at Nice, affirmed in 1928 by the Appeal Court at Aix, and after the defendants appeal was rejected by the French Supreme Court (Cour de Cassation) in 1935, the plaintiff brought action in the Italian Appeal

Court at Genoa to have the French judgments enforced in Italy, in accordance with the 1930 French-Italian Convention on the Execution of Judgments in Commercial Matters (League of Nations Treaty Series vol. 153, p. 136).

The Italian Supreme Court, affirming the Genoa Appeal Court decision of 1937, refused to grant *exequatur* to the French judgment, on the grounds that the French courts generally lacked jurisdiction regarding the defendant's water use activities which had been authorized by the Italian state as a matter of public policy, and that of a French-Italian boundary waters treaty of 17 December 1914, even though it referred to the firms' private agreement of 11 February 1914, had the effect of ousting the jurisdiction of the national courts in this matter. After commenting *obiter* on the international duties of riparian states, the court noted without comment that the intergovernmental commission set up by the 1914 treaty had considered the matter at meetings in 1925 and 1926 and had failed to reach agreement.

Under the terms of the 1947 Treaty of Peace with Italy (United Nations Treaty Series vol. 49 p. 126), Italy ceded to France that part of the Roya river basin where the San Dalmazzo power plant is situated, while France guaranteed electricity supply to Italy from the plant until 1961, and "full and equitable utilization by France and Italy of the waters of the Roya and its tributaries for hydroelectric power production" (Article 2.4, 9.2, and Annex III/B, thus reversing the former upstream-downstream roles). The French-Italian Convention of 28 September 1967 on Water Supply for the Municipality of Menton (in force as of 30 November 1971, text in Rivista di Diritto Internazionale vol. 54, 1971, p. 536) provides for shared use of the Roya waters by the coastal towns of Menton (France) and Ventimiglia (Italy), pursuant to a water use concession granted by the Italian authorities to the municipality of Menton, with the latter accepting to finance the waterworks required and to submit to Italian jurisdiction and law for this purpose (including deposit of security for its obligations, third-party liability insurance with an Italian insurance company, and further technical agreements to be concluded directly between the two municipalities concerned).

Poro vs. Houillières du Bassin de Lorraine. Court of Appeals, West Germany, 22 October 1957.

— The owner of the "Rebenhof" country resort in the township of Kleinblittersdo (on the Saar River in West Germany, near the French border) brought an action for delictual damages against the state-owned French Lorraine Basin Mining Company, which operates since 1954 an electrical power plant in the town of Grosbliederstroff (on the opposite bank of the river, in France). The plant burned low-quality coal, emitting

a considerable amount of smoke and coal dust into the atmosphere, resulting in damage to agricultural and horticultural crops and to recreation business in German territory across the river. By 1957, the situation had reached a critical level, with the approximately 4 000 residents of Kleinblittersdorf on a tax strike to protest against the and with a joint parliamentary question presented on 28 March 1957 by 30 representatives in the German Federal Parliament at Bonn.

The court held that under the rules of private international law as applied in Germany, plaintiff had an option to sue under either German or French tort law, which ever seemed more advantageous to him. Since the German plaintiff preferred to base his action on the French Civil Code (Article 1384) because of its easier rules on proof the court affirmed the lower court's verdict awarding damages pursuant to French law.

Subsequently, a number of related claims were settled out of court. Following the recommendations of an ad hoc inter-governmental commission established on 12 December 1957, the defendant company in 1959-60 installed filter equipment and special chimminies partly financed by joint French-German government contributions in the framework of Annex 8 (boundary pollution control) of the Saar Treaty of 27 October 1956 (for political economic background see Freymond, The Saar Conflict 1945-1955, London 1960). Pollution was reported to have been reduced by 90%; according to new public complaints and printed reports in 1971, however, there appeared to be some increase in air pollution from the power plant, due apparently to gradual deterioration of the filters and to the company's reluctance to make further antipollution investments in the plant, which is scheduled to be closed down within a few years. Pollution control along the river boundary is now the responsibility of a permanent international commission established by a French-German Protocol of 20 December 1961 (see French Journal Officiel 1962, p. 8364).

Township of Freilassing and Max Aicher vs. Federal Republic of Austria. Austrian Supreme Administrative Court (*Verwaltungsgerichtshof*), Vienna, 30 May 1969. Reported in Amtliche Sammlung (1969) No. 7582 (A) 264; summary in Österreichische Juristenzeitung vol. 25 (1970) 305, with a note by Schreuer, *ibid*, vol. 26 (1971) 542; French summary by Seidl-Hohenveldern in Journal du Droit International vol. 99 (1972) 647.

— The German township of Freilassing (in Bavaria, near the Austrian border) represented by the mayor, and a private landowner and resident therein, brought formal complaints (*Beschwerden*) in Austria against an administrative decision of 21 January 1969 by the Austrian Ministry of Transport and Nationalized Enterprises authorizing expansion of the Salzburg airport for jet traffic. The complaints were based on the Ministry's failure to include the neighbouring German municipalities and inter-

ested parties in the public hearing proceedings required by the 1957 Austrian Aviation Act in matters relating to airport safety and aircraft noise.

The court held that under the 1965 Austrian Administrative Procedure Act the complainants had no right of standing, on the grounds that the territorial scope of the 1957 Aviation Act was limited to Austria and that its provisions did not confer rights on foreign municipalities or owners of land situated abroad. As regards the foreign landowner's complaint, the court pointed out (citing its previous decisions of 20 June 1963 and 1 June 1967) that not even Austrian adjoining landowners were entitled to participate in the hearings. While noting the conclusion on 16 June/19 December 1967 of an Austrian-German treaty on the subject, the court refused to take the treaty into account so long as it had not been ratified.

Eventually, the treaty was retified on 17 April 1974 and entered into effect on 17 May 1974 (German Bundesgesetzblatt 1974, II, 15; see the forthcoming commentary by Seidl-Hohenveldern, Annuaire Français de Droit International vol. 20, 1974). Since 1972, there exists a civic "Association to Protect the Population Against the Threats of the Salzburg Airport" with some 2000 members in the German residential communities affected, which cooperates closely with a similar 650-members citizens' defense group (founded in 1964) on the Austrian side, and besides opposing any further expansion of current airport operations at Salzburg advocates alternative airport locations.

