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COMMITTEE ON ELECTRIC POWER

LEGAL ASPECTS OF THE HYDRO-ELECTRIC
DEVELOPMENT OF RIVERS AND LAKES
OF COMMON INTEREST

GENEVA - Switzerland

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Note by the Secretariat

The first edition of the study on "Legal Aspects of the Hydro-Electric Development of Rivers and Lakes of Common Interest" was issued by the Secretariat in March 1950 for "Restricted" distribution. The Committee on Electric Power at its eighth session decided to remove the restriction, and asked for the document to be distributed widely.

The text originally issued as document E/ECE/EP/98 is accordingly reproduced in the present edition which has, moreover, been brought up to date so as to include the latest treaties.

In the meantime, both the study itself and the problems it raised have been examined by a group of experts under the chairmanship of Mr. VISENTINI (Italy) and the interim chairmanship of Mr. CRESCENT (France); and a recommendation was drafted which the Committee on Electric Power approved on 3 October 1951 at Geneva.

Annex 11 gives a summary of the work of this group, together with the full text of this important recommendation.

November 1951

P R E F A C E
to Document E/ECE/EP/98 (March 1950)

This study was undertaken as a result of the concern expressed in the Committee on Electric Power of the Economic Commission for Europe at the complexity of the legal problems entailed in the hydro-electric development of certain waterways and lakes which border or traverse two or more States. The Committee felt that difficulties of a legal nature might hamper the harmonious development of a European policy on electric power. It therefore requested that this aspect of the problem should be examined and solutions in principle sought which might prove acceptable to the various States, and at the same time be satisfactory from the point of view of the European economy.

The present monograph is not a purely "academic" document, in the ordinary and somewhat invidious sense. Such a work would hardly be in keeping with the attitude of the Economic Commission for Europe towards European economic problems. While the study rests as a matter of course on a careful examination of the most important authorities, it is in no sense a mere catalogue. Its object is to help governments to find suitable solutions for a series of intensely practical problems. The Report defines the fundamental facts of the situation presented, reviews the ways in which this problem has been dealt with by States in specific instances in the past, and assesses the measure of their success in each such case.

An examination of the practice of States shows that, while it cannot be said categorically that riparian States have clearly defined legal rights with regard to the hydro-electric development of rivers which are only partially under their sovereignty, all the riparian States firmly believe that such development work can be carried out only on the basis of their prior agreement. It was for the precise purpose of promoting and facilitating such agreements that it was deemed advisable to assemble in one general study all the data concerning past negotiations and agreements of this type.

The Secretariat is naturally ready to co-operate with the governments concerned in seeking, in the light of the experience reflected in the present study, the most appropriate legal formula for the solution of any concrete hydro-electric development problems. It recognizes that all such situations differ somewhat, and that a single legal pattern is most unlikely to be suitable for all cases. Nonetheless, the general study here submitted, combining as it does a synthesis of the practice of States with an analysis of the fundamental factual aspects of the problem, would appear to supply enough data to permit a beginning at least, in particular cases, towards joint action by European governments, directed to a rational utilization of their power resources.

This study is the work of Mr. Pierre Sevette, Chief of the Power Section, Power & Steel Division of the Economic Commission for Europe. It represents only the first of a series of legal studies to be published in the form of separate pamphlets. The main subjects dealt with will be:

1. Legal aspects of the transmission of electric power in transit through one or more countries;

2. Legislation governing the export of electric power;
3. Comparison of national legislation concerning hydro-electric development with particular reference to the nature of waters, the property regime, the granting of concessions, servitudes and expropriations.

ECONOMIC COMMISSION FOR EUROPE
Geneva.

March 1950.

GUNNAR MYRDAL,
Executive Secretary.

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INTRODUCTION

1. The complexity of legislative problems relating to electric power is due chiefly to the large number of provisions which in every country govern the regime of waterways, the utilization of the hydro-electric power of these waterways and the transmission of power. In view of the extreme diversity of these provisions, it is doubtful whether unification of legislation could, in fact, be contemplated.

The exploitation of the hydraulic power of certain States is undergoing intense development. It is governed by provisions which, based on the public utility nature of the installations, favour the activities of some private individuals, public services or special bodies, while limiting the ownership rights of others.

On the other hand, other countries which are less experienced in the matter, or which have a more specific conception of ownership, strictly limit the scope of expropriation on grounds of public interest, subjecting its enforcement to complicated requirements.

At the present juncture only a "comparative survey" of these different laws could be undertaken. So far as we are aware, such a survey has not yet been made. (1)

(1) Mention should, however, be made of the voluminous work of G. Siegel: "Die Elektrizitätsgesetzgebung der Kulturländer der Erde" (1930), which gives very comprehensive information on the electricity laws of the various European countries, although this is no longer up to date. But this work is not a "comparative survey". The author merely reproduces the text of laws country by country. The problem of unification was taken up by the World Power Conference and Dr. Jaroslav Cerny published under the auspices of that Conference a number of pamphlets including: "Efforts tendant à obtenir une co-opération internationale dans la législation sur le régime des eaux et dans l'administration des eaux" (Tokyo 1929) and "Projets de norme internationale pour les demandes de concession ou autorisation relatives au droit d'eau" (Barcelona 1929).

2.2. Although this unification of legislation may appear difficult or even premature, the way may seem open to the conclusion of "general international conventions", which would help to prepare the ground for subsequent unification.

The national laws of a State are the expression of the equilibrium which has evolved naturally within its frontiers. Similarly, international law should reflect the conditions of life and the actual relationships which prevail between various countries.

There are strong indications that the countries of Europe represented on the Electric Power Committee of the Economic Commission for Europe are seeking to emerge from an era of international policy based on the idea of rivalry between nations to a new era dominated by the idea of conscious solidarity. International law based on solidarity must thus progressively replace that based on rivalry, since the principles of juridical solidarity spring naturally from the ties of economic solidarity between nations.

The development of international inter-connections and of hydro-electric plants in various countries, and the common character of electric plants, renders this solidarity particularly perceptible.

In this connection it might well be asked whether, parallel with the idea of a "national public utility", that of an "international public utility" to serve as a common denominator for all conventions between countries relating to electric power ought not also to be defined. Undoubtedly this new conception, with its train of obligations, can only be accepted with difficulty. But at least it is considered that it will be the more readily adopted in so far as the international public utility coincides with the national public utility as such.

It would appear, however, that the ground is not yet ready to receive the foundations of standard "general conventions". At the present juncture the desire of Governments seems to be to negotiate bilateral or multilateral agreements for each specific case.

3. Nevertheless a number of common principles undoubtedly emerge from the series of conventions already ratified and - although to a lesser degree - from theory and case law. Our aim in this study is to single them out as a guide for future negotiations and as a basis for any recommendations which may be made.

CHAPTER I - RECAPITULATION OF CERTAIN DEFINITIONS

4. In order to avoid any subsequent confusion, it is advisable, at this stage, even before the problem has been described, to determine the terminology to be employed by adopting certain basic definitions⁽²⁾.

Section I National and International Waterways and Waterways of Common Interest

5. The "river system" of a State comprises all the waterways by which it is watered. The size, importance and nature of such waterways may vary. These factors serve as a basis for classifications which differ according to the law of each State.

But there is a distinction which must be drawn when dealing with international law. The three main elements of certain waterways, namely bed, water and banks, are situated on the territory of one and the same State. As a general rule they therefore belong juridically to that State, "in full sovereignty and ownership", to use the old formula. These are "national" waterways which are governed by national law. On the other hand, there are some which separate or traverse two or more States. These must be governed by the rules of international river law *sensu lato*. What designation should be adopted for these waterways?

6. The oldest terminology employed the word "common", a term which we find in the title of a work in Latin published at Leyden in 1835 by J.L. Cramer van der Berg: "Disputatio historica juris gentium continens historiam novarum legum de fluminum communium navigationi".

Article 5 of the Convention concluded on 13 May 1779 between Austria and the Elector Palatine states: "The rivers mentioned in the foregoing Article (Danube, Inn, Salza) shall be common to the House of Austria and the Elector Palatine"

(2) The form of spelling of geographical names used in this study is that taken from the texts consulted. Since in some cases variants may exist, the choice of any particular spelling or transliteration does not imply endorsement by the United Nations.

In the same way, geographical names are given on the map showing principal rivers and lakes of common interest in Europe - Annex 15 - as they occur in the French text.

No boundary changes occurring after 1935 have been shown on this map.

To come nearer our own time we may quote Article 4 of the Treaty of Karlstad between Norway and Sweden, ⁽³⁾ dated 26 October 1905, which states: "Common lakes and waterways shall be deemed to be those serving as boundaries between two States, or situated in the territories of both....".

It is to be noted that this word "common" is open to various interpretations. For instance, the decree of the Provisional Executive Council of the French Republic, dated 16 November 1792, provides that "the water course of rivers shall be the common and inalienable property of all the countries watered by it", whereas Article 39 of the Recess of the German Imperial Diet, dated 25 February 1803, defined the Rhine as "having become, from the boundary of the Batavian Republic as far as that of the Helvetic Republic, a river common to the French Republic and the German Empire". In the second half of the 19th century, the term "conventional rivers" (fleuves conventionnels) was current for a time. But it is no longer used nowadays.

7. The most commonly applied distinction is undoubtedly that made between "national" and "international" waterways.

This traditional classification originated, in essence, at the Congress of Vienna (Articles 1 and 2 of the rules of 24 May 1815 relating to freedom of navigation on rivers and Articles 108 and 109 of the Final Act of 9 June 1815). But the expression "international waterway" itself was not recognized in an official text until the time of the Peace Treaties of 1919-20.

The use has been confirmed by many authors.

(3) Martens, Recueil Général des Traités, Second Series, Vol.34, p.710.

Diena⁽⁴⁾, for instance, begins his chapter on rivers with the sentence: "In the study of rivers from the standpoint of international law a distinction must be made between rivers which flow through the territory of one State only and those whose courses touch the territories of more than one State. The former are called national and the latter international".

Scelle⁽⁵⁾, Bastide⁽⁵⁾, etc. might also be quoted.

The same definition was adopted in the American projects for the codification of Public International Law in 1927: "International rivers are those which bound or traverse the territories of two or more States".

Although the distinction between national and international waterways is mainly theoretical, it has nonetheless served States as a guide to practice. While fundamentally simple and easy to define, it nevertheless merits closer analysis.

8. In our view, a clear distinction must be drawn, in the first place, between waters divided longitudinally, i.e. those bounding two States, and those divided laterally, i.e. those which flow through one or more States. We shall call the former contiguous waters and the latter successive waters.

Some authors have laid great stress on this distinction. Oppenheim classifies waterways in three categories: "national rivers" (i.e. waterways flowing through the territory of one State throughout their course), "not national rivers" (i.e. waterways flowing through the terr-

(4) Diritto Internazionale, Part I, 3rd ed, 1930, p.245.

(5) G. Scelle, "Cours de Droit international public", 1948. 1949

itories of two or more States) and "boundary rivers" (i.e. frontier waterways). Moyé⁽⁶⁾ adopts the same classification. In contra-distinction to contiguous rivers he establishes another category of rivers more truly called international, namely those which flow successively through the territories of several States. Fauchille⁽⁷⁾ may be quoted to the same effect.

The Madrid Declaration of 20 April 1911⁽⁸⁾ admits this distinction and lays down rules to cover both cases.

Winiarski⁽⁹⁾, however, is chary of adopting such a distinction which, he says, "is methodologically unsound" and "leads to overlapping". In our view, however, it is valuable in practice.

Indeed, as is shown below, the boundary is fixed differently according to whether the waterway is contiguous or successive.

Moreover the effects of hydro-electrical development on riparians are less serious in the case of a contiguous river, so that there at least it might be easier to evolve a few basic principles likely to win the unanimous approval of the various Governments.

9. Furthermore, the scope of this definition must be clarified.

Of the various types of waterways we will first take "rivers". These flow directly into the sea. There are also "tributaries" which flow into the rivers. Lastly, there are canals, whether of the lateral or junction type.

(6) "Le Droit des Gens modernes", Paris 1920, p.278.

(7) Traité de Droit international public, Vol.1,
Part II, p.422.

(8) Annuaire de l'Institut de Droit international,
Vol.24, p.355 (see Annex 4)

(9) Droit fluvial international - Recueil des Cours de
l'Académie de Droit international, 1933, Vol.III.

The former take the place of waterways between a certain point upstream and another downstream, while the latter link two different waterways.

Since a river may be international in the territorial sense of the word, as defined above, while its tributaries are national, or vice versa, the question arises what effect the international character of the one may have on the character of the other; or in other words, what bearing the international character of a river should have on its basin.

One view held is that the international character of the main waterway is shared by its tributaries. This view is sanctioned in Article 4 of the Treaty of Karlstad, between Norway and Sweden, dated 26 October 1905, to which we referred above: "Common lakes and waterways shall be deemed to be those serving as boundaries between two States, or situated in the territories of both, or flowing into the said lakes and waterways."⁽¹⁰⁾

Logical as it may appear, this view must be treated with caution since it may lead to unreasonable conclusions. Applied to inland countries which have no outlet to the sea it would make all waterways, even small mountain streams, into international waters. But it is to be noted that in practice the French Government, for example, has never felt obliged to consult the Swiss Government on questions concerning the harnessing of the Rhone or the Doubs downstream from the frontier, and even less so in the case of the harnessing of the tributaries joining the Rhone downstream from the frontier (Isère, Durance, Ain). The

(10) Martens, Recueil Général des Traités, Second Series, Vol. 34, p.710.

Swiss Government, for its part, has never consulted the French Government with regard to the harnessing of the Rhone or its tributaries either upstream from the Lake of Geneva or downstream from the latter in Swiss territory. That is true, at any rate, where the site of the projected scheme was not on a frontier section and where it did not entail diversion of the waterway concerned in the neighbouring territory.

The other view, namely that international agreement is required only in the case of the diversion of waters, is also too restrictive. But it appears to be the one adopted in the Treaty of Washington between Great Britain and the United States, dated 11 January 1909, concerning the harnessing of the boundary waters between the United States and Canada.⁽¹¹⁾ It states that:

"For the purposes of this Treaty boundary waters are defined as the "waters from main shore to main shore of the "lakes and rivers and connecting Waterways.... along which "the international boundary between the United States and "the Dominion of Canada passes, including all bays, arms "and inlets thereof, but not including tributary waters "which in their natural channels would flow into such lakes, "rivers and waterways, or waters flowing from such lakes, "rivers and waterways, or the waters of rivers flowing across "the boundary."

Midway between these views we must place the Agreement between Austria and Yugoslavia signed on 22 October 1923, which refers to a "frontier zone". Similar reasoning led to the drafting of Article 15 of the Italo-Austrian

(11) Martens, Recueil Général des Traités, Third Series, Vol. 4, p. 200.

Agreement dated 28 April 1923, which states that only such sections of successive waters shall be deemed to be boundary waters as are so designated by common agreement.

We shall adopt the definition which emerges from these two cases.

10. The basis of the distinction which we have so far drawn was territorial or geographical, but whether a waterway is national or international in character may also depend on its economic importance, i.e., on its usefulness to the international community or its international value. Hence some authors refer to "waterways of international concern". Such a concept goes beyond the geographical one.

Some waterways which traverse several States may be of no importance in international law if they have no value in international relations and trade. Other waterways which are national in the geographical sense might, on the contrary be classified as international waterways if their use is of public international concern.⁽¹²⁾

Furthermore the adoption of this new criterion would make it possible to incorporate tributaries which are geographically national in the system of international waterways and to proceed from the concept of river to that of basin.

This distinction chiefly arises from the Barcelona Statute of 1921. It should be pointed out straightaway that the latter, a priori, recognises a river as being of international concern only where it separates or traverses two or more States. In other cases, the State concerned is the sole judge of the economic importance of the river and of whether it shall or shall not be subject to the regime applied to waterways of international concern.

(12) In this connection see the records of the General Conference of Barcelona on Freedom of Communications and Transit, 1921.

Although more flexible than the one previously mentioned, this system remains nonetheless very vague. It is based on the concept of international concern, the definition of which is left to the judgment of the States concerned. It nevertheless merits attention. Although it arose originally in connection with navigation, it may also be applied, as we shall see later, to hydro-electric development.

Other definitions based on economic importance have been put forward by certain jurists, among them Mr. Charguéraud, who supplements the traditional differentiation into national and international rivers by subdividing the latter into:

- (a) rivers of general concern, i.e., of concern to riparians and non-riparians and
- (b) rivers of common concern, i.e., of concern mainly to riparians.