II. General aspects

One preliminary point needs to be emphasized:

The environmental disputes underlying these cases do *not* differ physically or economically from "ordinary" domestic disputes over water use, air pollution or airport location; they are only legally complicated by the fact that an international boundary happened to get into the way of ordinary local solutions. Obviously, had it not been for the accidents of political geography, the farmers aggrieved by the smelter at Trail could have complained to their local authorities, sued in their local courts, and nobody in Washington/D. C., Ottawa or Mexico would ever have heard of the case. As it happened, the mere existence of the boundary added a new factor and raised local problems to an intergovernmental level where a special international procedure had to be devised to solve them. Ever since Trail Smelter, therefore, international lawyers seem to have concentrated exclusively on the kind of clinical procedure required for this

purpose. Yet if the only cause of the complication here (as compared to "normal" pollution disputes) was the boundary handicap, a more rational remedy would be to eliminate this handicap which distorts the equities and prevents the parties from treating the problem like a normal domestic one. In fairness to the *Trail Smelter* case, it should be noted that under the circumstances, domestic remedies were insufficient for a number of local reasons which I shall briefly discuss later, thus making recourse to international procedure (facilitated by the 1909 US-Canadian Boundary Waters Treaty) an exceptionally attractive alternative. Before drawing over-simplified analogies from this "model" to other transnational disputes, however, the availability of suitable international machinery must be weighed against existing local remedies. Instead of internationalizing a local issue (via an enormous detour to the respective national capitals), a more economic solution in most cases would be to adapt local decision-making processes so that they can handle trans-frontier problems like ordinary local ones of comparable size, (see Sand, Trans-Frontier Air Pollution and International Law, in: New Concepts in Air Pollution Research, Willums ed. Basel 1974, at 109-110).

While this approach requires a number of adjustments between state laws, the social-administrative costs involved would seem to be lower than those of over-sized Trail Smelter procedures. It is worth recalling that this also was the original philosophy underlying the 1909 Boundary Water Treaty, as expressed by Secretary of State Elihu Root before the US Senate Committee on Foreign Relations (Proceedings, Jan./Feb. 1909, at 271):

> If our use of the Milk River injures those settlers down there they have their recourse and their rights can be protected in the American courts instead of becoming a great international question and having all of the people in Canada take an interest in it. It simply becomes a question of litigation before the courts instead of an international question.

Transnational environmental disputes of this familiar type, (i.e. the bulk of transfrontier disputes), hardly seem to warrant on *a priori* exception from the established rule which requires private parties to exhaust the local remedies available to them before international proceedings are initiated, (e.g., the Panevezys — Saldutiskis Railway case, Permanent Court of International Justice, Ser. A/B, 1939, No. 76). As pointed out by Jenks (Liability for Ultra-Hazardous Activities in International Law, Hague Recueil des Cours vol. 117, 1966-II, at 191), the local remedies rule might be impracticable with respect to certain exceptionally dangerous activities where the civil liability of the operator is "virtually merged in

the international liability" of the state; but is *not* inherently inapplicable to environmental disputes over radioactive fall-out, marine or air pollution (as seems to be implied by Paul de Visscher, Cours général de droit international public, Hague Recueil des Cours, vol. 136, 1972-II, at 174). I would hesitate, therefore, to subscribe to the sweeping waiver of the rule advocated by Kiss for trans-frontier air and noise pollution disputes (Kiss, Efforts to Control Air Pollution at International Level, in: Council of Europe, Legal Aspects of Air Pollution Control, Strasbourg, 1972, at 49-50; Kiss & Lambrechts, Les dommages causés au sol par les vols supersoniques, Annuaire Français de Droit International vol. 16, 1970, at 773). Unless effective new international mechanisms are created for private claims settlement, diplomatic protection procedures may turn out to be something of a mixed blessing for the victims. On the other hand, a recent international survey concludes that the proper application of the local remedies rule "results in the disposal at the local level of the great majority of aliens' complaints, where justice, if available, is bound to be more swift and less costly" (Dawson & Head, International Law, National Tribunals and the Rights of Aliens, Syracuse/N. Y. 1971, at 292 note 1; *cf.* Lillich, The Effectiveness of the Local Remedies Rule Today, Proceedings of the American Society of International Law, 1964, at 101).

The 1939 Negri case in the Italian Supreme Court, as summarized above, illustrates what may happen in the event of inadequate international procedures *precluding* domestic ones (other historical examples are one-sided exclusions of individual claims as in the 1906 US-Mexico Rio Grande Treaty). A noteworthy, if inconclusive, attempt at expressly *preserving* private remedies was the insertion (at the behest of Canada) of a clause in Article II of the 1909 US-Canadian Boundary Waters, to the effect

> that any interference with or diversion from their natural channel of such waters on either side of the boundary, resulting in any injury on the other side of the boundary, shall give rise to the same rights and entitle the injured parties to the same legal remedies as if such injury took place in the country where such diversion or interference occurs

(See Griffin, Problems Respecting the Availability of Remedies in Cases Relating to the Uses of International Rivers, Proceedings of the American Society of International Law, vol. 51, 1957, 36).

Even the model cited by Kiss, viz. the 1972 Convention on International Liability for Damage Caused by Space Objects preserves a "domestic option" by adding in Article XI (2), after having nominally waived the local remedies rule:

> Nothing in this Convention shall prevent a State, or natural or juridical persons it might represent, from pursuing a claim in the courts or administrative tribunals or agencies of a launching State. A State shall not, however, be entitled to present a claim under this Convention in respect of the same damage for which a claim is being pursued in the courts or administrative tribunals or agencies of a launching State or under another international agreement which is binding on the States concerned.

Coexistence between international and domestic remedies is thus conceivable. Between the extreme alternatives of categorically precluding or categorically requiring recourse to domestic procedures, there is a whole range of possible ways in which international law may accommodate and use existing channels of environmental dispute resolution on the national level — or may even prescribe the enactment or reciprocal harmonization of national law for this purpose, a kind of "internationally conditioned domestic procedures".

The potential contribution of domestic procedures to the "vertical" or "horizontal" legal order emphasized by Falk (The Role of Domestic Courts in the International Legal Order, Syracuse/N.Y. 1964) is not, of course, limited to judicial law-making. National administrative procedures and practices can have an equally important dispute-preventing effect on the international scale, although there are obvious differences in degree. It is arguable wheter control of foreing-aid activities by domestic environment protection procedures will also avoid transfrontier pollution problems (see Strausberg, The National Environmental Policy Act and the Agency for International Development, International Lawyer vol. 7, 1973, at 52), besides promoting the disclosure of internationally relevant and useful information. There is no doubt, however, as to the crucial preventive function of national law-restricting activities that have environmental effects abroad, such as the New Mexico and Colorado statutes on weather modification (New Mexico Stat. Ann. 1968, Section 75.37.12, Colorado Rev. Stat. Ann. 1963, Section 151.1.111; see Davis, Weather Modification, in: Waters and Water Rights, vol. 4, Clark ed. Indianopolis 1970, at 509).

It follows that our arsenal of international means to resolve or avoid environmental disputes need not be limited to the classical institutions and methods of public international law. Principle 22 of the 1972 Stockholm Declaration, which calls on states to further develop the international law regarding environmental damage (for a drafting history see Sohn, The Stockholm Declaration on the Human Environment, Harvard International Law Journal vol. 14, 1973, at 493), offers too narrow a basis because it fails to mention preventive law-making (besides liability and compensation), and because its "international law" terminology is

traditionally understood as referring to public international law only (as evidenced by the unofficial German translation of the Declaration, where the term is rendered as *Völkerrecht*; see Vereinte Nationen vol. 20, 1972, at 109). Yet a majority among the environmental disputes which transcend national boundaries is likely to require solutions by processes other than those of public international law: viz., private international law (conflict of laws), international civil and administrative procedure, and especially the vast borderland of national lawmaking for international subjects, sometimes described as international administrative law (Neumeyer, Le droit administratif international, Revue Générale de Droit International Public vol. 18, 1911, at 492; id., Internationales Verwaltungsrecht, Munich - Zürich 1909 - 1936).

The wide range of available legal instruments in this category includes:

(a) international sources:

— multilateral agreements, such as the 1974 Scandinavian Convention and Protocol on Environment Protection (English translation annexed hereto), which mainly deals with domestic judicial and administrative procedure, but also affects civil liability and real property rights;
— bilateral agreements, such as the 1967 Austrian-German Boundary Airport Treaty, which provides comprehensive settlement procedures for private environmental (noise) damage claims;
— recommendations of international organizations, such as Council of Europe Resolution (71) 5 on Air Pollution in Frontier Areas (nationally promulgated, e.g. in German Bundesgesetzblatt 1971, II, at 975), which calls on states to grant equal legal-procedural protection to interested parties on both sides of a boundary; and

(b) domestic sources:

— legislation such as the 1967 U. S. Clean Air Act and the 1973 Danish Environment Protection Act, which specifically provide for the participation of foreign authorities in environmental decision-making procedures;
— rules based on judicial decisions, such as the option for plaintiff to choose the law applicable to trans-boundary torts, as formulated in the 1957 *Poro* case;
— unwritten administrative practices, such as the consultation of third-country experts referred to in the 1969 *Salzburg Airport* case (where

the court pointedly, if *obiter*, reminded the German plaintiffs that their allegations had in part been refuted by the Swiss aviation experts consulted by the Austrian authorities), or refusal to permit weather modification experiments near national boundaries (on U. S. practice in the U. S.-Canadian boundary area see Rita and Howard Taubenfeld, Some International Implications of Weather Modification Activities, International Organization vol. 23, 1969, at 811 note 7).

As a rule, these provisions and practices operate between neighbouring states, for typical "regional", as opposed to "global" environmental problems (following the accepted distinction by Russell and Landsberg, International Environmental Problems. A Taxonomy, Science vol. 172, 25 June 1971, at 1308-1309). They have added a new dimension to international "neighbourship law", the conceptual label under which transfrontier environmental relations are often catalogued (see Andrassy, Les relations internationales de voisinage, Hague Recueil des Cours vol. 79, 1951-II, at 77; Thalmann, Grundprinzipien des modernen zwischenstaatlichen Nachbarrechts, Zürich 1951; but see also the critique by Berber, Rivers in International Law, London 1959, at 211). So far this concept —though derived from a private-law analogy—(compare Cosmas and Yocas, Les troubles de voisinage, Paris 1966; Gonzales Alegre, Las relaciones de vecindad, Barcelona 1967; and Gaartner, Verschuldensprinzip und objektive Haftung bei nachbarlichen Störungen nach französischem Recht verglichen mit dem deutschen Recht, Freiburg 1972), has been viewed exclusively from the perspective of public international law, based on an alleged principle of "good neighbourliness" (see von der Heydte, Das Prinzip der guten Nachbarschaft in Völkerrecht, Verdross-Festschrift, Vienna 1960, at 133), while at times stretching *droit de voisinage* to the more controversial political confines of "spheres of interests" (see Wright, Territorial Propinquity, American Journal of International Law vol. 12, 1918, at 541). In contradistinction, the innovative feature of the "environmental neighbourhood" provisions and practices discussed here is that they no longer limit themselves to inter-state relations; instead, they also aim at specific procedural solutions for those common boundary problems which arise from inter-individual claims and relations, for the very purpose of *preventing* these problems from becoming inter-state disputes ("to prevent the internationalizing of private grievances": Lillich, The Procedural Aspects of International Law Institute, International Lawyer vol. 4, 1970, at 748).

For the sake of academic convenience, we may qualify this set of procedures as "transnational" (adopting the helpful *cliché* used by Jessup,

Transnational Law, New Haven 1956, at 2, and previously by Rabel and others), in order to indicate that it contains hybrids partaking of the international and the domestic legal order, of the public and the private law sector. Yet, from a functional point of view, these procedures can all be considered part of a complex system of dispute settlement and avoidance.

III. SPECIFIC PROBLEMS

In view of the predominance of "neighbourhood problems" among transnational environmental disputes, the proper approach for comparative research would be boundary-by-boundary, through a series of regional or bilateral studies, along the lines of the U. S. "Bilateral Studies in Private International Law" initiated by Nussbaum (an excellent start in this direction is the work of McCaffrey, Trans-Boundary Pollution Injuries: Jurisdictional Considerations in Private Litigation Between Canada and the United States, California Western International Law Journal vol. 3, 1973, 191). Rather than embarking on an encyclopedic survey of national procedures—at the risk of facile generalizations—, I shall select a few topics for discussion in the light of the cases summarized above, and taking more recent developments into account. The emphasis will be on areas where environmental disputes are likely to encounter special difficulties or, converseley, seem to offer special opportunities for new solutions.