Mr. Alexandro Alvarez differentiates (a), among national rivers, those of great commercial importance and those having no such importance, and (b), among international rivers, those of universal concern, those of concern solely to riparian States and those which traverse the territory of only two States and are only partly explored.

Such distinctions, although very sound, may be difficult to apply in practice.

11. Certain writers have endeavoured to link the idea of freedom of navigation with the geographical character of an international river.

.Caratheodory gives the following definition: "Any navigable river which, before flowing into the sea, traverses or separates two or more States and which has, by

general agreement, been made subject to certain regulations as set forth in the Act of Vienna, is to be deemed an international river."⁽¹³⁾

This insertion of a reference to the navigability of a river has the effect of associating two disparate criteria and tends to restrict the number of international rivers. Nevertheless, Rivier⁽¹⁴⁾ and even Oppenheim⁽¹⁵⁾ take the same view: "These rivers are named international rivers, because freedom of navigation in time of peace on all such rivers in Europe and on many of them outside Europe for merchantment of all nations is recognised by international law." But it is clear that freedom of navigation is difficult to define and is subject to many gradations and limitations; however, as Winiarski observes: "a river is international or not international - the idea admits of no gradations."

12. The question nevertheless arises whether the number of international waterways cannot be limited without applying the above-mentioned criterion or whether that expression must be taken to include all waterways, even the smallest streams, which traverse or separate two or more States.

It may, indeed, seem pretentious to apply such terminology in the case of some mountain torrent like, for example, the Rissbach.

It would appear, moreover, that the term "inter-

(13) "Das Stromgebietsrecht und die Internationale Stromschiffahrt", in "Handbuch des Völkerrechts", by Fr. v. Holzendorff, 1887, p.302.

(14) Principe du droit des gens, Paris, 1896.

(15) International Law, London 1905, Vol.1, p.372.

national waterway" is applied only to certain large waterways which, like the Rhine and the Danube, have an international status. To preclude any confusion in this field, therefore, a new definition must be provided.

13. Since we must reach a conclusion, our finding is as follows:

A waterway which serves as a frontier between two countries (contiguous waterway) or which crosses the frontier between two or more countries (successive waterway) may be designated by agreement between the interested countries as a waterway of common interest.

This character does not apply ipso facto to the whole of the waterway in question, or to the whole of its basin. It is confined to a "zone" likewise specified by common agreement between the interested countries.

We shall refer later to the characteristics of this zone. (16)

Section II - The Frontier

14. It is now necessary to define in each of these two cases where the frontier lies.

In the second case (successive waterways), the solution is simple. The waterway is divided into a certain number of sections, the territorial boundaries of which are defined by straight lines connecting the points of the land frontiers situated on the two banks.

(16) These principles may also be applied to the branches, i.e. the portion of the river which flows into the sea usually forming several arms. It has not so far been possible to use these branches for hydro-electric purposes, though the question might arise with the harnessing of the tides.

The same is not true in the first case (contiguous waterways). When a river separates two States the difficulty lies in determining which parts of the waters belong to each State.

One very old theory going back to the Middle Ages places the frontier of each country on its own bank (*Rhenus ex una ripa Galliae ex altera Germaniae lines*). The portion of the river separating two States is then regarded as a neutral space belonging to neither. Certain authors give this as the reason why meetings between princes and the negotiation of treaties used to take place on an island in the river or in the middle of a bridge. For example, Article XXX of the Treaty of Cleves, concluded between Prussia and the Netherlands on 7 October 1816⁽¹⁷⁾, states: "In the absence of stipulations to the contrary, boundary streams, ditches, canals, etc., are to be considered as common to both parties." To our knowledge, a similar theory is still applied at the present day to the Moselle in the sector where it forms the frontier between Luxembourg and Germany. The frontiers are on the banks and the waters are undivided or owned jointly by the two countries.

15. But there are now three main conflicting theories which we shall briefly examine.

(1) Median Line

Each State enjoys the ownership of the waters as far as the geometric centre of the waterway taken at its normal level. This is the oldest theory, based on Roman law under which it was applied to the Rhine.

(17) Martens, *Nouveau Recueil des Traités*, Vol. 3, p.45.

(2) The Thalweg

The Thalweg is the theoretical line drawn in the part of the river bed where the waters are deepest and most rapid. (It is the line of minimum level of the river bed). In the case of navigable rivers, it is the line followed by vessels proceeding downstream. States therefore enjoy the ownership of a volume of water determined by perpendiculars raised from this line.

Although this term "Thalweg" is the one most commonly used, the expression "deep water channel" is also met with, particularly in the Versailles Peace Treaty of 28 June 1919 between Germany and the Allied and Associated Powers, where the use of a term of Germanic origin was avoided.

In 1918 a Paris advocate, M. Claro, proposed that "Thalweg" should be replaced by the word "taphrode", borrowed from the Greek *ταφρος*; river-bed, but this expression has not gained currency.

(3) A third theory consists in differentiating navigable from non-navigable rivers. In the case of the former, the frontier is determined by the Thalweg, and in the case of the latter by the median line. This distinction seems to be the most popular at the present time.

It should be noted that all these theories entail drawbacks. . The level of a waterway varies according to the seasons and if they are unequally embanked the two banks will be watered irregularly, mainly according to their contour. Hence the position of the median line varies according to the width of the waters.

In the case of mountain streams, the Thalweg is also deflected by any considerable flooding. In addition, it is also very difficult to determine in the backing-up zone behind barrages on boundary waterways.

Furthermore, many special cases may arise. A waterway may have several arms, islands may be formed in it and it may change its bed.

(4) A further point to be noted is that countries may fix the frontier by agreement without recourse to those theories.

Furthermore, each State's rights of ownership and sovereignty over the part of a waterway belonging to it have often been modified with no corresponding change in the frontier.

We do not wish to go into details in the body of this document, but in order to clarify this question which even to-day still gives rise to considerable controversy we have listed in Annexes 1 and 2 all relevant documentary material concerning the theory and practice of States.

However, we must adopt certain definitions in this field also. We shall therefore conclude that:

In the case of a contiguous waterway the frontier, in the absence of any agreement to the contrary between the riparian States, is determined by the Thalweg if the waterway is navigable and by the median line if the waterway is not navigable.

Section III Lakes

16. To the few simple definitions given above concerning the river system will now be added similar definitions regarding lakes.

Lakes, like waterways, may be national, international or of common interest, but the distinction

varies according to whether they have or have not an outlet to the sea.

An inland lake which has no outlet to the sea through a river will be national if it is bounded entirely by the territory of a single State (Lake Lucerne, Lake Neuchâtel in Switzerland, Lake Balaton in Hungary etc.). Otherwise it will be international.

In the former case the whole lake is the exclusive property of the State in whose territory it is situated.

On the other hand, where the lake is bounded by several States, the situation is more complex. According to some authorities, particularly Orban in his study on International River Law, the lake is then the joint property of the adjacent powers. But the more general view is that different sections of it belong to the riparian States, in which case the frontier is settled by convention or treaty.

So far as lakes having an outlet to the sea are concerned the questions of ownership and delimitation of frontiers are similarly governed by the principles set forth above. We may take as examples Lake Constance which separates Austria, Germany and Switzerland and has an outlet to the sea through the Rhine; the Lake of Geneva, with France and Switzerland as the riparian States, which has an outlet to the sea through the Rhone; in the United States, Lakes Michigan, Ontario, Huron and Superior, between Canada and the United States, which have an outlet to the sea through the St. Lawrence.

But waterways of common interest sometimes flow into these lakes and this is also a case where a zone may be defined by agreement, although no definite rules can be laid down a priori on the subject. (18)

(18) Lederle, "Das Recht der internationalen Gewässer", 1920; Rokich, "Die Völker- und Staatsrechtlichen Verhältnisse des Bodensees", 1884; Hoenninger, "Der Bodensee in Völkerrecht", 1906.

CHAPTER II - PRESENT STATE OF THE PROBLEM

17. Now that these few points of terminology have been clarified, the next thing is to define clearly the problem under review.

In the case of a given waterway of common interest, to what extent and under what conditions, in the absence of any international common law on the subject or in the absence of an agreement, may a State traversed or bounded by the waterway harness it for the production of electric power?

(The following remarks will also apply to lakes, unless otherwise stated).

We shall begin by noting the great variety of uses to which a waterway may be put, pointing out the specific character of the production of hydro-electric power. We shall then study the relative importance of the latter, and shall finally examine the question of whether it is desirable to draw up a standard form of general convention or whether it will be sufficient to educe certain practical rules for the guidance of States.

Section I - The Various Uses of Waterways

18. A waterway can be put to a very great number of different uses, the main ones being briefly described below. These uses, which do not lend themselves to rigid classification, sometimes entail altering the physical characteristics of the river and, in any case, can raise delicate legal problems when a waterway of common interest is involved. These rules of law combine to make what is commonly known as international river law, which is merely a branch of

international law. This term, however, is generally taken in its strict sense and applies chiefly to navigation. We shall use it in its broadest connotation, taking it to include all the uses to which waterways are put.

19. Waterways are commonly described as "moving highways". Navigation is, in fact, the use with which everyone is most familiar and ample documentation exists on the subject. Permanent commissions have been set up to regulate it. The best known are the Central Rhine Commission, the International Commission of the Elbe, the European and International Commissions of the Danube. A large number of international conventions have also been concluded defining the rights of countries concerning the Rhine, the Scheldt, the Elbe, the Vistula, the Niemen, the Oder, the Neckar, the Main, the Moselle, the Meuse, the Weser, the Danube, the Dniester, the Pruth, the Po, the Douro, the Tagus, the Bidassoa, the Mississippi, the St. Lawrence, the Amazon, the Rio Grande, the Colorado, the Gila, the Rio de la Plata, the Congo, the Niger and the Zambesi, to mention only the most important rivers.

Although less well-known, the problems raised by fishing rights and timber floating are also important and have led to the conclusion of a large number of special conventions.

20. An international waterway can also be exploited for agricultural purposes (irrigation). In the United States of America, in particular, there exists a large number of interstate Protocols governing this aspect of the question. Whereas, however, in the case of navigation and fishing, there is an "inexhaustible" use

of the water, irrigation involves an "exhaustible" use which is likely to reduce the quantity of flow. Furthermore, it entails the construction of dams and in this way raises problems akin to those attending the installation of a hydro-electric power-station.

Although different in character industrial uses are usually classed by authors in the same category as the above. Certain plants use the water of rivers (thermal power-stations, in particular, for feeding their cooling apparatus) and, more often than not, discharge it in a polluted state (as happens with the chemical industries). In this case, it is the quality of the water that is impaired.

Finally, waterways are used to supply drinking water for built-up areas, and in countless international conventions reference is made to this use.

21. A waterway, properly harnessed, likewise constitutes a source of electric power; whence the expression "white coal" which has passed into popular usage.

Arrangements for harnessing the hydraulic power of a waterway at any point may influence stream conditions:

- upstream, to the upper limit at which backing-up caused by the dam is perceptible, and even beyond that point if the damming sets up silt deposits outside the conservation area;
- downstream, to the point where the waterway regains its normal characteristics. This point is determined either by the construction of a "balancing reservoir" or by the influx of water from tributaries;

- on the banks, if the level of the phreatic layer⁽¹⁹⁾ is affected by the harnessing, being either raised throughout the length of the conservation area or lowered along the dried-up section of the waterway.

There is consequently a "zone of influence" both downstream and upstream, within which the essential and utilizable character of the waterway is altered.

22. Since it is advisable in this connection to draw up a precise terminology, we shall take as our source Article 1 of one of the most recent treaties, that signed between the United States of America and Mexico at Washington on 3 February 1944, relating to the utilization of the waters of the Colorado and Tijuana rivers and of the Rio Grande from Fort Quitman to the Gulf of Mexico.⁽²⁰⁾

"To divert" means the deliberate act of taking water "from any channel in order to convey it "elsewhere for storage, or to utilize it for domestic, "agricultural, stock-raising or industrial purposes whether "this be done by means of dams across the channel, "partition weirs, lateral intakes, pumps or any other "methods.

"Point of diversion" means the place where the act "of diverting the water is effected.

"Conservation capacity of storage reservoirs" means "that part of their total capacity devoted to holding "and conserving the water for disposal thereof as and "when required, that is, capacity additional to that "provided for silt retention and flood control.

(19) Name given by Daubrée to the impregnated surface layer resulting from the total and permanent impregnation of the soil by water at varying depths below the surface (from the Greek phreos : a well)

(20) United Nations Treaty Series, Volume 3, 1947 - page 313.

"'Flood discharges and spills' means the voluntary or
"involuntary discharge of water for flood control as
"distinguished from releases for other purposes.

"'Return flow' means that portion of diverted water
"that eventually finds its way back to the source from which
"it was diverted.

"'Release' means the deliberate discharge of stored
"water for conveyance elsewhere or for direct utilization.

"'Consumptive use' means the use of water by
"evaporation, plant transpiration or other manner whereby
"the water is consumed and does not return to its source
"of supply. In general it is measured by the amount of
"water diverted less the part thereof which returns to
"the stream.

"'Lowest major international dam or reservoir'
"means the major international dam or reservoir
"situated farthest downstream.

"'Highest major international dam or reservoir'
"means the major international dam or reservoir situated
"farthest upstream."

Section II - Interdependence and Relative Importance of the Different
Uses to which a Waterway may be put

23. Hydro-economy in the present sense of the term
dates only from the end of the last century and is the
product of a rapid development in technique. Formerly,
the only known methods of utilising the waters were
navigation, fishing, timber floating, water-driven
forges and water-mills and these, by reason of the
simple equipment they required, the low density of
population and the somewhat rudimentary character of
the economic system, rarely got in each other's way.

The situation nowadays is totally different and the manifold uses to which water has been put has made it an integral part of modern life.

Each harnessing of a waterway upsets its natural equilibrium and brings about a whole chain of important and inter-related repercussions. As Mr. Hartig has aptly pointed out, each interference in the régime of a waterway has an effect like that of a stone cast into the water spreading in a series of ever-widening circles.

When, for example, in the course of equipping a hydro power-station, a waterway has to be diverted, navigation and timber floating may be suspended, while certain hydro installations belonging to riparians may be put out of action. The fact that the water level is altered may possibly adversely affect irrigation and the transportation of dredged gravel, ruin fishing and deprive towns and villages of their drinking water supply and their attraction for tourists etc.

There exists then, between the manifold uses to which a waterway may be put, a state of interdependence, a very close solidarity.

24. The question arises whether these various uses can be classified according to their economic importance and an order of priority established. This would mean that, in the event of conflict, a less important use would have to give way to a more valuable one, or at least agree to tolerate any prejudice which might be caused to its interests.

When a conflict arises in international law, as of course in other branches of law, between opposing interests (even though these are legitimate when taken

singly), it is necessary to assess these interests, classifying them in order of importance and deciding which of them should come first. This can be done either by taking time as the essential factor or by laying down certain general principles based chiefly on moral rights.

The law relating to navigation on international waterways is much older than that governing their other uses. In Rome, rivers were regarded as public property "*res publicae jure gentium*" and the State had simply the right of supervision and taxation over them. The principle of the freedom of navigation is also affirmed by the maxim "*riparium usus publicus est juris gentium sicut fluminis itaque cuiuslibet liberum est per ipsum flumen navigare*" (Theodosian Code, lib. 14, titl.27, para.2). But this concept was abandoned in the Middle Ages notwithstanding a few local attempts to apply it, as in 1177 for the Po and in 1255 for the Rhine.

In 1616, however, a Convention signed at Vienna between Austria and Turkey recognized the right of free navigation on the Danube and this was soon followed by other special conventions of the same kind. Not until the end of the 18th century, however, was a general provision formulated. On 16 November 1792, a decree of the Provisional Executive Council of the French Republic provided that: "The watercourse of rivers shall be the common and inalienable property of all the countries watered by it and no nation may without injustice claim the right to have the sole use of the channel of a river and to prevent neighbouring peoples from enjoying the same advantages."

We shall not attempt to trace the full history of the right of navigation, since that would go beyond the

scope of our study. Mention must be made however of the Convention of 1804 on Rhine dues which for the first time set up an international administration. The Treaty of Paris of 30 May 1814 contains an Article 5, a ~~renewal~~ of a proposal made by Talleyrand, which lays down the principle of the complete freedom of navigation on the Rhine "in such manner that it may be forbidden to none." The principle is reaffirmed in Articles 108 to 117 of the Final Act of the Congress of Vienna in 1815, was applied to the Rhine from 1815 onwards and to the Danube after the Congress of Paris in 1856. It was also the guiding principle of the African Conference of 1885.