1. *Jurisdiction and foreign judgments.* Both the 1939 *Negri* case and the 1969 *Salzburg Airport* case serve to underscore the key role and the interdependence of "legislative" and "enforcement" jurisdiction (following the distinction drawn by Mann, The Doctrine of Jurisdiction in International Law, Hague Recueil des Cours vol iii, 1964-I, 1).

On the one hand, difficulties for foreign plaintiffs may arise from rigid territorial self-limitations in the interpretation of national law (see generally Habscheid and Rudolf, Territoriale Grenzen der staatlichen Rechtsetzung, Karlsruhe 1973): the Austrian court in the *Salzburg Airport* case refusing to apply its national Aviation Act for the benefit of foreign landowners or municipalities; the Canadian courts at the time of the *Trail Smelter* case refusing to take jurisdiction over actions involving damage to foreign land (and thereby indirectly compelling the foreign pollution victims to pursue international remedies; see Read, The Trail Smelter Dispute, Canadian Yearbook of International Law, vol. 1, 1963, at 222); or a Belgian scholar's view to the effect that national air pollution legislation would not be applicable where the pollution damage occurred only abroad (Paul de Visscher, La protection de l'atmosphère en droit international, Rapports généraux au VIIe Congrès international de

droit comparé, Brussels 1968, at 339 note 4; *contra* Kiss, La protection de l'atmosphère en droit international, Études de Droit Contemporain, Paris 1966, at 373). Carried to its logical extremes, this attitude could also defeat the choice-of-law option of the plaintiff, formulated in the 1957 *Poro* case: actually, the German court considered "renvoi" but reached the conclusion (at 754) that the law chosen by plaintiff could not be interpreted as declaring itself to be inapplicable to the case. Provisions permitting foreign participation in environmental decision-making (such as the U. S. and Danish laws cited *supra*) may, however, be viewed as indicating a trend against these territorial self-limitations.

Domestic procedural limitations can, in turn, preclude actions against foreign defendants in the absence of jurisdiction *in personam* (although this obstacle is progressively being reduced by extraterritorial service procedures; e.g., pursuant to the 1964 Hague Convention on the Service Abroad of Judicial and Extrajudicial Documents in Civil or Commercial Matters). In order to overcome these traditional constraints, recent environmental legislation of states such as Minnesota (on the US-Canadian boundary) allows the state courts to "exercise personal jurisdiction over any foreign corporation or any nonresident individual" who "commits or threatens to commit any act outside the state which would impair, pollute, or destroy the air, water, land, or other natural resources located within the state" (Minnesota Environmental Rights Act, Minnesota Statute, 1971, Section 116 B. 11, subdiv. 1, b).

The recent case of *State of Ohio vs. BASF Wyandotte Chemicals Corporation et al.*, pending in the Ohio state courts, will test a domestic "long-arm statute" for personal jurisdiction over any person (including a corporation) "causing tortious injury in this state by an act or omission outside this state if he regularly does or solicits business, or engages in any other persistent course of conduct, or derives substantial revenue from goods used or consumed or services rendered in this state" (Ohio Rev. Code Ann. Section 2307.382). In a local action against the German-owned Wyandotte firm for damage due to mercury pollution in Lake Erie, the Attorney General of Ohio also joined Dow Chemical of Canada Ltd., after the U. S. Supreme Court in 1971 refused to take federal jurisdiction over the case (*Ohio vs. Wyandotte Chemicals Corp.*, 401 U. S. 493, 1971; see case comment, Federal Common Law and Interstate Pollution, Harvard Law Review vol. 85, 1972, p. 1439) and thus encouraged state action by what has been called a "rather optimistic reading of the Ohio long-arm statute" (case comment, Northwestern University Law Review, vol. 67, 1972, at 70).

On the other hand, a restrictive judicial attitude towards the legitimacy of extra-territorial law-making (legislative or judicial) by *other* states,

may lead to the non-enforcement of foreign adjudications, via the "jurisdictional test" usually applied in recognition proceedings, as exemplified by the public policy exception raised by the Italian Supreme Court in the *Negri* case (see generally von Mehren and Trautman, Recognition of Foreign Adjudications: A Survey and a Suggested Approach, Harvard Law Review vol. 81, 1968, at 1610). This defensive attitude—which will only be reinforced by environmental "long-arm statutes" of the Minnesota type—is a general phenomenon, and there is probably no point in singling out environmental adjudications for special treatment in recognition and enforcement procedures. While considerable progress has been made in recent years towards international harmonization in this field (the 1966 Hague Convention and Protocol on the Recognition and Enforcement of Foreign Judgments in Civil and Commercial Matters, and the 1968 Common Market Convention on the same subject; see also the 1958 U. N. Convention on the Recognition and Enforcement of Arbitral Awards), certain remaining differences in approach—partly attributable to the interrelations among recognition, jurisdiction, and choice of law—are best overcome in the context of general recognition agreements on a bilateral or regional level. The 1932 Scandinavian Convention on Recognition of Judgments (text in Hudson, International Legislation vol. 6, 1937, 6) thus was part of the common grounds which facilitated consensus for the 1974 Scandinavian Convention on Environment Protection; and the 1930 French-Italian Recognition Convention provided at least a procedural basis for enforcement proceedings in the *Negri* case.

It should be recalled, however, that international judicial/administrative assistance presently does not cover, as a matter of principle, the enforcement of foreign penal, tax, or revenue judgments—a gap which will have to be taken into account in the framing of any international pollution emission (effluent) charge system (a possible analogy for this purpose are enforcement provisions for the decisions of supranational bodies, such as Articles 44 and 92 of the 1951 Treaty on the European Coal and Steel Community, American Journal of International Law vol. 46, 1952 Supplement, p. 107).