25. This brief retrospect serves to explain, at least on the time basis, one of the principles underlying the commonly held doctrine that navigation rights have priority over those of other uses.

For instance, Fauchille⁽²¹⁾ does not hesitate to state that: "There is one point which is beyond dispute: a "riparian must never do anything which directly or "indirectly may render impossible the free passage on the "river of the vessels of any riparian or non-riparian "State. In our view, freedom of navigation on inter-"national rivers constitutes a right for all peoples".

This theory has been accepted in a certain number of treaties. We need only mention the view taken by the Belgian Government with regard to the diversion of the waters of the Meuse: "The interests of navigation must "... have priority over all other interests, subject "to such measures as may be required for the safety of "neighbouring territories and the repair of the damage "directly caused".

(21) Fauchille, "Traité de Droit international public", Vol.1., Pt.II, p.452.

The Final Act of the Congress of Vienna stipulated that: "Each State bordering on the Rivers is to be at the expense of maintaining the necessary works through the same extent in the channels of the river in order that no obstacle may be experienced to the navigation."

The decisions of the Supreme Court of the United States have also tended to uphold it, as for instance in the case of Iowa v. Illinois, when it ruled that in the case of a navigable waterway the interests of navigation were the principal interests. Similarly Article 5 of the declaration approved by the Seventh International Conference of American States at Montivedeo in 1933 stipulates that "In no case either where successive or where contiguous rivers are concerned shall the works of industrial or agricultural exploitation performed cause injury to the free navigation thereof" while Article 6 adds that such works should on the contrary try to improve navigation in so far as possible.

26. What are we to think of the "time" basis? Should we accept Fauchille's view that there exists *semper ubique et ab omnibus* a universal right of navigation on all navigable rivers?

In many cases, of course, this ancient right attaching to navigation is of a final and priority nature. At the present time it would appear impossible to interrupt navigation on rivers such as the Rhine and the Danube whose statute has been defined in a large number of treaties, even for the purpose of hydro-electric development, no matter how important or advantageous this may be.

Such priority may also involve the carrying out of certain works such as locks, the construction of

which will be obligatory. But should this supremacy of navigation be made general? In other words, should the laws concerning the use of international waterways be crystallized at a certain point of their evolution? We do not think so and endorse the view expressed in the Report of the Commission of Enquiry to the Barcelona Conference: "There is yet another consequence of technical and economic evolution since the Congress of Vienna. A hundred years ago waterways were principally used for purposes of navigation; today this is no longer invariably the case. Waterways nowadays frequently serve other purposes. Some of them have become, or are capable of becoming, a valuable source of electric power; ... from this point of view the absolute priority of navigation is no longer invariably admissible, and cases may arise where the carrying out of works is perfectly legitimate although such works may be liable to impede navigation."

The actual text of the Statute adopted⁽²²⁾ is, however, less categorical. Article 10, paragraph 1, states that: "Each riparian State is bound to refrain from all measures likely to prejudice the navigability of the waterway"; but this is modified by paragraph 6 which provides that: "A riparian State may close a waterway wholly or in part to navigation, with the consent of all the riparian States. As an exceptional case one of the riparian States of a navigable waterway of international concern not referred to in Article 2 may

(22) League of Nations Treaty Series, Vol. 7, 1921-22, page 50.

"close the waterway to navigation, if the navigation on
"it is of very small importance, and if the State in
"question can justify its action on the ground of an
"economic interest clearly greater than that of
"navigation."

Such a crystallization of the legal system would
be not merely unprogressive but also out of touch in
any case with present-day requirements. In studying
the treaties in their chronological order we shall find
that more and more importance is being attached to
other uses and to the development of power for the
production of electric energy in particular.

27. Some basis other than time must therefore be taken
for the assessment of the relative importance of the
various interests.

In private law human life takes precedence over
property; the interests of the community over those
of the individual, in international law the interests
of the victorious State over those of neutral countries.

In the case of the uses of a waterway of common
interest, however, the task is admittedly more delicate
and is tending to become more and more so. These
interests are in fact extremely numerous and also
highly complicated, and the relative importance of the
various uses of a waterway changes with time.

It is difficult at the present stage of evolution
of the relevant law to arrive at any definite criteria.
Orders of priority vary with different treaties.

The Washington Treaty of 11 January 1909⁽²³⁾ between Great Britain and the United States, relating to the harnessing of the boundary waterways between the United States and Canada establishes an order of precedence as follows (Article 8).

"The High Contracting Parties shall have, each on its own side of the boundary, equal and similar rights in the use of the waters hereinbefore defined as boundary waters.

"The following order of precedence shall be observed among the various uses enumerated hereinafter for these waters, and no use shall be permitted which tends materially to conflict with or restrain any other use which is given preference over it in this order of precedence;

"(1) Use for domestic and sanitary purposes;

"(2) Uses for navigation, including the service of canals for the purposes of navigation;

"(3) Uses for power and for irrigation purposes.

"The foregoing provisions shall not apply to or disturb any existing uses of boundary waters on either side of the boundary."

Article 4 of the Madrid Declaration of 1911 gives priority to navigation. The right of navigation by virtue of a title recognised in international law may not be violated in any way whatever by the use made of the waters. It is true that in this case an international agreement is presumed to be already in existence.

⁽²³⁾ Martens, Recueil Général des Traités,
3rd Series, Vol. 4, page 208.

The above text should be compared with Article 8 of the Geneva Convention of 1923 which safeguards the Regime of Navigable Waterways of International Concern by the following reservation:

"All rights and obligations which may be derived
"from agreements concluded in conformity with the present
"Convention shall be construed subject to all rights and
"obligations resulting from the general Convention and the
"special instruments which have been or may be concluded
"governing such navigable waterways."

The Paris Convention of 23 July 1921⁽²⁴⁾ instituting the definitive Statute of the Danube makes the International Commission "responsible that no obstacle due to the action
"of one or more States is placed on the unrestricted navigation
"of the river" (Art.10).

The Commission may forbid the construction of "works to
"be carried out on the portion of the waterway situated within
"their own frontiers which they (the riparian States) consider
"necessary for their economic development, especially
"those undertaken for purposes connected with the
"utilization of hydraulic power" ... "in so far as they may be
"detrimental to navigation". (Art.14).

The Statute of Navigation of the Elbe signed at Dresden on 22 February 1922⁽²⁵⁾ uses similar language. (Art. 41).

Article 29 of the Treaty of Copenhagen signed on 10 April 1922 between Denmark and Germany stipulates that "an application
"relating to drainage should in general be given preference over
"applications dealing with other improvements".

(24) League of Nations Treaty Series, Vol.26, 1924, page 173

(25) League of Nations Treaty Series, Vol.26, 1924, page 219.

Portugal and Spain in the Lisbon Convention of 11 August 1927 relating to the River Douro go so far as to refuse to recognise the river as a navigable waterway in the international section, where such a character is incompatible with its full utilisation. It is prohibited to lead off any part of the water except for reasons of public health, the reason being that they attribute priority to works to be carried out for hydro-electric development and declare them of "public utility and urgent".

Article 35 of the Convention signed at Prague on 14 November 1928 between Hungary and Czechoslovakia, states that the Contracting Parties shall facilitate the construction of engineering works designed to ensure drainage, irrigation, to supply the frontier communes with water and ensure the utilization of the power produced by the frontier watercourses to advantage.

The Federal Statute relating to the River Colorado enacted in the United States in 1928 establishes the following order of priority:

- (1) Flood control measures, regulation of the flow of the river and the improvement of navigation;
- (2) Storage of water for public use - drinking water - irrigation;
- (3) Generation of electric power.

Finally, we would quote Article 3 of the Treaty of 3 February 1944 between the United States of America and Mexico which stipulates that:

"In matters in which the Commission may be called upon to make provision for the joint use of international waters, the following order of

preferences shall serve as a guide:

- "(1) Domestic and municipal uses;
- "(2) Agriculture and stock-raising;
- "(3) Electric power;
- "(4) Other industrial uses;
- "(5) Navigation;
- "(6) Fishing and hunting;
- "(7) Any other beneficial uses which may be
"determined by the Commission."

If this classification is compared with that given in the Treaty of 11 February 1909 already discussed, it will be observed that greater importance is attached to the use of waterways for the production of electric power.

Dr. Quint observes that the tremendous progress made over the last few decades, to which the vast hydro-electric installations pay eloquent tribute, has not been without its serious consequences in the field of international law.⁽²⁶⁾ We are witnessing the creation of a new type of river law under which priority is no longer granted *eo ipso* to the interests of navigation.

28. An examination of these various provisions shows that no hard and fast order of priority exists in practice. The relative importance of a given use develops with time. Since the period of the Congress of Vienna, the world has entered on the path of economic development. At that time rivers were only highways of trade, but technical progress has since undermined this monopolization of waterways by navigation and other uses of undoubted economic significance have been discovered. At the same time, competition from other means of transport has diminished the importance of navigation.

(26) "Nouvelles Tendances dans le Droit fluvial international": Revue de Droit international et de Législation comparée. 1931 - page 325.

Miss Reid does not hesitate to write⁽²⁷⁾: "Navigation is not as important today as it was prior to the discovery of electric power". The case of each river must therefore be considered on its own merits. If, for instance, the order laid down in the Treaty of 3 February 1944 were applied to the Nile, the results would be inadmissible. The Nile is a navigable river but its historic function has always been to irrigate Egypt, which depends on the Nile floods for its existence. In that case the interests of irrigation undoubtedly have priority over other uses. Any attempt to achieve codification in this sphere would therefore be both dangerous and futile.

29. When it comes to the use of a waterway of common interest, the relative importance of the interests involved would therefore seem difficult to gauge. The following simple rules can however be formulated:

In order to determine the order of priority of the various interests, historical, geographical, political and economic considerations must all be borne in mind whenever any work is carried out on a waterway of common interest.

Even where, by virtue of an ancient right or special circumstances, one use is of paramount importance, this should not put an absolute veto on the complete economic development of the waterway but should merely impose certain servitudes on subsidiary uses.

(27) "Les Servitudes internationales": Académie de Droit international, 1933, Vol. 3.

Lastly, the waterway should not be regarded as a separate entity. The primary aim should be to meet as fully as possible the general interests of the community it serves. (28)

Section III - Advisability of Examining the Problem. Desirability of a General Convention

30. The hydro-electric development of a waterway of common interest by a country, in so far as it alters the physical characteristics of the waterway, is likely to be detrimental to the interests of another State situated within the zone of influence.

This is true both when the waterway passes through several territories in succession, on account of the disturbances set up downstream and upstream, and in the case of boundary waterways. Since the waters are closely intermingled on either side of the theoretical surface constituting the frontier, it is clear that utilization by one State of the part of the waters situated on its own territory is bound to cause prejudice to the other riparian State.

On the other hand, each State has a right both of ownership and of sovereignty - to be examined below - over that part of the waterway situated on its own territory and can, *stricto jure*, make unrestricted use of it.

(28) In this connection see J. Hostie ("Contribution de la Cour Suprême des Etats-Unis au développement du Droit des Gens"): The rule that the interests of navigation are the primary interests should be regarded "not as a strict rule but as a general guide to be followed with due regard for all the circumstances of the case." See also Smith, "The Economic Uses of International Rivers" (page 136) and Dr. Quint, "Internationales Rivierenrecht" (page 6).

Now, therefore, is the undoubted prejudice caused to other States to be reconciled with these rights in personam? A study, in the following chapters, of the solutions provided by legal theory, international case-law and national practice, will throw light on the question.

Before going any further it may be well to make clear the purpose of such a study.

International law relating to the development of hydraulic power is still in its infancy. This is due in the first place, to the modern character and technical aspects of the considerations that have given rise to it. Another reason is perhaps the diversity - which is, however, merely apparent - of the problems to be solved. Finally, most of the States concerned have up to the present displayed a preference for special conventions of limited scope intended to resolve the specific problems which had arisen in this sphere. Hence, despite the importance of its field of application, there are very few "general" texts.

Schulthess⁽²⁹⁾ had already recognized that legislation relating to international waterways was "one of the least developed parts of international law." Smith⁽³⁰⁾ after noting the increasing importance of the use of international waterways in all fields, says: "the use of water for the production of electric power is another development which is ... capable of raising international questions" and he adds: "it is clear that this problem of the economic use of international rivers is one which cannot be completely solved by the

(29) Schulthess, "Internationales Wasserrecht", (1915), page 4.

(30) Smith, "The Economic Uses of International Rivers", 1931, pages 3 and 4.

traditional legal method of seeking for authority in the past. There is a legislative as well as a judicial problem, and the community of nations is as yet without an effective legislature."

However, the hydro-electric development of waterways of common interest is becoming more and more important from a practical standpoint, as we shall see later when we come to study the cases which have arisen or are awaiting settlement (See Appendix 3). It may safely be assumed that this problem will assume particular significance in the years to come under the influence of two factors, namely, the laudable tendency of countries closely to interconnect their national networks and the recently conceived idea of international power-stations.

A further point to be borne in mind is that the hydro-electric potential of countries is not unlimited and that certain States have already harnessed over 50 per cent of their heads. All States having interest to harness those heads which can be developed most economically and give rise to the fewest problems, a large number of development schemes on waterways of common interest have been deferred. However, as an examination of the problems awaiting settlement amply shows, the day of decision cannot be indefinitely postponed. We therefore consider it desirable that this problem should be governed by principles, clearly enough defined to serve as a practical guide for the solution of particular cases.

31. The question then arises in what form these principles should be set out and whether it is possible to codify them in a standard form of general convention to be submitted for the approval of the various governments.

A general rule, to be impartial, must be capable of application to a large number of cases and, in international law the fact that a measure is applicable only to some sixty or so widely differing States is a reason for exercising great caution. This is particularly true where rivers are concerned. The legal position relating to waterways varies from country to country. Each waterway, moreover, has its own individual characteristics. Lastly, the choice of uses to which waterways are put is conditioned by the economic structure of the State concerned. One country needs to develop irrigation, whereas another, with small coal resources, will prefer to install hydro power-stations.

The exercise of caution is also advised by a number of authors:

Dr. A.N. Quint⁽³¹⁾ considers that "people will come gradually to recognise that each river has its own individuality as much from the legal as from the economic standpoint. Although this individuality has perhaps been rather too much neglected by theoreticians, it has always existed in legal practice. It must be taken into account even when this involves favouring interests other than those of navigation. Each international waterway, then, is to be considered on its own merits and its statute should always be the logical outcome of its geo-political character." In his conclusion, Dr. Quint affirms: "Meanwhile, one must never lose sight of the fact that each waterway has its individuality and, hence, the greatest caution must be exercised when drawing up general rules."

(31) Quint, "Nouvelles Tendances dans le Droit fluvial international". (par.27)
Revue de Droit international de Législation
comparée (1931)

Brierly⁽³²⁾ expresses a similar view: "There are many rivers, especially so-called 'international' rivers, which flow through or between the territory of more than one state, which it is desirable in the general interest that the law should regulate so that the maximum of advantage may be extracted from them. But this cannot be done by rules applying generally to all rivers. The political factors which have to be taken into account differ, and so do the uses to which rivers may be put; navigation, electric power generation, irrigation, water supply to cities, are some instances. Some rivers are more important for one purpose and some for another, so that they cannot all be dealt with in the same way; each requires a régime adapted to its own special circumstances. Experience has shown that special river commissions, each with its powers and duties laid down in an appropriate convention, are a more suitable method of regulating the user of rivers than a general law of rivers could ever be."

Finally, Smith⁽³³⁾ says much the same in the following passages: "Experience has shown that these declarations of general principle are of little or no value in safeguarding the interests which they purport to serve. The actual conditions of human intercourse are too complicated to be thus artificially simplified, and attempt to regulate it by rules logically derived from a few general principles are foredoomed to failure In the law of rivers there is clearly no place for any purely legal doctrine derived from any single abstract principle, whether that principle be the

(32) Brierly, "The Outlook for International Law",
The Clarendon Press, Oxford.

(33) Smith, Op.cit. (par.30).

absolute supremacy of the territorial sovereign or the old private law doctrine of riparian rights. The former is as essentially anarchic as the latter is obstructive All good law, national or international, must be the fruit of experience, and premature attempts to force agreement upon specific rules are more likely to do harm than good". Referring to the Declaration of Madrid, which will be examined later, Smith expresses a similar opinion: "Taken as a whole, the resolutions illustrate the dangers of premature attempts at codification. The report of the discussion at Madrid makes it clear that the diplomatic material available for study at the meeting was quite insufficient to illustrate the practical complexities of the problem. In the light of what we now know, it is clear that the formal incorporation of the proposed rules into the body of positive international law would have proved a serious obstacle to the economic development of river systems. Any State which wished to maintain a purely obstructive attitude would have found its position strongly fortified by an agreed rule of law and there can be little doubt that in some cases this advantage would have been used in order to extort a heavy price for consent For the same reasons, the subject is clearly one which is not ripe for codification at the present day. Experience is rapidly accumulating but it has not yet been adequately studied and surveyed as a whole new problems will arise for which no exact precedent can be found and any attempt to codify the law of today would almost certainly put weapons in the hands of the obstructionists."

"What we can do is to study as carefully as possible the available material in order to understand the actual problems presented by international river systems and to analyse the tendencies of international practice. Questions of law will be closely involved with questions of history, geography, strategy, economics and politics. In most cases the statesmen will also be compelled to rely very largely upon the guidance of engineers and other technical experts."

It must be admitted that the only attempt at a general convention, the Geneva Convention of 1923, which will be studied in detail, is open to criticism and has remained a dead letter as far as practical application is concerned.

When the text of it was submitted to the delegates who had devoted so much effort to its drafting, a controversy arose as to whether the principles enunciated should take the form of a series of recommendations or of a Convention. It was this latter form which was finally adopted by 25 votes to 6 with 1 abstention.

Even the Swiss delegate, who in the course of the discussions had several times spoken in favour of curtailments and had always recommended great caution, declared himself ready to accept a Convention.

But this heavy vote in favour can be chiefly explained by the fact that the principle of the sovereignty of States was safeguarded and that the main clauses seemed at that time to be very cautiously worded. However, there is good ground for believing that this virtual unanimity was largely due to reasons of political expediency.

The delegate of Brazil did not hesitate to oppose the proposal. He considered such a draft convention to be premature and particularly emphasized the regional nature of the questions involved.

33. However attractive the idea may be and although we have seriously considered it, we are of the opinion that the aim of this document, if it is to serve a useful purpose, should not be the ultimate formulation of a draft general convention. In any case, the majority of the delegations on our Committee on Electric Power have, quite recently, uttered the warning that any attempt at codification would be premature.

Were we to put forward such a draft standard form of general convention, the principles it contained would inevitably have to be vague to obtain the agreement of all parties on a minimum programme. In view of the present somewhat retrograde trend in the doctrine of sovereignty, we do not consider that by so doing any useful contribution would be made to the progress of the question under review. On the contrary, in view of the increasing number of cases arising in this field as hydro-electric development expands, it seems necessary for a complete study to be made of the question with a view to bringing out the differences in international practice and, insofar as that is possible, to reducing any general ideas that might emerge.

In the chapters which follow, we propose to study the general principles governing the hydro-electric development of waterways of common interest. We shall then consider separately the arrangements such development entails in respect of the other uses of waterways and, in particular, in respect of navigation, the allocation of profits and the questions of procedure.

CHAPTER III PRINCIPLES GOVERNING THE HYDRO-ELECTRIC DEVELOPMENT OF
WATERWAYS OF COMMON INTEREST.

34. These principles derive from theory, case-law and national practice.

We shall begin by outlining the first two sources, subjecting them to critical analysis, and then proceed to examine national practice in closer detail.

A. Theory

35. This is derived in the first place from the work of the Institute of International Law and from occasional formulations by governments. The main sources are, however, the writings of a number of authors and the fundamental principles of law.

Section I The Institute of International Law

36. It was during its Congress held at Madrid on 19 and 20 April 1911 that the Institute of International Law adopted the text of "International regulations regarding the use of international watercourses for purposes other than navigation", more commonly known as the "Declaration of Madrid". (34) (See Annex 4).

Up to that time, Conventions dealing with watercourses had hardly contemplated any problems beyond those of navigation. Problems concerning the industrial and agricultural utilisation of watercourses had not been touched on. Messrs. von Bar and Harburger first broached the question when, at the Congress of the Institute held at Paris on 1 April 1910, they tabled a motion with the

(34) Yearbook of the Institute of International Law,
Vol. 24, p.365.

object of "determining the rules of international law relating to international rivers from the point of view of the utilisation of their energy." This motion was carried and Mr. von Bar, a professor at Göttingen University, was asked to present a report on the subject to the Congress at Madrid.

The Declaration draws a distinction between the two cases we have already examined.

The first case arises where a watercourse forms the frontier between two States. It is laid down in particular that "neither of these States may, without the consent of the other and without special and valid legal title, make or allow individuals, corporations, etc. to make alterations therein detrimental to the bank of the other State."

Thus we find here clearly restated the two principles of restricted sovereignty and of previous agreement.

The second case arises where a watercourse traverses successively the territories of two or more States. The articles propounded under this head reproduce in general terms some of the limitations which we shall come across in studying the special Conventions. First of all (Article 1): "The frontier between the two States in question cannot be changed by the construction of establishments by one of the States without the consent of the other." Further all alterations of the water are forbidden. The alteration may be qualitative and due to the emptying therein of "injurious matter" or to a natural or artificial deposit of matter. But it may also be quantitative if a certain volume of water is taken from the river. More generally Article 3 provides that the "utilisable" or "essential" character of the watercourse when it reaches the territory downstream

shall not be "seriously" modified. We know that such disturbance may also extend as far as the upstream riparian; Article 5 therefore states that: "a State situated downstream may not erect or allow to be erected within its territory constructions or establishments which would subject the other State to the danger of inundation." The damage caused is taken here in a limited sense.

This text and in particular its second part is regarded by many authors as incomplete.

Smith criticizes it severely. He recognizes the necessity of the principle that the consent of both States is necessary for any substantial alterations in the character of a waterway of common interest, but, in his opinion, the Declaration of Madrid fails to state that there is any positive duty incumbent on the opposing party of granting consent in cases where it cannot reasonably be refused. He claims therefore that, as it stands, the Declaration would seem, like the private law doctrine of riparian rights to consecrate the right of veto: "The duty of giving consent is just as important as the right of withholding it".

It must, however, be borne in mind that this text represents the first step made along this path. Although certain countries and some authors may have criticized it as obsolete and too general, the fact nevertheless remains that the principles it thus laid down for the first time were re-affirmed in the Geneva Convention and also inspired a large number of Conventions of that period, two facts which, in our opinion, constitute not the least of its merits.

37. On 23 July 1932, a report preparatory to the work of the Seventh International Conference of American States at Montevideo was published by the Permanent Committee on

Codification of Public International Law "on the general principles which may facilitate regional agreements between adjacent States on the industrial and agricultural use of the waters of international rivers." This report begins by defining the right of a riparian State as being "an exclusive right conditioned, however, in its exercise upon the necessity of not injuring the equal right due to the neighbouring State." It then cites the words of the Declaration of Madrid which laid down "certain principles which constitute a well-defined outline of juridical regulation of the subject", principles "dictated by reason, having in view not only the complexity of the relations between States through whose territories streams run, but also interests of a more general character, such as those relating to navigation and public health, which might be injured by the contamination of the waters or the poisoning of fish." The report, the text of which is given in Annex 5, concludes that "For the utilisation of waters of international rivers for industrial or agricultural purposes, agreement between the riparian States is indispensable, since such utilisation on one side may in various ways affect the other bank if the river be the boundary, or affect the territory of the neighbouring State if the river runs through it. This fundamental principle is foreseen in the programme."

Section II

The Theoretical Standpoint of Certain Governments.

38.

There are few examples of a government being led to formulate a general definition of its theoretical standpoint with regard to the hydro-electric development of waterways of common interest. Such a theoretical standpoint must not be confused with the practice of States as reflected

in the conventions concluded by one country with various others. The information contained in this section should therefore be regarded as purely tentative.

The chief case in question is that of Bavaria and Austria.

The most important waterways constituting part of the Austro-Bavarian frontier are the Inn, the Saalach, the Salzach and the Danube. Although their hydro-electric development has given rise to no official agreement between the two countries, during diplomatic negotiations between Bavaria and Austria with reference to the proposed diversion of the Tyrolean Ache by Austria, the two States formulated the following common viewpoint:

- a) It is recognized that neither State enjoys exclusive rights over the total volume of the waters of contiguous waterways, but that, by virtue of general principles of law, each of them - apart from exceptions arising from special legal circumstances - may claim the right to exploit half the volume of the waters of the waterways in question;
- b) To ensure that the hydro-electric development of a particular waterway takes place under the most favourable economic conditions, it would be desirable, in each individual case, to seek by common agreement what manner of developing the hydro-electric resources of the waterway is calculated to give the highest yield from both the technical and economic standpoints;
- c) Should the study point to the conclusion that the

most rational solution is not the sharing of the volume of the waters but some other form of exploitation such as a division based on the gradient of the river bed, the right to the harnessing, in one or the other State, of the hydro power in question and to the use of the volume of water belonging to the other State will be conceded on condition that the economic interests of the renouncing State and the possible rights of private individuals concerned be safeguarded. That being so the latter State would not refuse to the other State, or to a national of the other State seeking the concession, the right of harnessing the volume of water to which it or he is entitled.

This principle has since been re-affirmed in negotiations between the United States and British Military Governments in Germany, on the one hand, and the Austrian Government, on the other, for the joint development of the hydro power of those reaches of the Inn, the Saalech and the Salzach which form part of the frontier. These negotiations envisage the setting up of an Austro-Bavarian joint stock company for the joint exploitation of the frontier reaches, each State holding half the shares and the power produced being shared out in the same proportion.

This principle has further been confirmed by the so-called Vienna Agreement of 1947 between the American and British Military Governments in Germany and the Austrian Government on the provisional regulation of the power produced at the two frontier power stations of Ering and Obernberg which were erected on the Inn during the second world war at a time when Germany and Austria were one.

Yet Bavaria has not adopted the Austrian position with regard to successive waterways, which is as follows:

- a) In accordance with the law of territorial sovereignty, such waterways are at the entire disposal of each country throughout the whole stretch within its territory;
- b) without prejudice to the above legal standpoint, Austria would be willing, for the purposes of a more rational development of the waters and on a reciprocal basis, to communicate to the neighbouring State any plans for the development of waterways crossing its territory and to give representatives of that country the facility of familiarising themselves with such plans;
- c) the neighbouring State would be in a position to inform Austria of any objections it might have to such plans. Should Austria recognise the justification of those objections on legal, technical or economic grounds, an accredited Austrian representative would put them forward during the legal enquiry into the case, the administrative authority having however complete freedom of decision.
- d) the views of the neighbouring State would be represented only if a previous agreement had been reached on the economic and legal compensations involved.

Section III. The Authors

39. International river law has inspired a large number of works, chiefly centring on the question of navigation, and

a considerable amount of documentation exists on the subject of the legal origins of the principle of free navigation. On the other hand, the other uses to which international waterways may be put have received little attention from jurists.

40. Few authors maintain the first argument, that by virtue of a right of unrestricted sovereignty over the part of a waterway belonging to it, a State is free to use it regardless of the prejudice caused to other States.

That, however, is what Klüber claims. Writing in 1819 (35) he remarks that "the independence of States is particularly marked in the free and exclusive use of their right over the whole extent of the waters (in their territory)." Admittedly, at the time when he published his work there was no question of installing hydro-electric power stations, but the rules he states are kept in very general terms and he later confirms them in the following words: (36)

"A State is entitled not only to possess and use the territory but even to add to it by means of alluvial deposits or avulsion It is entitled to exploit its territory to achieve its proper objects by such means, amongst others, as changing the course of waterways, even if that might turn out to be to the detriment of other States."

An Austrian jurist, Bousek (37), likewise supported this argument. It should, however, be observed that he relied on some inaccurate data in developing his argument. To begin with, he claims that Schenkel favoured the principle

(35) "Droit des gens modernes de l'Europe", quoted by Van Eysinga, "Les 4 fleuves et canaux internationaux", p.130

(36) Europäisches Völkerrecht, 2nd edition, 1851, para.134.

(37) Bousek, "Internationales Wasserrecht" (in the "Protokoll über die internationale Wasserwirtschaftliche Konferenz," Berne 1912) page 70 et seq.

of unrestricted sovereignty. That is not strictly true. Schenkel (38) only criticises the attitude adopted by the German Reichsgericht in a judgment rendered in 1927. This court had in fact conceded that a State not only should not harm a neighbouring State, but in some cases owed a duty to take positive measures. Schenkel, however, only wishes to concede the "negative" principle of non-tortfeasance (artificial change of the mode of flow) and not the "positive" principle of the protection of the rights of neighbouring States.

Schenkel's as well as Bousek's obscurity seems largely due to the fact that these authors do not clearly differentiate between public international law and private or administrative international law. It is also curious to note that Bousek relies on an agreement concluded between the United States and Canada in 1909 whilst other authors, like Schulthess and Oppenheim (39), adduce the support of the same agreement in order to advance an argument to the contrary.

41. Some writers, pursuing the opposing principle to its extreme conclusion, would deny a riparian State the possibility of harnessing that part of the waterway flowing through its territory, should such development be likely to prejudice other States. Hüber (40) seems to maintain this view when he says:

(38) Schenkel, "Badisches Wasserrecht", 2nd edition, paras. 11. and 14.

(39) Oppenheim, "International Law," 1929. Vol. I, p.321.

(40) Dr. Max Hüber, "Ein Beitrag zur Lehre von der Gebietshoheit an Grenzflüssen" in the "Zeitschrift für Völkerrecht," page 159 et seq.

"As a general rule, each State disposes freely over its territory and exercises its authority over such territory exclusively; it is not entitled to act on foreign territory, nor bound to tolerate outside action on its own territory. The only actions which, having been committed beyond the State's frontiers, may be regarded as unlawful are those which have a bearing on the natural or artificially constituted state of affairs, and hence on the rights of the other State."

On the one hand, absolute sovereignty of the State taken as far as its strictly legal consequences will go. On the other respect of the proprietary rights of the other State likewise applied in its most extreme and even tyrannical form. Such are the two principles which clash when the question of developing a waterway arises. As might well be supposed, there gravitate around these two extreme poles numbers of more subtle theories claiming various sources of inspiration. We propose first to outline them in brief and later to make a coherent analysis of them with reference to the basic principles of law.

42. To begin with mention must be made of certain writers such as Grotius and Puffendorf who based their theories on the doctrine of the school of natural law and the law of nations.

Grotius, for example, considers that all goods were once the common property of all men. Gradually a division of these goods came about; some men then reserved their rights over things which had become the property of others, their intention in so doing being to depart as little as possible from natural equity. From this he deduces that "in very grave necessity the pristine right is revived of

making use of things as if they had remained common property, since in all human laws, and consequently also in the law of property, this extreme necessity seems to have been accepted."

Grotius carries his theory even further. From this original community of property he deduces the right of inoffensive use. A people, according to his view, can justifiably occupy a part of foreign territory if the masters of the latter, having other more fertile land, leave it uncultivated. Thus, the right of sovereignty gives way before the right of the person affirming his need of the uncultivated part of another's territory.

Puffendorf, for his part, tempers this theory by introducing the concept of sociability which he likewise derives from natural law. "Every man should cultivate and observe towards others a social attitude, which is peaceful and agreeable at all times to the nature and need of the human race hence, all things which necessarily work to that sociable attitude are understood to be commended by natural law and all that disturb or destroy it to be forbidden."

In the eyes of Puffendorf, the "necessity" spoken of by Grotius does not justify unlawful acts but only excuses them. There is hence no longer any question of a real right but rather of an imperfect obligation, a law of humanity similar to that which obliges one to aid one's neighbour in distress.

According to him, however, this obligation is an overriding one, permitting those driven by urgent necessity to resort to force and to take for themselves what is unjustifiably denied them.

Among the other jurists who refer back to natural law and make it the basis of the law of nations are Wolff and Vattel. These latter, while enunciating the general law ~~that each nation~~ "should contribute to the happiness and perfection of other nations to the fullest extent of its power" go on to state that, charity beginning at home, a nation's duty to itself is "primarily and preferably to do all in its power for its own happiness and perfection." Furthermore, each nation also derives from nature the right to the peaceful enjoyment of liberty, which hence must be preserved. Their doctrine is no longer as categorical in its consequences as that of Grotius, especially as they establish a distinction between perfect and imperfect rights. Thus, though each nation has preserved from the primitive community some right over things belonging to others, these constitute exceptional and "perfect" cases.