Another "open" area is the enforcement of judgments for equitable relief (e.g. an injunction) prohibiting an act which could cause environmental harm or forbidding the continuance of that act (see Robert Stein, Legal and Institutional Aspects of Transfrontier Pollution Control, in: OECD, Problems in Transfrontier Pollution, Paris 1974, at 296). In the United States, there was originally a policy against enforcement of foreign nonmonetary remedies, because of their "extraordinary and discretionary character" (Restatement of Conflict of Laws, 1934, Section 447). State courts were typically reluctant even to try to enjoin activity outside their

territory (Developments in the Law: Injunctions, Harvard Law Review vol. 78, 1965, at 1031). However, the Restatement (Second) now offers a qualified prediction that foreign decrees ordering or enjoining an act will be enforced, "absent undue burden upon the American court" (Ginsburg, Recognition and Enforcement of Foreign Civil Judgments: A Summary View of the Situation in the United States, International Lawyer vol. 4, 1970, at 730). While domestic "long-arm" legislation such as the above-mentioned 1971 Minnesota Environmental Rights Act, would also provide possibilities for injunctive relief against foreign polluters, its enforceability abroad remains doubtful.

Finally, there is the question of jurisdiction over foreign governmental defendants; viz., the spectre of sovereign immunity. The problem was foreshadowed by the *Negri* case; when the private defendant invoked the water use permit granted to him, and actually cited the Ministry of Public Works as a co-defendant, the Italian court found (p. 525) that "a judicial scrutiny regarding the legality of the activities of the company holding the concession, in respect of the works and the utilisation of the river, amounts to a scrutiny of the legality in international law of an act done by the Italian State in the exercise of its sovereign right over public waters. Foreign courts are not permitted to exercise such a scrutiny".

Perhaps the least painful way out of this sovereign dead end—not insignificantly, the *Negri* case was handed down on the eve of World War II—is the claims settlement procedure adopted by the 1967 Austrian-German Boundary Airport Treaty, which provides in Articles 4 and 5 that the German government shall *substitute* its own liability for the civil liability of Austrian authorities, as regards specified claims for damages or taking of property on German territory caused by the establishment or operation of the Salzburg airport, and shall subsequently be *reimbursed* by the Austrian government. This type of transnational substitution is not a novelty in environmental claims settlement; it has been standard practice in claims for noise and sonic-boom damage caused by NATO military aircraft in Europe, pursuant to Article VIII(5) of the 1951 Status of Forces Agreement (United Nations Treaty Series vol. 155 p. 67; e.g., see *Dame Brun veuve Ethevenard vs. French State Treasury*, Tribunal de Grande Instance de Montbéliard, 14 December 1965, Annuaire Français de Droit International vol. 13, 1967, p. 858). As compared to the more traditional "mixed commission" procedure applicable to similar claims involving Warsaw Pact aircraft in Eastern Europe (e.g., pursuant to Article 11 of the 1957 USSR-GDR Agreement, United Nations Treaty Series vol. 285 p. 126, and similar bilateral agreements with Romania, Poland and Hungary, discussed by Kiss and Lambrechts, *op. cit. supra*, at 779), the NATO method permits swift and uncomplicated settlements

in accordance with local procedures and practically without distinctions as to the nationality of the military aircraft concerned (cf. Sand, Neue internationale Aspekte des Fluglärmrechts, in: Studientagung für Luftrecht "Neue Tendenzen im Luftrecht", Zürich 1973, at 21). The procedural fiction whereby the local public authorities are substituted for the foreign public tortfeasor, effectively eliminates the "transnational handicap" and its potential discriminatory effect on the victims; on that level of claims settlement at least, recourse to public or private international law has become obsolete.

2. *Procedural representation of foreign interests.* The principle that foreigners shall have access to domestic courts on equal footing with nationals (the "national standard of treatment", denial of which entails the sanction of state responsibility through diplomatic protection procedures) may be considered as universally accepted (see Dawson & Head, *op. cit supra*) and would thus be *eo ipso* applicable to transnational environmental disputes. The question whether equal access to the courts must also be granted to foreign *collective* interests (e.g. foreign or international civic environmental defense groups) will arise only in those few countries where collective rights of this kind (such as class actions) are recognized in judicial proceedings nationally (for a comparative survey see Cappelletti, Rapport général au IXe Congrès International de Droit Comparé, Teheran 1974). On the other hand, the principle of equal access would seem to apply generally to the procedural rights of foreigners, regarding injuries attributable to the acts or omissions of public authorities (for a definition of attribution see Sohn & Baxter, Responsibility of States for Injuries to the Economic Interests of Aliens, American Journal of International Law vol. 55, 1961, at 576; cf. generally Baxter et al., Recent Codifications of the Law of State Responsibility For Injuries to Aliens, Dobbs Ferry/N. Y. 1973). In countries where special remedies against injurious governmental acts or omissions are provided outside the ordinary courts (e.g., through "administrative courts" and tribunals), the rights of equal access by foreigners will have to be extended accordingly (for a comparative survey see Max-Planck Institute, Judicial Protection Against the Executive, vol. 3, Mosler ed. Dobbs Ferry/N. Y. 1970).

The problem may be said to be different, however, where the aim of the foreigner's remedy is not to seek redress for injury to his own interests, but to challenge administrative action on general (environmental) grounds. The Austrian court in the *Salzburg Airport* case, while using characteristic "national standard of treatment" language in dismissing the individual complaint, clearly hesitated to concede equal treatment under domestic legislation to a foreign municipality, and preferred to bypass the issue by way of its restrictive "territorial" interpretation of the Avia-

tion Act. In the United States, the view has been expressed that the term "any person" as used in the 1970 Michigan Environmental Protection Act (Michigan Comp. Laws Ann., 1970 Section 691.1202.1) would entitle a foreigner to standing in the state courts (McCaffrey, *op. cit. supra*, at 239). However, although the term "any person" is, of course, also used in federal legislation (such as the 1946 Administrative Procedure Act, 60 Stat. 237, Section 10 a), standing was denied to non-resident aliens in actions brought in the District of Columbia to enjoin the U.S. Government from carrying out nuclear tests in the Pacific (*Pauling vs. McElroy*, 278 F. 2d 252, D.C. Civ. 1960, cert. denied 362 U.S. 835), or from constructing the environmentally controversial Trans-Alaska pipeline (*Wilderness Society vs. Morton*, D.C. 1972; *but* see the appeal decision: 463 F. 2d 1261, at 1262, D.C. Cir. 1973).