They regard as justified the seizure of another's possessions even by force in case of refusal, Vattel quoting in support of the seizure by force of things indispensable to the seizer, the case of taking food and even that of abducting women (justification of the rape of the Sabines). The aim pursued being, however, to help society along the road to perfection, natural law must be aided by political laws arising from existence of an international society, such laws being either conventional or customary laws. That imperfect natural laws also exist can be seen when a State cannot demand from another the accomplishment of a duty by virtue of political laws. Thus, as regards rivers, the two authors recognise that they are subject to territorial sovereignty. They belong to all for the purpose of drinking and drawing water but the sovereign State can quite justly deny the right to this use when its exercise is to its detriment.

Hence it is on its consent that depend the conditions to which it may subject the right it grants.

43. Separate mention must be made of Engelhardt, since, not content with basing his argument on the principles of natural law, he strengthens his thesis by quoting the celebrated passage of the Institutes "Et quidem naturali jure communia sunt omnia haec aer aqua profluens et mare et per hoc litora maris - Flumina autem omnia et portus publica sunt." For him Roman law is the expression of natural law. Waterways, *naturalem census sui rigorem tenens*, form part of public property and can belong to no person because nobody has the means of capturing them, since servitude is incompatible with their constant mobility. "There is in any case nothing to be gained by monopolising an exhaustible object which is constantly renewed, of which all have an equal need and which each can use without diminishing the share of the others."

Vernesco (41) Carathéodory (42) and Demorgny (43) express similar views, the latter affirming that 'natural law recognises no privileged riparian peoples. Rivers are property common to all and are subject neither to servitude nor condominium.

Some writers have reverted to this idea of condominium or rather coimperium. We have already met it when studying the determination of frontiers in contiguous waterways.

(41) Des fleuves en droit international, 1888.

(42) Du droit international concernant les grands cours d'eau, 1861.

(43) Le Danube, 1911.

According to this concept there would be a common sovereignty of the two States over the river. The Decree of 16 November 1792 stated that "the water course of rivers shall be the common and inalienable property of all the countries watered by it." Oppenheim speaks of "gemeinschaftliches Eigentum" (joint tenancy).

Rivier ⁽⁴⁴⁾ considers that contiguous or successive waterways are the common property of the riparian States. Thus in addition to its right of sovereignty over the portion of the river contained in its territory each State has a right of co-sovereignty over the other parts of the river.

44. Some authors base their limitation of the sovereignty of States over the portion of waterways of common interest flowing through their territory on the concept of natural international servitudes.

The State for the benefit of which a servitude existed would be obliged "civiliter uti" its right, which means that it could not cause any damage to the restricted State beyond what was strictly necessary.

Heffter says that "the natural relationships of States which have to develop side by side carry in themselves the necessity of certain restrictions of sovereign rights They have been given the name of natural public servitudes" (~~servitudes juris gentium necessariae~~). To these are added the positive servitudes to which States have ~~freely~~ consented (~~servitudes juris gentium voluntariae~~) through treaty or custom.

As a result of the former, a State is obliged to receive the waters which flow in a natural manner from an adjacent State, and must not divert the course of a river in harnessing it. In short, it must not cause injury to the neighbouring State.

(44) Principe du droit des gens, 1896.

Miss Reid (45) makes a distinction between negative and positive servitudes. She points out that natural resources are unevenly distributed, and that this maldistribution is further complicated by the establishment of arbitrary frontiers between sovereign States. In her view, negative servitudes constitute one means of bringing about a better distribution of natural wealth. "A significant application of a negative servitude," she declares, "already occurs in connection with the control exercised over the diversion of waterways - a problem aggravated by the rapid development of hydro-electric power, since uncontrolled diversion might eventually ruin a particular industry depending on that power, or even the electrical industry itself." In support of her argument, the author quotes the Treaty of Versailles, whereby Germany bound herself not to undertake or to allow the construction of any lateral canal or any derivation on the right bank of the river opposite the French frontiers. She contends that this restriction is the corollary of the positive servitude, granted simultaneously to France, of taking water from the Rhine to feed canals, whether existing or to be constructed, and conferring on her the exclusive right to the power derived from works of regulation on the river.

45. Private law, says Fauchille, has formulated in similar cases a theory which should guide us. Relationships of contiguity or neighbourhood between properties belonging to different owners necessarily result in a conflict between their respective rights. Such conflict can only be

(45) Op. cit. (par. 28.)

resolved by means of certain limitations imposed on the exercise of the rights naturally inherent in the property. He then enumerates a number of consequences which he regards as accepted a priori in the absence of conventions, namely:

1. a riparian can never change the point where a watercourse enters the territory of a riparian State, without the consent of that State, as such a change is equivalent to a modification in the latter's actual territory

2. A riparian cannot make or allow to be made in its territory constructions or establishments which will be a cause of floods affecting another riparian;

3. a riparian cannot perform in the part of the river which flows along its border acts which will have the effect of drying up and completely eliminating the waterway on its arrival in the territory of another State. That again would be a violation of the very constitution of the territory of that State.

Quint also thinks that conflicts of interests which arise in connection with international waterways "derive essentially from the international law of neighbourly relations" and private law provides him with a good starting point. He recalls in this connection Articles 644 and 645 of the French Civil Code: "A person whose property is on the border of a stream can use the water as it flows to irrigate his lands. A person through whose tenement the water flows can even use it for the distance it runs through such tenement, provided it is put back in its ordinary channel when it leaves his tenement." "If a controversy arises the Tribunals in rendering their decisions must reconcile the necessities of agriculture and the respect due to ownership" Articles 676 and 677 of the Civil

Code of the Netherlands are similar to those of the French Code.

46. The sovereignty of a State is one of the essential elements of its personality in the international community. It can be defined inside its territory as a supreme power which it is called upon to exercise, but within the limits laid down by the same right of other States. That at least is what Pillet affirms, when he says that "States have among themselves only one fundamental and essential right, that is their right to mutual respect of their sovereignty." However, although recognising that each State has a right of sovereignty, he subsequently subjects it to the international community. In the international society, the presumed right of independence of the State does not exist; "the State ceases to be the master to become a mere member of the association, and a subject of the common interests of that society." When there is a conflict of interests, the author admits the law of the least sacrifice. "The only means of settling the difficulty is to give the preference to that of the two sovereignties of which the claim is based on a greater interest from the point of view of the exercise of its functions and thus of the fulfilment of its duties."

47. Most authorities who have studied the utilisation of waters for industrial purposes admit the sovereignty of the State over the portion of the waterway situated in its territory, but insist on the limitation of that sovereignty by the right of ownership possessed by the neighbouring State. As soon as serious injury may be caused to it as a result of injuries inherent in neighbourhood, its consent must be obtained, and prior agreement is then necessary.

Kisker (46) favours the principle of absolute sovereignty as regards the disposal of the waters, but upholds that of the inviolability of the foreign territory.

Hyde (47) upholds the unlimited right of the upstream owner to divert the flow. He admits, however, that in certain special cases it is necessary to compare "the value of conflicting claims of opposing States according to the effect upon each of the act of diversion"; and he further regards it as a moot point whether a diversion which results for the upstream proprietor in a slight advantage which cannot bear comparison with the disadvantage resulting for the downstream proprietor amounts to an abuse of power.

Oppenheim, in his treatise on international law, everywhere insists on limitation of sovereignty.

".... it is a rule", he says, "of International Law that no State is allowed to alter the natural conditions of its own territory to the disadvantage of the natural conditions of the territory of a neighbouring State. For this reason a state is not only forbidden to stop or to divert the flow of a river which runs from its own to a neighbouring State, but likewise to make such use of the water of the river as either causes danger to the neighbouring State or prevents it from making proper use of the flow of the river on its part." "As regards the utilisation of the flow of [international] lakes,

(46) Zeitschrift für Völkerrecht, Vol. 11, p.573: "Zur Frage der mehreren Staate Gemeinsamen Gewässer."

(47) "International Law chiefly as interpreted and applied by the USA," 1922, para. 183.

-the same is valid as that concerning the utilization of the flow of rivers."

As for Smith (48), he lays down the following principles. No State is justified in taking unilateral action to use the waters of an international river in any manner which causes or threatens appreciable injury to the lawful interests of any other riparian State. On the other hand, a State must not abuse its legitimate rights; and when the injury which it may suffer is not "appreciable", or is negligible as compared with the very great advantages obtained, it should acquiesce, subject to full compensation. Such minor detriment, which is not "appreciable", corresponds to the inconveniences "due to good neighbourliness." When there is a dispute on a matter of this kind, or on the importance of the proposed constructions, the parties shall have recourse to arbitration.

Schulthess (49) expresses the same opinion. "The territorial sovereignty of a State is subject to a limitation in the sense that although it may in principle dispose freely of its territory, it cannot, in the exercise of its territorial sovereignty, affect the territory of the neighbouring State in such a way that the latter suffers injury." He explains, however, that only the effects on "the natural or artificially constituted State" of affairs in the neighbouring State are considered as being unlawful. However, it must suffer "acts of no importance" having their origin beyond the frontier,

(48) Smith, op. cit. (par. 30).

(49) Schulthess, op. cit. (par. 30).

if they are the legal result of ownership and if they do not impair essential interests. They are, he adds, what one might call the principles of the "law of international neighbourly relations."

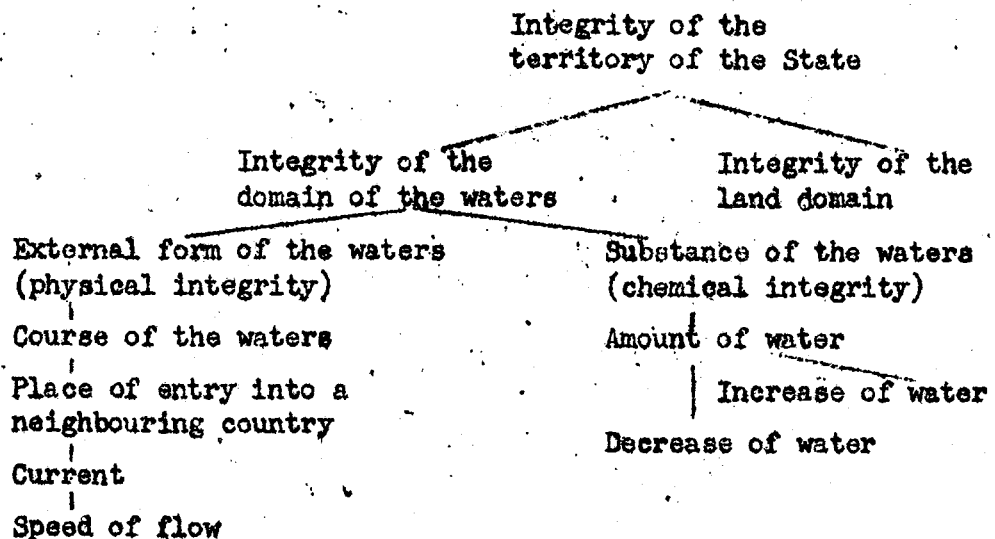
Schulthess, in his study, draws up a diagram of the various factors on which an influence may be exercised and applies the above principles to each particular case.⁽⁵⁰⁾

Lederle is also insistent on the same point.⁽⁵¹⁾

"The opinion prevails at present," he says "that the right of each State to dispose of the watercourses situated in its territory is limited in as far as its arrangements might result in injury to another State." He therefore considers that there would only be violation of the territorial integrity of a State if the acts of another State caused injury to it. Like Schulthess, however, to whom he refers, Lederle admits that "negligible" injuries are not regarded as injuries if they are the normal result of a legal use of property.

48. We are, therefore, back to the problem of assessing the nature of the injury caused. That question must not be settled subjectively by one of the interested States;

(50) The diagram drawn up by Schulthess is as follows:



(51) Lederle, "Das Recht der internationalen Gewässer,"
p. 190 et seq.

the decision must be taken on the basis of objective data and Lederle submits that "it is generally admitted that any alteration of the nature of the waters constitutes a serious injury."

Reference has already been made to Hüber (52) and we noted then that by some of the principles he laid down he meant to forbid to a State any possibility of exploiting a river in a way likely to cause injury to another State. Further on, however, he reverts to the common doctrine in stating that "acts of no importance having their origin beyond the frontiers, should be endured if they result from legal use of property and if they do not affect the neighbour's essential interests." An optical factor, as for instance, the destruction of a natural monument situated within the frontier is not regarded by him as an important effect.

He also admits that when there are extraordinary restrictions of the legal use of property which represent departures from the general rule, it is necessary to obtain a "special title", i.e. to negotiate. Finally, speaking of frontier rivers divided "realiter", i.e. utilised conjointly and not in accordance with their separation in space, Hüber claims that they can be utilised by each of their co-proprietors in so far "as such utilisation does not diminish or render impossible the already existing or possible legal utilisation by the other co-proprietors."

Björnsken (53) in a short study on this question decided that the principle accepted in the theory and practice of international law "forbids the State to

(52) Hüber, op. cit., (par. 41)

(53) Björnsken, "Das Wassergebiet Finnlands in völkerrechtlicher Hinsicht", p. 166 et seq.

commit acts resulting in injury to and considerable effects on another State. On the other hand, the State is free in respect of acts the result of which only represents minor detriment and negligible effects."

As for von Bar ⁽⁵⁴⁾, he says it must be accepted "as a generally recognized principle that no State may, by constructions made by it in its territory, cause a positive and easily recognisable injury to the territory of another State."

Neumeyer ⁽⁵⁵⁾ lays the main stress on the distinction between navigable and non-navigable waters. "An alteration in the course of the water, which is harmful to other States, is allowed in the case of springs and torrents, but prohibited in the case of rivers with a regular course and of lakes"; and he also points out the interference of the rules of international law in this matter with the administrative and civil law of each State,

Jellinek ⁽⁵⁶⁾ claims that "a State has the right as a moral person within the framework of the law of nations to require another State to abstain from committing unlawful acts" likely to harm it.

Meurer ⁽⁵⁷⁾ lays down the following two rules :

"Any utilisation of common watercourses is permitted if it does not cause the neighbour any injury or only an injury of no importance."

"Diversion of a watercourse by the upstream State and its damming by the downstream State are forbidden."

(54) Annales de l'Institut de droit international.
Vol. 24, page 156.

(55) Neumeyer, "Internationales Verwaltungsrecht", 1922,
Vol. 2, page 5.

(56) Jellinek, "Système du droit public subjectif", 2nd
edition, p. 302.

(57) Meurer, "Zeitschrift für Politik", Vol. 4, p. 371.

Sosa Rodriguez (58) notes that rivers of common interest are subject to various sovereignties and each must take account of the legitimate rights of the others. "It would be untrue to say that, to be consistent, the doctrine of the absolute sovereignty of the State over its rivers" which the author upholds as regards navigation "should lead to the right of each State to carry out on the portions of international rivers belonging to it any works it pleases." If such absolute sovereignty of the State over the rivers permits it *stricto jure* to prohibit foreign shipping "when the agricultural or industrial exploitation of the rivers is involved", the question is different. Each of the riparian States enjoys a right of ownership, which limits the freedom of action of the others.

The writer concludes by saying "The best thing is therefore for the States to agree on the matter by means of conventions". If there is no convention, he adds, the States can be guided by the solutions offered by private law relating to neighbourly relations, thus agreeing with the theory put forward by Fauchille.

(58) Sosa Rodriguez, "Le droit fluvial international et les fleuves d'Amerique latine", p. 51.

CHAPTER IV PRINCIPLES GOVERNING HYDRO-ELECTRIC DEVELOPMENT OF WATERWAYS
OF COMMON INTEREST

B. Case-law

49. Case-law proper on this question, as a normal rule, consists of judgments by international courts or decisions by ad hoc tribunals or commissions.

Note should be taken in this connection of the judgment rendered by the Permanent Court of Justice at the Hague on 28 January 1937, which seems, indeed, to be one of the very few judgments which may usefully be cited. It should also be pointed out that this judgment, delivered in connection with a dispute between Belgium and the Netherlands arising from a diversion of water from the Meuse, related to a misinterpretation not of international law but of a treaty concluded between those two countries on 12 May 1863. The judgment ruled (59) that "as regards such canals, each state is at liberty to modify, enlarge or transform them, and even to increase the volume of water in them from new sources, provided that the diversion of water at the treaty feeder and the volume of water to be discharged therefrom is not affected."