Partly in view of these impediments, "public interest groups" pursuing transnational goals have begun to organize on a binational or multinational basis in order to meet domestic procedural requirements. In several European frontier regions, joint working groups representing citizens from both sides of the boundary, have been set up to deal with common problems including environment protection; e.g. in the Danish-Swedish Öresund region (1964), and in the Dutch-German Rhine-Ems area ("*Euregio* Working Group" established in 1965 between three municipal associations) and Rhine-Waal area (1971). A Swiss-French-German "Society to Promote the *Regio Basilensis* Working Party" was incorporated at Basel (Switzerland) in 1963 under Article 66 of the Swiss Civil Code; and the French-German "Communauté d'intérêts Moyenne Alsace-Breisgau" (CIMAB) was set up in 1964/65 as a registered association under civil law both in Baden-Württemberg (Germany) and in Alsace (France), where identical legal provisions happen to apply with respect to incorporation pursuant to the old German Civil Code (see von Malchus, La coopération des régions frontalières européennes, Revue de Droit International, des Sciences Diplomatiques et Politiques vol. 50, 1972, 207, 291 at 331). A characteristic feature of these groups is that they combine objectives of civic representation and local government cooperation, a form of transnational communication also postulated in *Council of Europe Resolution* (71) 5 on "Air Pollution in Frontier Areas" (Committee of Ministers, 26 March 1971), which recommends

> that governments of member States of the Council of Europe ensure for the inhabitants of regions beyond their frontiers the same protection against air pollution in frontier areas as is provided for their own inhabitants. To this end they should in particular ensure that the competent authorities should inform each other in good time about any project for installations liable to pollute the atmosphere beyond the

frontier. The competent authorities beyond the frontier should be able to make their comments on such projects. These comments should be given the same consideration and treatment as if they had been made by the inhabitants of the country where the plant is situated or proposed.

(Among the diplomatic background to this resolution may be mentioned: French parliamentary questions in 1960 regarding air pollution from a Swiss oil refinery across the border at Aigle-Collombey, Journal Officiel 1962, No. 14781, p. 1389; Swiss protests in 1969 regarding fumes emitted from a French plant at Annemasse, Revue Générale de Droit International Public vol. 73, 1969, p. 185; and the French-German intergovernmental commission set up in 1967 to settle transfrontier air pollution problems raised by the construction of a chemical plant in the French border-town of Ottmarsheim/Alsace, Procès-verbal de la réunion franco-allemande concernant l'usine P.E.C. Rhin à Ottmarsheim, Paris 19 January 1968).

De lege lata, however, equal representation of neighbouring foreign administrative entitites still is the exception rather than the rule. An example of rather limited participation procedures is Section 115(c) of the 1967 U.S. Clean Air Act (as amended by Public Law 91-604, 31 December 1970):

Whenever the Administrator [of the Environmental Protection Agency], upon receipt of reports, surveys, or studies from any duly constituted international agency, has reason to believe that any pollution referred to in subsection (a) of this section which endangers the health or welfare of persons in a foreign country is occurring, or whenever the Secretary of State requests him to do so with respect to such pollution which the Secretary of State alleges is of such a nature, the Administrator shall give formal notification thereof to the air pollution control agency of the municipality where such discharge or discharges originate, to the air pollution control agency of the State in which such municipality is located, and to the interstate air pollution control agency, if any, in the jurisdictional area of which such municipality is located, and shall call promptly a conference of such agency or agencies. The Administrator shall invite the foreign country which may be adversely affected by the pollution to attend and participate in the conference, and the representative of such country shall, for the purpose of the conference and any further proceeding resulting from such conference, have all the rights of a State air pollution control agency. This subsection shall apply only to a foreign country which the Administrator determines has given the United States essentially the same rights with respect to the prevention or control of air pollution occurring in that country as is given that country by this subsection.

A related, still more discretionary, provision is a footnote appearing in Appendix II of the 1973 U.S. Council on Environmental Quality *Guidelines on Preparation of Environmental Impact Statements*, Federal Register vol. 38, p. 20550: "In all cases where a proposed action will have significant international environmental effects, the Department of State should be consulted, and should be sent a copy of any draft and final impact statement which covers such action." It is my understanding that the State Department communicates the impact statements so received (pursuant to Section 102.2.C of the 1970 National Environmental Policy Act, 83 Stat. 852) to the foreign authorities concerned.

Another example is Section 74(3) of the *Danish Environment Protection Act* of 13 June 1973 (Lovtidende A No. 34, Text 372, p. 1088):

"The Minister for Pollution Control may lay down regulations or decide that appeals [*klage*] may be lodged against decisions under this Act by specified authorities [*mundigheder*] in other countries." (The domestic authorities whose decisions are subject to such appeals also include local government authorities on the municipal, country, and metropolitan level; and according to Section 80-2 of the Act, the national Environmental Appeal Board).

The farthest-reaching provisions in this direction are now formulated in the *1974 Scandinavian Convention on Environment Protection*, which grants the national standard of treatment in judicial and administrative proceedings both to foreign individuals (Article 3, presumably including corporations) and to such foreign administrative authority as will be designated for this purpose by other Contracting States (Article 4). The Convention goes a major step beyond the existing practice of inter-administrative cooperation (see generally Loebenstein, International Mutual Assistance in Administrative Matters, Vienna 1972), which already offers precedents for direct non-diplomatic contacts and trans-frontier intervention under some bilateral and regional agreements (e.g. the 1960 Dutch-German Frontier Treaty, the 1960 and 1966 Austrian-Swiss-German Lake Constance Conventions on Water Quality Protection and Water Abstraction, United Nations Legislative Series ST/LEG/SER.B/12, 1963, pp. 438, 757, and United Nations Treaty Series vol. 620 p. 198; and the Swiss-Italian Convention of 20 April 1972 on the Protection of Boundary Waters Against Pollution, with exchange of letters dated 11 December 1972), including two earlier Scandinavian agreements on mutual assistance in pollution emergencies (the 1963 Nordic Agreement on Radiation Accidents, and the 1971 Copenhagen Agreement on Cooperation in Measures to deal with Pollution of the Sea by Oil). For the first time, equal treatment is formally extended to non-judicial preventive proceedings in environmental matters — partly, perhaps, in despair over the inextricable

blend of administrative, judicial, and quasi-judicial review procedures which is peculiar to Scandinavian public law (see Herlitz, Legal Remedies in Nordic Administrative Law, American Journal of Comparative Law vol. 15, 1967, p. 698; and cf. Sand, Legal Systems for Environment Protection: Japan, Sweden, United States, FAO Legislative Studies No. 4 1972, at 13). Be that as it may, the net result is a recognition of competing foreign interests as legitimate permanent participants in domestic decision-making, thus reflecting a growing realization that pluralism and potential rivalry between divergent *public*, as well as private, interests, is a fact of life in any system of environmental law (for examples from domestic administrative law, see Steiger, Zur Entscheidung kollidierender öffentlicher Interessen bei der politischen Planung als rechtliches Problem, in: Fortschritte des Verwaltungsrechts, Wolff-Festschrift Munich 1973, p. 385). This pluralistic approach to foreign participation certainly is a far cry from the onetime concern — as expressed in the *Negri* case — with "the" public policy of the forum (i.e., the autarchy and presumed inner harmony of domestic procedures) as something to be shielded from any international interference.