50. Apart from judgments delivered by international courts, however, there are also decisions pronounced by certain national courts which may seem no less important, such as those relating to the settlement of disputes that have arisen between Federal States of the United States of America, between Cantons of the Swiss Confederation and between certain German "Länder".

(59) British Year Book of International Law, Vol. XIX, 1938, p.232, para. 6.

This comparison seems an apt one in view of the fact that no national codified law common to the parties in dispute existed at the time, and that the judgments in question cited the principles of international law. In this connection J. Hostie ⁽⁶⁰⁾ observes that in the United States, the different States adopted either "common law" whereby "~~riparian owners downstream have equal rights in the uninterrupted flow of a stream~~" or the new civil law of "private appropriation", according to whether their water resources were abundant or meagre. This gave rise to a series of disputes which could be settled only by reference to the actual rules of international law.

The author also points out that the United States Supreme Court plays a dual role, "sitting as an international as well as a domestic court", and that it applies "State law and international law as the exigencies of the particular case may demand."⁽⁶¹⁾

Certain jurists, however, hesitate to attribute real value to these judgments. It seems very dangerous, in their opinion, to transpose into the international sphere rules laid down by certain confederations to govern the relations between their member communities. Such

(60) J. Hostie, op. cit., (par. 29), p. 74.

(61) See also Sprout, "Theories as to the applicability of International Law in the Federal Courts of the United States", in the "American Journal of International Law", Vol. 26 (1932), p. 281 ("Natural Law, on which the authority of international law is based, continues to play a part in national courts"); and Smith's treatise "The American Supreme Court as an International Tribunal" (1920). With regard to the application of international law by the Swiss Federal Court to disputes between Swiss cantons, see Schindler, "American Journal of Law", Vol. 15 (1921), p. 149.

relations, whether derived from conventions freely discussed among those communities or from the constitution of the confederation of which they are members, nevertheless owe their existence to a particular legislative code which may vary from one confederation to another and which, even in its most important passages, may be quite different from that in force in other States. There is no doubt that, in some cases, the supreme decision of the federal authority has been of a political rather than a legal nature and has found a compromise solution by "cutting the cake in half". This "judgment of Solomon", however, may well be different from that which a court applying written law would have reached.

The fact nevertheless remains that, in the absence of international case-law proper, the rulings of these courts can make a useful contribution to this study.

51. Let us first consider the decisions of the United States Supreme Court.

Kansas, a riparian State of the Arkansas River, had brought an action against Colorado, a riparian State upstream, which had partially diverted the river. While the Supreme Court rejected the Kansas claim, on the ground that the diversion "had worked little, if any, detriment" to the plaintiff, it nevertheless went on to state: "At the same time it is obvious that if the depletion of the waters of the river by Colorado continues to increase, there will come a time when Kansas may justly say that there is no longer an equitable division of benefits ..." ⁽⁶²⁾ The plaintiff's right was therefore safeguarded

(62) Quoted from Smith, "The American Supreme Court as an International Tribunal", (1920), pp.86-87.

in respect of the institution of "new proceedings whenever it shall appear that through a material increase in the depletion of the waters of the Arkansas by Colorado, its corporations or citizens, the substantial interests of Kansas are being injured to the extent of destroying the equitable apportionment of benefits between the two States resulting from the flow of the river."

Thus, while the Court considered that the actual injury did not exceed the limits imposed by good neighbourly relations, it also stressed the principle of the equality of States which limits their sovereignty, thus illustrating in particular the difficulty of assessing substantial injury.

52. A similar judgment was rendered by the same Court on 24 February 1931 in a dispute between the States of Connecticut and Massachusetts regarding the proposed diversion of the waters of two tributaries of the Connecticut river (the Wave and the Swift). "Connecticut's bill will be dismissed without prejudice to her right to maintain a suit against Massachusetts whenever it shall appear that substantial interests of Connecticut are being injured." (63) It is thus necessary for the injury to be "substantial" and not presumptive: the Court specified in particular that "the facts do not show that any real or substantial injury or damage will presently result to Connecticut from the proposed diversion."

(63) "American Journal of International Law",
vol. 26 (1932), page 163.

53. In 1922, in a dispute between the States of Wyoming and Colorado, the Court delivered the following judgment:
"The contention of Colorado that she, as a State, rightfully may divert and use as she may choose, the waters flowing within her boundary in this interstate stream, regardless of any prejudice that this may work to others having rights in the stream below her boundary, cannot be maintained."⁽⁶⁴⁾

The New Jersey v. New York suit is similar, apart from a few minor points.

54. On 18 May 1931, the Court delivered yet another judgment of a similar nature in the suit between Arizona and California in connection with the diversion of the waters of the Colorado River during the construction of the so-called Boulder Dam⁽⁶⁵⁾. Here too, it rejected the plea by the riparian state downstream on the ground that no injury existed but stated specifically that Arizona could not at a later juncture appropriate the waters of the Colorado river.

55. In the case of North Dakota v. Minnesota, the elimination of bends in a river in Minnesota having, by raising the level of Lake Traverse, led to the regular flooding of certain farms in North Dakota by the Bois des Sioux river, the outlet of the Lake, when in spate, the Court's decision was similar:
"It needs no argument to reach the conclusion

(64) J. Hostie, op. cit., (par.29), observes, in connection with these three judgments, that in the first suit Kansas relied on common law and Colorado on civil law. In the second suit, both States based their claims on civil law, and in the third suit, both States upheld common law. It is therefore particularly interesting to note that the Court consistently applied international law in all three instances.

(65) British Year Book of International Law, Vol.XIII, 1932, p.190

that where one State by a change in its method of draining water from lands within its border, increases the flow into an interstate stream, so that its natural capacity is greatly exceeded and the water is thrown upon the farms of another State it is the creation of a public nuisance of simple type for which the State may properly ask an injunction."

56. The Supreme Court was also called upon to adjudicate in a dispute, which we cite pro memoria, between Missouri and Illinois in 1901 and 1906 on the subject of the pollution of the Mississippi.

57. In view of its importance, special mention should, however, be made of the judgment concerning the "Chicago diversion", litigation on which lasted for decades, finally involving thirteen States.

The city of Chicago, which is situated on the watershed of the St. Lawrence river and the Mississippi, underwent rapid expansion towards the beginning of the century. It embarked on the diversion of the waters of Lake Michigan, of which the St. Lawrence forms the natural outlet into the Mississippi. Canada, together with a certain number of States bordering on the St. Lawrence in the Eastern part of the USA, considered themselves injured by the resultant fall in the water-level. Complaints having been lodged against Illinois, by Wisconsin and four other States, the Supreme Court delivered judgments in 1925 and 1929 in favour of the riparian States downstream. Dealy⁽⁶⁶⁾, in his commentary on those judgments, writes: "The Court

(66) American Journal of International Law, Vol. 23, p.310.

also held that a diversion of water in one State, which causes a lowering of water levels in other States and thereby does substantial injury to their interests, is illegal "

58. As we have just seen, the view taken in these decisions by the Supreme Court was practically identical in each case. In 1895, however, Mr. Harmon, United States Attorney General, based his arguments on the subject of the Rio Grande on different grounds. "The fact that the Rio Grande lacks sufficient water to permit its use by the inhabitants of both countries does not entitle Mexico to impose restrictions on the United States which would hamper the development of the latter's territory or deprive its inhabitants of an advantage with which Nature had endowed them and which is situated entirely within its territory. To admit such a right would be completely contrary to the principle that the United States exercises full sovereignty over its national territory." He adds, however, that the question was one of policy and "should be decided as one of policy only, because, in my opinion, the rules, principles and precedents of international law impose no liability or obligation upon the United States."

59. Before leaving the subject of United States case-law, mention should also be made of a judgment by the Circuit Court of the United States in and for the Southern District of Texas, dated 5 December 1911⁽⁶⁷⁾, obliging the "Rio Grande Land and Irrigation Company", which had been responsible for the diversion of the

(67) Ibid. (1912), p.483.

waters of the Rio Grande, to abandon this illegal diversion and pay damages to the injured party.

60. The case-law of the German Reich follows a similar line of reasoning.

We shall merely cite the very important judgment rendered on 18 June 1927 by the Supreme Court of the Reich adjudicating on Federal Questions (Staatsgerichtshof für das deutsche Reich) in connection with a dispute between the Länder of Württemberg, Prussia and Baden relating to the percolation of the waters of the Danube⁽⁶⁸⁾. These waters sank between a point in Baden territory above Futtingen and a point in Württemberg territory below Futtingen. The greater part of the water disappeared underground and, on emerging, flowed into the Baden section of the Aach, on which industry was able to develop thanks to this important feeder. Württemberg considered herself injured, and proposed to Baden that the course of the

(68) Lammers-Simon, "Die Rechtssprechung des Staatsgerichtshofs für das deutsche Reich", Vol. 1, p. 183.

Dr. Endriss has devoted several papers to the subject:

"The Percolation of the Danube", a study submitted to the Governments and Diets of Württemberg and Baden, 1907; "The question of the Percolation of the Danube", 1908; "Basic Opinions on the Solution of the Problem of the Percolation of the Danube", 1909.

The Diets of Württemberg and Baden had already devoted attention to the question. The Württemberg Upper House considered the matter in 1905, and on 11 June 1907, 9 and 11 February 1909 and 3 May 1910, while the Lower House dealt with it on 8 July 1909. The Upper House of Baden discussed the matter from 6 to 9 April 1910.

Danube be diverted by artificial means, so that she might keep a certain volume of water for herself. In passing judgment, the Court declared: "With regard to the use on "its own territory of a waterway owned jointly with another "State, every State is subject to limitations based on "general principles of international law precluding it from "infringing the rights of another member of the international "community. No State has the right to cause substantial "injury to the interests of another State by the use it makes "of the waters of a natural waterway." This conception of the law is assuming ever increasing importance in the international field, especially since it has now become necessary, by reason of the fuller exploitation of natural hydraulic power, to settle by agreement conflicts of interest which may arise in connection with the big waterways of common interest.

The Supreme Court went on to say: "While admittedly "a State has no right to use a waterway shared with "another State to its own advantage, regardless of the "rights of third parties, it follows that it is likewise "bound to carry out the necessary measures commonly adopted "nowadays by civilised States with regard to the exploitation of waterways. If a State Government fails to apply, "or even prohibits the application of, measures deemed "necessary in the light of the recognised principles "concerning the exploitation and regulation of waterways, "with the result that the population of another State "thereby suffers injury while the population of the first "State is favoured, such conduct is incompatible with "the essential principles governing the comity of nations. "A decision based on general principles is therefore "called for, to cover not only the case of a State "which allows free play to natural forces, but also the

"case of a State which contributes to the effect produced
"by those forces omitting to take action as prescribed by
law."

This second part of the German Court's judgment thus appears to extend the interpretation of the principle of limitations imposed by considerations of good neighbourly relations to include not only the obligation to abstain from certain acts but likewise the necessity for taking positive action. Such a conclusion admittedly goes beyond the generally accepted doctrine, and, as we have seen, some authors, such as Schenkel⁽⁶⁹⁾, oppose it. We shall come across another broad interpretation when studying the preparatory work on the Geneva Convention. The German Court's judgment has overstepped the frontiers of the country in which it was rendered, and Smith points out its similarity to a decision by the Privy Council in *Stollmeyer v. Trinidad Petroleum Co.*⁽⁷⁰⁾

61. With regard to Swiss case-law, mention must be made of a judgment by the Federal Court dated 12 January 1878⁽⁷¹⁾ delivered in connection with a dispute between the canton of Zurich, the upstream riparian, and the canton of Aargau, the downstream riparian.

"In the case of waterways which flow through several cantons," it rules, "no canton has the right to undertake measures on its territory which would be detrimental to another canton, such as, for example, the diversion of a river, the erection of dams, etc. which would entail infringement of territorial rights."

(69) Schenkel, *op. cit.* (par. 39).

(70) British Yearbook of International Law, Vol.1, 1929, p.149

(71) Entscheidungen des schweizerischen Bundesgerichts, Vol. 4, pp.34, 37 and 47.

A settlement was also reached in a dispute between Zürich and Schaffhausen. When Zürich proposed to construct a hydro-electric plant on the Zürich side of the Rhine falls, Schaffhausen regarded the proposal as a threat to its tourist trade and lodged a complaint with the Federal Court seeking recognition of its territorial sovereignty over the waters of the Rhine falls. The Federal Court's decision of 9 November 1897 nevertheless rejected that claim in respect of the southern side of the waters of the Rhine falls, and pronounced in favour of actual partition.

CHAPTER V PRINCIPLES GOVERNING THE HYDRO-ELECTRIC DEVELOPMENT OF
WATERWAYS OF COMMON INTEREST

C. Critical Analysis of Theory and Case-Law

62. We have confined ourselves so far to an exposition of theory and case-law concerning the principles governing the hydro-electric development of waterways of common interest.

We shall now attempt to arrive at a number of general rules, but first we must analyse some of the views encountered.

The portion of a waterway of common interest which is situated on the territory of a particular State is an integral part thereof in the same way as a national waterway.

The legal regime governing the territory of a State cannot be other than that of full ownership. By definition it is impossible for any external authority to be lawfully exercised therein, and any interference could only be the consequence of temporary intervention. Over its own territory a State possesses a right of domain, a "kind of dominium eminens".

In the final analysis this power takes the form of full sovereignty.

This concept of sovereignty has given rise to innumerable theoretical discussions and has also evolved with the passage of time. It actually means that there is no legally organized human authority above States, which is competent to regulate their affairs.

63. Up to the 16th century political society was organized on a hierarchical basis. Over the Princes there was a

legal authority such as that of the Pope or of certain great Emperors. Their claims to hegemony gave rise to the idea of the civilized world being constituted in a hierarchical form reminiscent of the institutions of the Roman Empire and calculated to please certain ecclesiastical writers who viewed the terrestrial world as a reflection of the kingdom of heaven. Moreover, the actual frontiers were not clearly defined. In the Middle Ages, and even at the beginning of the modern era, it would have been difficult to trace accurately the boundaries of the territory of a big State. Such States were generally separated by border provinces or "marches" which were sometimes dependencies of an independent Power. "Natura non facit saltus" says an old philosophical adage which can be appropriately applied to this period prior to the 16th century. The power of a monarch governing a State was strongest in the centre of the territory, gradually diminishing towards its extremities until in the disputed border areas it was virtually non-existent.

But during the 16th century this period of uncertainty was followed by an era in which, within the framework of their historic boundaries, States sought to consolidate and where necessary extend their territories. The idea of papal or imperial supremacy disappeared and in 1648 the Treaty of Westphalia established the principle of the co-existence of States recognizing each other as members of a community in public law. To escape the political hegemony claimed by the German Holy Roman Empire, the States concerned proclaimed their independence and took their stand "behind the dogma of absolute, indivisible and irreducible sovereignty". (72)

(72) Nicolas Politis, "La Morale internationale", p. 100.

Having freed themselves of foreign domination the States then thought that their sovereignty was unlimited and that they could act as they thought fit without being accountable to anyone. This trend towards the omnipotence of the State which was strengthened by the Reformation became still more marked during the French Revolution and completely triumphant in the 19th century.

The essential legal consequence of such a concept of sovereignty was the equality of States before international law. The political influence of States may of course vary but when confronted with a rule of international law they are all on the same footing. The idea that the State has a legal power above which there is no organized legal power is of considerable practical significance.

It means that States are entirely free to form their own judgment of situations which concern them. Such judgment may lead to disputes which cannot be settled unless the contending States agree to submit them to an arbiter or judge. Furthermore, there is a danger of serious difficulties arising if a State wishes to alter the existing legal order through the application of a legal principle, such as the "rebus sic standibus" clause. In the absence of a higher authority the only solutions are voluntary acceptance by the other State concerned or a trial of strength. Nevertheless, from this period onwards, the authors recognize that apart from respect for a loosely defined moral law, the only limit which the law places on the action of States is respect for the freedom and independence of others. This is the theory of auto-limitation. It has no juridical basis since the existence of law does not and cannot depend on the volition of a single entity subject thereto. Nor is it scientific

in conception since the conditions governing the limitation are not stated.

At the end of the nineteenth century, under the pressure of events, the authors looked to equity and good faith to give effect to the peoples' aspiration towards international justice, and to this concept of the legal balance required. But the events responsible for the overthrow of the old theories were the 1914-1918 war and the establishment of the League of Nations, as we shall find when we come to study the Geneva Convention. Article 15, paragraph 8, of the Covenant of the League of Nations introduced a new concept, that of "matters solely within domestic jurisdiction", which was to limit the sovereignty of States: "If the dispute between the parties is claimed by one of them, and is found by the Council, to arise out of a matter which by international law is solely within the domestic jurisdiction of that party, the Council shall so report, and shall make no recommendation as to its settlement". Hence, should a dispute arise, the State recognizes that it is subject *de jure* to international legal authority, it does not automatically assume powers of jurisdiction but asks a legal authority for them. This represents a step forward since in effect States abandon their claims to be their own judges of their "vital interests".

It is curious to note that Article 2, paragraph 7, of the San Francisco Charter seems to mark a step backward in this matter: "Nothing contained in the present Charter shall authorize the United Nations to intervene in matters which are essentially within the domestic jurisdiction of any state or shall require the Members to submit such matters to settlement under the present Charter;" the word "solely" in the first draft was a better rendering of the term "exclusif" but has been replaced here by

"essentially". The criterion, therefore, is whether the matters involved are domestic by nature, with the result that the organ seized has no powers of jurisdiction whenever the matter is considered domestic.

Nevertheless, according to what follows in the text, a government cannot be a judge unto itself even in connection with essentially domestic matters. (73).

Our aim has been to show broadly the general evolution of the concept of State sovereignty since, on the interpretations given to it, depend the principles governing the development of international waterways.

We shall now study in greater detail the theories of the authors mentioned in a previous chapter.

64. Most of the authors recognize that State sovereignty must be limited but their ideas as to the extent of and reasons for such limitations differ widely.

Firstly, what view must be taken of those who hark back to natural law and what is the latter's influence in modern positive law?

Mr. van Wellenhaven, chief arbiter to the General Claims Board, United States and Mexico, stated in a recent decision that natural law might have been highly thought of three centuries ago as a guide in building up a new law of nations. The consecration of an ideal law of man and nations might have exerted a salutary influence 150 years ago on the development of democracy on both sides of the Atlantic. But it could not form a lasting basis for either national or international law. It cannot be used today as a substitute for either positive

(73) See Scelle, "Droit international public", pp.111-112

national law or positive international law as recognised by the nations and governments in their acts and declarations.

Natural law is in fact not a body of rules imposed on States but merely a collection of ideal standards by which positive law may be guided. For such standards to be adopted in positive international law, the States would have to declare themselves in favour thereof by concluding treaties or by recognising the value of international custom based on such law. The discrepancies which we shall note when studying legal practice prove that such international custom is as yet non-existent so far as the subject under review is concerned.

The application of Grotius's theory to the development of waterways would lead us along a very dangerous road. It would enable an upstream State, in case of necessity, to divert a waterway if, for example, the downstream State was not exploiting it. The upstream State would be the sole judge of such necessity regardless of the injury caused by such use.

By his doctrine of imperfect rights Vattel moderated Grotius's theory, while claiming to be a member of the same school. In his view the consent of the neighbouring State is required. Although no author has drawn the parallel, we may say that the hydro-electric development of waterways represents an imperfect right and these arguments based on natural law, the influence of which still survives, provide one of the reasons for such consent (to which we shall return later).

65. As we have already seen, certain authors like Engelhardt cited Roman law in support of their contention that rivers were common property. Winiarski has made an interesting exegesis of the sentence in the Institutes on which this

author based his argument. We shall not go into details but merely point out that Roman law cannot be regarded as a direct source of international law.

Roman law was pre-eminently civil law and it is only in modern municipal river law that some of its principles can still be applied. It cannot in any case be regarded as representing a source of the law of nations, which rests on custom and agreement. Moreover, in the Roman era there was no community of nations since at that time Rome dominated the whole civilised world and regularisation of its relations with the barbarians was certainly not the purpose of the legal rules laid down.

In the twelfth and thirteenth centuries, despite the activity of the commentators, the Roman law studied by the latter was civil law and remained so in their minds. Indeed, since Justinian's time innumerable political changes had occurred in Europe but when adapting the corpus juris to the conditions of their epoch the commentators had always clung to the fictitious idea of an Empire and considered Roman law as the law of Christendom.

With the breaking up of the Empire and the appearance of the later commentators a certain distinction began to be made, particularly as regards rivers, which were no longer regarded as common to all. Bartole classed as common property "aqua de caelo profluens", whereas "flumina non tot offerunt se".

The particularism of the Middle Ages was another obstacle to the development of an international law regarding waterways. "Rivers passed from the public domain to the domain of the sovereign who had possession and seizing thereof and exercised jurisdiction, justice, overlordship, the power of coercion and constraint over their whole length and breadth". The only interesting

feature of this period is that States for the first time granted by international convention, certain privileges in respect of their rivers to the subjects of foreign sovereigns examples being the treaty between Poland and the Elector of Brandenburg, concluded at Trzebieszow on 29 January 1618 in respect of the Oder and the Warta and the treaty concerning the Warta between Poland and Sweden dated 18 September 1705.

66. The concept of condominium or co-imperium provides no better legal basis for the common ownership of rivers. In positive international law there is no natural joint property. Indeed, the latter presupposes an agreement, and each riparian State exercises sovereignty over those parts of the waterway flowing through its territory. Nevertheless, this concept makes it possible to assess the common interests of two States, and leads naturally to the idea of the necessary mutual agreement.
67. A more attractive theory, particularly where electricity is concerned, is that of the international servitude.

The actual concept of servitude is slightly repulsive in so far as it implies servility. Certain writers, however, present it not as a means of limiting sovereignty but, on the contrary, of safeguarding it. According to them, it consists in permission for the dominant State to use the territory of the servient State, or in an undertaking by the latter not to use its territory in a manner prejudicial to the dominant State, the nationality of the territory remaining unchanged. They compare international servitudes to the predial servitudes of Roman law and subsequently of civil law. Miss Reid ⁽⁷⁴⁾ gives the

(74) Reid "Servitudes internationales", *Recueil des cours de l'académie du droit international*, 1933, Volume III, page 15.

following definition: "An international servitude is a real right based on an agreement between two or more States, whereby the territory of one State is subjected to permanent use by another State for a specific purpose. It may be permissive or restrictive but never entails any commitment. It is always a right, never a duty The use of the term in international law can only be justified if it is restricted to a class of rights truly analogous to the servitudes of Roman law".

This translation of civil law into international law is a delicate matter. From the point of view of the dominant tenement, the predial servitude was a *jus in re aliena*. In all property there is a subject and an object and a relationship between the two. But can territory be considered as equally external in relation to the State as the tenement in relation to the person of the owner? Territory is one of the constituent parts of the juridical personality of the State and its function cannot be compared to that of real property in relation to its owner. Winiarski, in the above-mentioned work, recalls the well-known formula of F. von Liszt "There are two alternatives: either there is limitation of the dominium, in which case international law does not apply; or there is limitation of the imperium, in which case the concept of servitude is impossible".

It therefore appears that this idea of servitude, for which the legal basis is questionable, should not be accepted. Moreover, what are the "real rights" of one State in respect of another, and does the development of a waterway by one country entitle it to make use of neighbouring territory? We do not think so. And

since this right must be based on an agreement, we consider it unnecessary to have recourse to the concept of international servitude in order to justify it.

The use of the concept "negative servitude" to justify an improved distribution of natural wealth is a fiction which we do not feel inclined to adopt; neither do we agree with Miss Reid's explanation of the passages quoted from the Versailles Treaty (para. 46). This Treaty, which marked the conclusion of a hard-fought war, granted certain privileges to the victor countries as reparations, or security for reparations rather than as ideal servitudes.

68. As an explanation of the theory of the fundamental rights of States, R. Pillet enunciates the law of least sacrifice. That is not an explanation in law but, at most, one of morality or international charity. Indeed, no subject of a right can be legally bound to relinquish it. Moreover, the problem would only be pushed back further. Unless there were agreement on arbitration or mediation, who would judge the extent of the sacrifice to be accepted?

We find it equally difficult to subscribe to his theory of the existence of a higher international community to which the sovereignty of States is subordinated. This concept of a community, which comes from the solidarist school, is based on the inter-dependence of States which, as we have observed, is now steadily increasing. But such inter-dependence is not a right, it is a fact. This fact

brought about the birth of international law; but the fact of inter-dependence cannot be opposed to the right of sovereignty. The function of international law can never be to impose relations between States, but only to facilitate them by providing a legal system.

69. Jellinek, on the other hand, considers that a State should refrain from certain "unlawful" acts. This qualification is not very explicit; either the writer means that a harmful act is permissible if the person committing it has some kind of right, such as self-defence - in which case he is merely stating a natural principle generally recognised in all legislation; or, on the contrary, he considers that such "unlawfulness" is an additional factor in a de facto situation, the existence of which is likely to give rise to violation of the integrity of a territory under the law of nations. We cannot accept this latter view. Indeed, the idea of "unlawfulness" presupposes the existence of rules defining lawful acts as opposed to unlawful ones. Now, no such rules exist and consequently the idea of unlawfulness in this specific field of international law lacks foundation.

70. Although it is possible, to some extent, to speak of obligations deriving from neighbourship, it would be equally vain to follow Schulthess in trying to justify a limitation of sovereignty by a "right of international neighbourship". It is true that States bordering on the same river are united by a community of interests. But as we have seen in examining the theory of fundamental

rights, this can provide no legal basis for a right.

71. The decisions of various Courts which, we have considered, subject to certain reservations, as equivalent to decisions in case-law, do not always coincide. The position adopted by Attorney-General Harmon, in particular, differs strongly in substance.

To explain this fact, it is necessary to bear in mind the obvious basic differences between the United States and Europe. We have seen how difficult it is to classify the various uses to which waterways can be put. As regards most of the large rivers of the New World which we have mentioned, it appears that irrigation is the essential function. Although in certain respects, particularly the construction of dams, the equipment of a waterway for irrigation can be considered in conjunction with its equipment for power production, there is an essential difference between these two uses. In one case the water is expendable, so that there is a permanent change in the quantity of flow for the downstream State. In the other case, the flow is temporarily changed but only as regards quality. Since the life of certain areas in the United States depends solely on the flow of the rivers running through them, their dogged defence of their rights becomes readily understandable.

72. It has been our aim, in examining theory and case-law, to cover the ground as fully as possible. Nevertheless, it seems doubtful whether they can

be of much help in drawing practical conclusions.

In point of fact, we find that nearly all authors are obsessed by the idea of navigation, which gives a bias to their theories regarding river law.

Furthermore, these theories fail to withstand critical analysis, and their very diversity adds to the confusion.

Nevertheless, this study was necessary. Even if it fails to bring out any clear principles, it throws light on certain ideas which we shall re-encounter later, especially those of common interest, equity, international comity and good neighbourliness. The diversity of theories will likewise indicate to Governments the danger of relying, in specific cases, on a single one of them, even though it appears to coincide with their interests.

We ourselves shall make no attempt to construct a theory concerning the hydro-electric development of waters of common interest on the sole basis of purely legal concepts, as this would, we consider, be so much wasted effort.

Leaving the abstract plane, however, we shall now proceed to make a close examination of national practices.

CHAPTER VI

PRINCIPLES GOVERNING HYDRO-ELECTRIC DEVELOPMENT OF
WATERWAYS OF COMMON INTEREST

D. Legal Practice

73. There are in existence a large number of conventions relating to the use of international waterways. They are either bilateral, in which case they deal with certain given waterways, or general, in which case they are concerned with the problem in the abstract.

Some relate to the general use of the water. These will be examined, since the principles to be drawn from them can be applied in the case of hydro-electric development. Utilization for the latter purpose is also the subject of certain special conventions, which will be considered separately. The present Chapter is so arranged as to bring out this distinction while following a chronological order.

Section I.

Bilateral Conventions Relating to the Hydro-Electric
Development of Waterways of Common Interest

74. Some treaties have been concluded between various countries for the sole purpose of covering the construction of a power station on one part of a waterway of common interest. The principles on which they are founded will be examined in the present section.

75. Chronologically, the first of such treaties appears to be the Berne Convention of 4 October 1913 between France and Switzerland.

The object thereof is to regulate the methods of exploitation of the water power of the Rhone between the works planned at La Plaine and a point to be specified upstream of the Chancy-Pougny Bridge.

Article IV provides that the operation of the dam to be constructed shall follow "a set of rules agreed between the two Governments with a view to avoiding any risk of floods and any damage to the plant upstream, and, so far as possible, mitigating downstream the detriment which may result from the changes in the water flow". Article I more particularly provides that the dam is to be established at a point where the rise in the water level thus produced cannot extend beyond the outlet of the tailwater canal of the proposed plant at La Plaine. For that purpose a free outlet must be provided for the overflow, so that in times of spate the waters may flow away without any risk of an excessive rise above the point fixed as the limit of the backwash. In addition, since the dam is likely to cause a discharge of gravel, it is stipulated that the sill must be constructed "at a level approaching the average depth of the bed" so that the deposit is carried away.

76. The well-known Convention between France and Italy, signed on 17 December 1914, on the use of the waters of the River Roya and its tributaries, must also be mentioned. It is quoted in this section although it is drawn up in more general terms, because it deals particularly with electric power plants.

Article I clearly lays down the principle of limited sovereignty. The High Contracting Parties both declare that they will refrain from exploiting, or allowing to be exploited, the hydraulic power of the Roya or its tributaries in the sections exclusively under their sovereignty, in such a way as might appreciably alter the regime or the natural flow of the waters in the State downstream. Here again, this principle is modified by the possibility, mentioned in Article 3, of

constructing permanent or temporary works above or adjoining the bed, with the consent of the two Governments. But this prior consent is an essential condition.

The above clauses make up the general part of the Convention relating to the work to be carried out.

Article 5, applying these general principles to certain special cases, provides for a certain number of restrictions. Thus the oscillations produced by the San Dalmas Plant on the Miniera must be almost completely damped out and the watercourse on entering France must be restored to the state in which it would have been if the plant had not been working. The catchment dam of the Fontan plant will be raised to such a level that the Negri plant will not suffer a loss of intake of more than two metres. These few examples reveal the practical importance of the general principles laid down.

The question was taken up again in the Treaty of Peace of 10 February 1947, where it is stated that:

Annex III - B

"4 (a) France shall operate the hydro-electric plants on the Roya in French territory, taking into account as far as reasonably practicable the needs of the plants downstream. France shall inform Italy in advance of the amount of water which it is expected will be available each day, and shall furnish any other information pertaining thereto;

(b) Through bilateral negotiations France and Italy shall develop a mutually agreeable, co-ordinated plan for the exploitation of the water resources of the Roya".

77. On 4 June 1917, Württemberg and Bavaria signed a treaty at Ulm for the regulation of the hydraulic power of the Ill. These two countries agree to allow each other reciprocally the full use of hydraulic power in certain sections.⁽⁷⁵⁾

(75) For further details see Martens, "Recueil Général des Traités", 3rd series, Vol.12, page 290.

It is stipulated that if a State has to dam waters at certain periods to fill reservoirs, it must make adequate compensation before the waters are returned to the river.

78. On 10 May 1921, Czechoslovakia and Austria signed a Convention at Prague concerning the delimitation of the frontier between the two countries.⁽⁷⁶⁾ The first part of the Convention deals solely with the utilization of the water-power of the river Thaya in the area extending from the beginning of the common frontier near Cizow (Zaisa) to the end of that frontier near Podmol (Baumöl). The work was given to a Czech enterprise, but since the structures would stand on both territories, the Austrian Government undertook to grant a valid concession for the construction and utilization of the works. Details are contained in Article 2; it should simply be noted that in paragraph (f) the Czechoslovak Republic undertakes to require its concessionary enterprise to give compensation to the downstream riparians for the loss caused by the upstream works. Note should also be taken of the stipulation that, should the Austrian Government fail to make by a certain date a declaration finally binding upon it to the effect that a concession has been granted, the part of Austrian soil and territory required for the construction of the works for the exploitation of the whole of the water-power in the frontier area shall be ceded to the sovereignty of the Czechoslovak Republic.

79. An Agreement was concluded at Capetown on 1 July 1926⁽⁷⁷⁾ between the Government of the Union of South Africa and the Government of the Republic of Portugal regulating the use of the waters of the Kunene River for the purposes of generating hydraulic power. It begins with a long preamble describing the situation. The South African Government, desirous of utilizing its share of the water for the purpose of generating hydraulic power, asks Portugal for leave to divert the

(76) League of Nations Treaty Series, Vol. 9, page 359 (1922)

(77) League of Nations Treaty Series, Vol. 70, page 316 (1928)

river waters for its benefit in view of the fact that the silting up of some of the natural channels prevents the riparians from benefiting by the flood waters which have inundated the country from time immemorial.