3. *Choice and harmonization of Law.* By definition, every transnational environmental dispute involves at least two sets of domestic law, both of which are potentially applicable to the case, and both of which are deemed to be equally qualified for this purpose. Short of resorting to an impartial *third* body of law, related to neither of them (as in the case of recourse to special "international" law laid down by an arbitrator), a choice will have to be made between competing national laws.

The problem has been viewed as a new type of conflict-of-laws situation, calling for a special *droit privé de la frontière* (Niboyet, Les conflicts de lois relatifs aux immeubles situés aux frontières des Etats, Revue de Droit International et de Legislation Comparée vol. 60, 1933, at 487). The *Poro* case illustrates the kind of choice-of-law solutions available for a "trans-boundary tort" (*Grenzdelikt*) where act and injury occur in different states. The comparatively simple method of giving the plaintiff an option to sue under either one of the domestic laws available, well-established in German conflicts theory (e.g., see Kegel, Internationales Privatrecht, 3rd ed. Munich 1971, at 265-271), was followed in a subsequent transfrontier pollution dispute in the same geographical region, with identical results: In a decision of 4 July 1961 concerning water pollution and sedimentation by French mining industries upstream on the Rossel river (a tributary of the Saar), the *Landgericht* of Saarbrücken again applied the French Civil Code "because it is more favourable to the [German] plaintiff", and defendant's appeal was rejected on 5 March 1963 by the same Court of Appeals which had decided the *Poro* case

(see Deutsche Rechtsprechung auf dem Gebiete des internationalen Privatrechts in den Jahren 1960 und 1961, Müller ed. Berlin 1968, at 125). Predictably, this convenient method ended up being codified. Article 4(3) of the 1967 Austrian-German Boundary Airport Treaty reads as follows:

> Claims regarding the effects of airport traffic or airport operations upon persons, property or rights within the territory of the Federal Republic of Germany may be based on German or Austrian law. Where the claims are based on German law, the provisions of Section 11 of the German Aviation Act in conjunction with Section 26 of the German Gewerbeordnung [nuisance remedies] shall apply *mutatis mutandis*, to the extent that the airport is being operated in accordance with the applicable Austrian regulations and within the framework of the present Treaty. The ordinary courts of the Federal Republic of Germany have exclusive jurisdiction for the resolution of disputes regarding such claims.

The option obviously favours the claimant, though probably no more than *a priori* election of the claimant's law would (on Article IV of the *Trail Smelter compromis* in this regard see Dobbert, Water Pollution and International River Law, A.A.A. Yearbook vol. 35, 1965, at 86). A more serious drawback is the fact that choice-of-law is essentially a stop-gap technique which merely confirms a legal *status quo*, without providing incentives for future law reform. While allowing the victims of transnational pollution to escape application of their potentially inadequate domestic procedures and to rely on a "better" foreign one *ad hoc* (thereby discriminating against the victims of purely home-made pollution who can't escape), the less adequate procedure remains intact. As pointed out by a case comment on *Poro*, the situation is bound to remain unsatisfactory in the absence of common standards of pollution control for the boundary region concerned (Boisserée, Neue Juristische Wochenschrift vol. 11, 1958, 1239).

Similar reservations have been expressed as regards the adequacy of choice-of-law solutions for the risks of trans-frontier damage from nuclear power plants and research facilities (Boisserée, Fragen des interlokalen und internationalen Privatrechts bei der Haftung für Schäden durch Atomanlagen, Neue Juristische Wochenschrift vol. 11, 1958, p. 849; Hillgenberg, Das Internationale Privatrecht der Gefährdungshagtung für Atomschäden, 1963), especially since several of the nuclear establishments located near, or right on, some European boundaries are operated by international organizations rather than under the exclusive aegis of national laws (OECD/Eurochemic, Euratom, CERN; on the ensuing complexity of "transnational real property" problems see Zarb, Unité du domaine

public d'une organisation internationale et souveraineté territoriale concurrente de deux Etats, Annuaire Français de Droit International vol. 15, 1969, p. 550).

The emphasis on unification or "approximation" of national laws as a more appropriate alternative (on Common Market use of the technique see generally Eric Stein, Assimilation of National Laws as a Function of European Integration, American Journal of International Law, vol. 58, 1964, p. 1) may appear unrealistic in view of the close interdependence of environmental law and heavily "national" sources such as land and real property law, which are usually ranked lowest on the list of subjects susceptible to international or even regional unification (e.g. see Limpens, Les constantes de l'unification du droit privé, —Revue Internationale de Droit Comparé, vol. 10, 1958, p. 277), and where certain deep-rooted divergencies between domestic procedures are consequently bound to persist (cf. Stoll, Der Schutz der Sachenrechte nach internationalem Privatrecht, Rabels Zeitschrift für ausländisches und Internationales Privatrecht, vol. 37, 1973, at 360). The *Trail Smelter* dispute is a case in point, having started from what was then considered a deadlock between conflicting rules of land law: The Canadian courts, according to their interpretation of the leading House of Lords decision in *British South Africa Co. vs. Companhia de Moçambique* (1893 A. C. 602), refused to accept jurisdiction over suits based on damage to land situated abroad (see Willis, Jurisdiction of Courts: Action to Recover Damages for Injury to Foreign Land, Canadian Bar Review vol. 15, 1937, at 113). On the other hand, the Canadian smelter was unable to follow the normal domestic procedure of acquiring smoke easements from the owners of the land affected abroad, since the Constitution of the U. S. State of Washington precluded alien persons or corporations from holding interests in land in the State (Read, The Trail Smelter Dispute, Canadian Yearbook of International Law vol. 1, 1963, at 223).

It is perhaps worth recalling that the latter obstacle, for one, is neither unique to the Trail Smelter dispute nor probably insoluble. Transnational easements are a familiar device in the management of boundary airports. In the case of the Geneva-Cointrin airport, continuous harassment of Swiss airport operations by adjoining French private landowners (including a balloon barrage organized by a hotel-owner in protest against aircraft noise; see *Viens c. Ministère Public*, Court of Appeals of Lyon, 9 July 1954, Revue Française de Droit Aérien vol. 8, 1954, p. 433) led to Article 5 of the 1956 Swiss-French Boundary Airport Treaty, which provides for mutual readjustments in the respective national laws of real property regarding easements (*servitudes de dégagement*; see Guinchard, La colla-

boration franco-helvétique en natière d'aéroports: Bâle-Mulhouse et Genève, Annuaire Français de Droit International vol. 3, 1957, at 670; cf. Milacic, Les servitudes aéronautiques de dégagement en France: règlementation actuelle et son avenir, Revue Française de Droit Aérien vol. 17, 1963, at 151). It would seem overly pessimistic, therefore, to discard *a priori* the possibility of legislative harmonization even in so "conservative" a category of domestic procedures.

Yet there is no need to await legislative harmonization for these matters on a nation-wide scale. Many of the existing legal discrepancies which complicate transnational environmental disputes could be resolved by the adoption of common standards and procedures specifically designed for, and limited in scope to, the frontier areas concerned. Examples are the "water quality objectives" developed for the St. Lawrence basin by the U. S.-Canadian International Joint Commission under the 1909 Boundary Waters Treaty, and now codified in the 1972 Agreement on Great Lakes Water Quality (International Legal Materials, vol. 11, 1972, p. 694); or the "joint determination of methods for defining quality objectives in frontier areas" envisaged by the environmental action programme of the European Common Market (see the Declaration of the Council on 22 November 1973, Official Journal of the European Communities vol. 16, 1973, No. C-112, at 28; cf. Touscoz, L'action des communautés européennes en matière de'environnement, Revue Trimestrielle de Droit Européen vol. 9 1973, p. 3).

This geographically limited harmonization of domestic procedures recognizes the basic socio-economic fact that frontiers really are *regions* rather than lines (Paul de la Pradelle, La frontière: Étude de droit international, Paris 1928, at 56). Frequently, peripheral regions are "underdeveloped" due to infrastructural disadvantages (transportation, employment, investments, etc.) which they share with each other but not with the central regions of their own states (see Romus, La notion de région frontalière dans les relations entre États de la Communauté européenne, Revue des Sciences Économiques vol. 46, 1971, p. 159). One way of preventing transnational disputes here is joint regional planning, either on the basis of special bilateral agreements (such as the Belgian-German Agreement of 3 February 1971 on Cooperation in Regional Planning Matters which provided the framework, *inter alia*, for the establishment of a joint natural park) or through a general delegation of powers to local government authorities for the conclusion of trans-frontier agreements on a sub-national level (e.g., the cantonal privilege of treaty-making on border relations, pursuant to Article 9 of the Swiss Federal Constitution; cf. the recommendation of "model trans-frontier agreements" by the Second European Conference of Ministers Responsible for Regional Planning,

Council of Europe Doc. CEMAT/73, Strasbourg 1973). A permanent framework for joint regional planning would also permit the integration of environmental and developmental objectives postulated by economists (see Balassa, Regional Policies and the Environment in the European Common Market, Weltwirtschaftliches Archiv, vol. 109, 1973, p. 402). After all, the problem with most transnational environmental disputes is that they rarely are "straight" environmental ones in the first place.

Conclusions: The Role of Prevention

Our *tour d'horizon* of legal remedies for trans-frontier pollution has indicated an extremely wide range of techniques available —international and domestic, public and private, legislative, judicial, administrative; the choices are seemingly unlimited. In concluding, however, I should like to single out one type of remedies, the significance of which cannot be overemphasized in the field of environment protection: *preventive*, or anticipatory mechanisms of dispute avoidance. Anticipatory methods are conceivable not only at the "pre-decision" stage of environmental planning and law-making-although obiously they can be most effective at this stage, where there is still time to prevent environmental difficulties from arising, by appropriate consultation mechanisms either through international boundary commission, through joint regional planning among local government authorities in frontier areas, or through advance notification of legislative projects with transnational effects (as initiated by the Organization for Economic Cooperation and Development on 18 May 1971, OECD Doc. C/71/73 Annex; and recently proposed also by the Commission of the European Communities, EC Bulletin Supplement 3/1973). Considering that trans-frontier pollution cases are, almost by definition, conflict-of-laws cases, various methods to *avoid* conflicts should also be considered at the stage of adjudication and claims settlement: I already mentioned the possibility of advance selection of the applicable national law by way of treaty clauses (as in the 1967 French-Italian Convention on Water Supply for Menton); the procedural fiction whereby transnational claims are treated like domestic ones, with subsequent reimbursement (as in the 1967 Austrian-German Boundary Airport Treaty); and, last-not-least, harmonization (if not unification) of the applicable substantive law on both sides of the boundary, either nation-wide or limited to the frontier regions concerned. Finally, I wish to mention a much-neglected area of preventive legal action; namely, the recognition and enforcement of foreign decisions for equitable relief —injunctions, *mandamus*, or using a generic and less Anglo-Saxon term, "preventive judicial protection".

There is a remarkable practical similarity between modern legal systems when it comes to empower a judge to prohibit certain potentially harmful acts for the future—although the doctrinal starting point may be very different. For instance, the English and the German legal systems both developed injunctive relief basically out if real property law, subsequently extending it to other legally protected interests; whereas French law reached an essentially similar result, *le pouvoir du juge de donner des ordres* from the law of torts (Art. 1382 of the Civil Code), by assimilating the likelihood of future damage (*le préjudice futur certain*) to damage actually suffered (see Kötz, Vorbeugender Rechtsschutz in Zivilrecht: eine rechtsvergleichende Skizze, Archiv für die civilistische Praxis vol. 174, 1974, p. 145). Yet although this type of preventive (and/or temporary) judicial protection has undergone a phenomenal parallel expansion in most contemporary legal systems—both in civil and in administrative proceedings—the mutual recognition and enforcement of foreign *preventive* judgments has lagged far behind, and still is the poor stepchild of international agreements in this area. This could be a priority area for future procedural improvements in our field, and for some serious comparative legal research to begin with.