Clauses 1 and 4 therefore provide that a dam may be constructed on Portuguese territory to divert waters for the purpose of supplying a power plant situated in the Mandated Territory and that a canal may also be constructed.

It should be noted that the rights granted under this Agreement, the right of access, the right to erect permanent structures in Portuguese territory, in no way restrict the sovereignty of the Portuguese Government over its territories. Moreover, Clause 18 provides that "no hydraulic works on the Kunene or Kavango (Cubango) Rivers, except those at the Rua Cana Falls", which form the subject of the Agreement, "may, where these rivers form the boundary ..." be constructed by either Government "without the previous consent of the other Government having been obtained".

80. The building of the Kemba power station on the Rhine gave rise to lengthy negotiations.

The zone of influence of this power station was intended to cover three countries, Switzerland, Germany and France. But the Rhine is essentially a navigable river, and navigation, which has been the subject of many conventions, is strictly controlled by the Central Rhine Navigation Commission.

Finally, Article 358 and 359 of the Treaty of Versailles restricted the property rights of Germany and France over the waters of the frontier section of the river and over the production of electric power.

The Central Rhine Navigation Commission accordingly gave lengthy consideration to this problem and laid down in detail the conditions necessary for the construction of this power plant. (78) After the draft, with its restrictions, had finally been adopted by the Commission, France and Switzerland signed a Convention at Berne on 27 August 1926 to regulate relations between their countries "with regard to certain clauses of the legal regime of the Kembs diversion". (79)

Article 3 contains a clause whereby the French Government undertakes to communicate to the Swiss Government the principal plans and calculations concerning the proposed scheme for the Kembs power station, so that the French Government may submit its comments.

81.

In 1926 Austria, by constructing the Achensee power station, blocked the course of the Walchen which forms the outlet of the Achensee into the Isar, in Bavarian territory. There was no formal agreement between the two States in this particular instance, but the history of the case is of some interest.

(78) See Actes du Rhin, 1947, Chapter XII.

(79) This Convention came into force on 29 December 1927. The Kembs power station, which temporarily suspended operations during the last war, was put into service in the autumn of 1932. In order to permit full economic utilization of the existing structures by using a larger flow, France and Switzerland agreed on 19 December 1947 to propose to the Central Rhine Navigation Commission an increase in speed of the feeder (to 0.90 metres per second) by modifying its Resolution of 10 May 1922.

On 7 December 1920 the representatives of Bavaria, in the course of an exploratory meeting, recognized the economic importance of a power-station on the Achensee, and did not insist that the discharge of the Walchen into the Isar should be maintained. As against this, they had asserted their right to compensation for damage caused to fishing and timber floating, for the lowering of the water level, for the removal of possibilities of creating stand-by capacity for the installation of power stations, etc.

When the final scheme was approved in 1923, Austria reserved the right to require the undertaking concerned to make compensation for justified claims of downstream property owners. An attempt was made to obtain an amicable agreement between the Achensee undertaking (the Tiroler Wasserkraft Werke) and the Bayernwerk, but these negotiations had no outcome until in 1926 when a contract for the supply of current was made between the two undertakings. This contract was made conditional upon agreement on the settlement of questions of compensation arising out of the construction of the Achensee power-station. The Bavarian negotiators, in view of this agreement which in any case was advantageous to them abandoned their opposition to the blocking of the Walchen and ceased to challenge the right of Austria, as upstream owner, to block a successive waterway without the consent of the downstream State.

Thus in this case the opposing points of view, while clashing in theory, were over-ruled by the common interests of the two countries in the matter of hydraulic power. Principles yielded pride of place to economic considerations.

82. Article II of the Convention between Belgium and Portugal signed at Sao Paulo de Loanda on 20 July 1927 concerns the construction of a dam on the River M'Pozo, the effect of which would be to raise the level of the river in that part of its course which was situated in Angola territory. The two Governments agreed that compensation for injury caused should be paid to the downstream State. (80)

83. Shortly afterwards, on 11 August 1927, Portugal signed a particularly important treaty with Spain at Lisbon "to regulate the hydro-electric development of the international section of the River Douro". (81) Each of the two contracting parties accords the other the exclusive right of utilizing the entire fall in level of the river on a certain stretch of the frontier section.

Thus two zones of utilization are created, each State having the right to utilize for the production of electric power the entire volume of water which flows through its zone. But it is specified that both States undertake mutually not to reduce the volume of water which should reach the beginning of each zone of utilization of the international section of the Douro or of the Portuguese Douro. Each State shall proceed to the hydro-electric utilization of its zone directly or by means of concessions granted in accordance with its laws. But all the works and installations necessary for such utilization shall be situated on the national territory of the State to which the zone is granted. An

(80) League of Nations Treaty Series, Vol. 171 (1928) page

(81) League of Nations Treaty Series, Vol. 82 (1928-1929) page 131.

exception is, of course, to be made in the case of dams or certain accessories which would have to be built in the bed or on the other bank of the river, on the understanding that the other State undertakes to establish the necessary servitudes with respect to reservoirs, dam-supports and off-lets, and, if need be, to decree expropriations.

In that section it is likewise prohibited to lead off any part of the water except "after agreement between the two States".

84. In 1928, the French and Swiss Governments were simultaneously approached with the request for a concession to utilize the hydraulic power resources of that section of the river Doubs between the Saut du Doubs and the place known as "Les Gravières". Negotiations between the two countries soon resulted in the conclusion of the "Convention between Switzerland and France concerning the Châtelot Falls Concessions", which was signed at Berne on 19 November 1930.⁽⁸²⁾

Article 4 provides that the inlet and outlet operations shall be carried out in accordance with "regulations agreed between the two Governments" with a view to maintaining fixed levels upstream and to "regulating the off-let of waters downstream so as to reduce variations as far as possible, and in every case,

(82) Owing to the economic situation, the French and Swiss companies which had jointly applied for the Châtelot Concession postponed the execution of their scheme until later, however. It was not until 1945 that they decided to resume negotiations. On 28 January 1947 the concession was granted to the Swiss Electricity and Traction Company of Basle and to the national enterprise "Electricité de France", and it came into force on 13 October, 1930. This power station will cater for an annual production of 100 million kWh.

so as not to endanger the common interest and in particular the normal operation of downstream plants". As this latter condition is worded, it appears to make a distinction between injury tolerable on grounds of good neighbourly relations and serious injury affecting the general interests of the country in question.

85. Again, let us quote two recent exchanges of notes between the United States of America and Canada.

The first concerns the development of certain portions of the Great Lakes - St. Lawrence Basin project (Washington 14 and 31 October and 7 November 1940)⁽⁸³⁾ and the other the temporary diversion of additional waters of the Niagara River above the Falls (Washington 20 May 1941).⁽⁸⁴⁾ These notes contain the following passages: "to assist in providing an adequate supply of power ... and contingent upon the Province of Ontario's agreeing to provide immediately for diversions into the Great Lakes System of waters from the Albany River Basin which normally flow into Hudson Bay ..." "an additional diversion for power purposes of 5,000 cu. ft. per second may be utilized on the United States side of the Niagara River above the Falls...".

A few months later, on 10 November 1941, a further exchange of notes took place between the same two countries regarding the temporary raising of the level of Lake St. Francis.⁽⁸⁵⁾

(83) League of Nations Treaty Series: Vol.203, 1940 - 1941, page 268.

(84) League of Nations Treaty Series: Vol.204, 1941 - 1943, page 200.

(85) United Nations Treaty Series: Vol.23, 1948 - 1949, page 275.

Canada had asked the United States for permission to construct a dam whereby the natural levels on the United States side of the St. Lawrence River near the head of Lake St. Francis would be raised, in low water periods, the object being to conserve the power supply in the area.

The request, which was agreed to for a period up to 1 October 1942, was thereafter renewed, and the arrangement extended until 1 October 1943. However, the United States, in its reply to the original request, made it clear that it attached "importance to the understanding that this agreement authorizing the raising of the level of Lake St. Francis is temporary, and that this action shall not be deemed to create any vested...right" for the future.

86. The principality of Liechtenstein in 1946 decided to divert the upper reach of the Samina stream, a tributary of the Austrian river Ill, for the purpose of generating electric power, and came to an agreement with the downstream parties affected in Austria on a suitable indemnity. Austria did not object to this procedure, since no serious prejudice to public interests was involved.

87. In 1948 Bavaria and Austria agreed to attempt the exploitation, on a basis of equal participation, of hydraulic resources on the Inn and the Salzach by a joint Austro-Bavarian company. When all the hydro power plants planned on the Inn have been established, the unified development of the chain of power stations could convert over 80 million kWh of off-peak winter power into winter peak power. If operation on this scale is compared with present operation in these frontier areas, it represents considerable progress, which would be due to the agreement in question.

88. On 20 June 1948, a further agreement was concluded between Austria and Bavaria concerning the Rissbach, the Dürrach, the Kesselbach, the Blaserbach and the Dollmannsbach all of which rise in Austria and flow into the Isar in Bavarian territory. This agreement was signed on 16 October 1950.

In 1947 Bavaria had begun to lead off the waters of the Rissbach to the Walchensee at a point in Bavarian territory situated above their junction with the Isar. In this way the natural reservoir received the water from the Rissbach in the form of a supplementary winter contribution, which was then utilized at the Walchensee head. These works gave rise to constructions carried out entirely in Bavarian territory, without touching that of Austria. Subsequently Austria let it be known that she intended to lead off the Austrian section of the Rissbach to the Achensee for the benefit of the Inn basin. These waters would then have been utilized in the same way as in Bavaria, the yield in the two cases being more or less the same. The execution of the Bavarian project would have become impossible if Austria had carried out this diversion because the quantity of water remaining to be led off in Bavaria would have become too small. The two projects therefore could not both be carried out. The agreement concluded in 1948 stipulates that Austria waives without compensation the right to lead off the waters of the Rissbach and its tributaries. Bavaria in exchange accepts without compensation the leading off of the Dürrach, Kesselbach, Blaserbach and Dollmannsbach. Austria undertakes in addition during low water periods up to a total of 75 days, to allow, on request from Bavaria, the water of the abovementioned waterways to flow into the Isar bed so as to ensure the maintenance of

a sufficient volume of water in the upper Isar valley so long as a sufficient flow has not been ensured by the construction of dams. The backing up of the dam, which will partly affect Austrian territory after the construction of the storage basins in Bavaria, will be tolerated by Austria on conditions to be defined later. During the negotiations Bavaria held to the principle of integrity, Austria to that of territorial rights. The agreement by which the two parties finally abandoned their positions expressly states that it was concluded in spite of the legal principles upheld by the two parties. This agreement, therefore, rests on the desire to obtain the most economic utilization of the waterways in question.

We shall conclude our examination of these bilateral conventions with the agreement of 13 June 1949 between Italy and Switzerland concerning the concession of the hydraulic power of the Reno di Lei and other waterways in the Averserrhein basin. (86)

The Governments of the two countries concerned recognize that the project, which provides for the exploitation in a single plant of the hydraulic power of sections of Swiss and Italian waterways, ensures the rational utilization of that power, but that its development and use, which only a joint undertaking is capable of realizing, should form the subject of an international agreement taking due account of the divergencies in the legislation of the two States.

The scheme for executing the works is to be drawn up (Article 3) by the concessionary. It is to be submitted, with the necessary supporting documents, to the two

(86) This agreement has not yet been ratified.

Governments, and can only be carried after the latter's consent has been obtained.

The two Governments expressly reserve the right to exercise joint control over the works and to authorize or forbid by common consent, where necessary, any alteration to the scheme as previously approved or to the works already completed (Article 4). The two Governments will inform each other of their decisions regarding the grant of concessions which will not take effect until the two Governments have agreed on the conditions to be laid down.

Insofar as they affect the interests of the two countries, the provisions of the concessions may not be subsequently amended except by common consent of the two Governments (Article 7).

In the event of the non-completion of the plant or interruption of operations, the two Governments will by common consent take such action as they deem best suited to meet the situation (Article 8).

Section II

Bilateral Conventions concerning the General Use of Waterways of Common Interest

90. The first Treaty appears to be that of Fontainebleau concluded on 8 November 1785 ⁽⁸⁷⁾ between Germany and the Netherlands.

In Article 6 it is stipulated that "Their High Powers shall regulate in the most appropriate manner, to the satisfaction of the Emperor, the flow of water in the territory of His Majesty in Flanders and towards the Meuse, in order, so far as possible, to prevent inundation.

(87) Smith, "The Economic Use of International Rivers", p. 159.

Their High Powers agree that, to this end, use may be made, to a reasonable extent, of any necessary land under their dominion. The locks erected for this purpose on the territory of the States-General shall remain under their sovereignty."

91. The foregoing provision was one of the many clauses in a Treaty of Commerce and Boundaries. The Treaty of Cleves ⁽⁸⁸⁾ dated 7 October 1816 is no doubt the first to deal exclusively with the regulation of waterways. It relates to the Wildt from the Sonnerdamm at Klein-Netterdem to its junction with the Rhine. Article VI stipulates that "In boundary waters no offensive work is to be constructed in the bed of the river capable of deflecting the current and injuring the opposite bank, except by common consent," and Article XXXI provides that "The present flow of water in the respective territories of these two countries shall likewise be maintained in the future and no arrangement shall be made which might impede the flow of inland waters."

92. On 7 August 1843 came the Convention of Maestricht between Belgium and Luxembourg. With regard to the sections of waterways forming the boundary, it declares "that no concession which may result in altering the character of these waterways may be granted without the consent of both Governments" (Art.30).

Similar provisions are to be found in the Conventions of 26 June 1816 between Belgium and Prussia (Art. 27), and of 8 August 1843 (Art. 10) and 11 June 1892 (Art. 10) between Belgium and the Netherlands.

(88) Martens, "Nouveau Recueil des Traités", Vol. 3, p.45.

93.

Another treaty between Belgium and the Netherlands signed at the Hague on 27 September 1843 ⁽⁸⁹⁾ stipulates in Article 10 that "The parties shall take no unilateral action calculated to alter the course of the Meuse in the frontier section." Article 35 provides that "wherever rivers or other waterways form the boundary, sovereignty over them shall be exercised jointly by both States, except where there is a formal stipulation to the contrary, each State being responsible for their conservation and upkeep on its side of the boundary." Finally, Article 36 states that "existing catchments on rivers or other waterways serving as frontiers shall be preserved in their present state. No new catchments, no concession or innovation whatsoever, involving any alteration to the rivers and other waterways forming the boundary, or to the existing condition of the banks, may be granted without the consent of both Governments. These stipulations shall apply to the Meuse in so far as they do not conflict with previous provisions relating to this river."

A further Treaty between Belgium and the Netherlands, signed at the Hague on 12 May 1863, ⁽⁹⁰⁾ lays down regulations for the diversion of the waters of the Meuse. It provides that: "the Belgian Government shall leave in or restore to their natural channels the streams and watercourses which, having their source in Belgium, flow towards Netherlands territory" (Art. 7) and that: "no lowering of the normal water-line of these channels may be effected except by prior agreement between the two

(89) Martens, "Recueil des Traités", Vol. 5, page 345.

(90) Martens, "Recueil des Traités", Second Series, Vol. 1, page 117.

Governments" (Art. 8). Article 12 of the same treaty provides that: "no work which might alter the current and thereby injure the opposite bank may be constructed at a distance of less than 150 metres from the Thalweg of the Meuse at the point where it forms the boundary, except by common consent of the two High Contracting Parties.

94. The Treaty of Bayonne (or more specifically the Additional Act of 26 May 1866 to the Treaty proper of 2 December 1856) stipulates in Article 11 that: "Where one of the two States proposes to grant further concessions prior notice shall be given so that, if such projects are likely to infringe the rights of riparians of the neighbouring Power, complaints may be lodged in good time with the proper authorities and interests that might be involved on both sides safeguarded". Article 12 re-affirms the principle we have already come across: "the lower levels shall be bound to receive from the higher levels in the neighbouring country the waters which naturally run down from them, together with whatever they carry along, apart from anything contributed by human agency. No dam, or any obstacle liable to injure the higher riparians shall be built, and the latter shall likewise be forbidden to take any action which may increase the servitudes of the lower levels."

This Treaty applies to all the boundary waterways between Spain and France, and in particular to the Puigcerda and Raour channels, to the Riou Tort and the Riou Tartares, to the Vanera and to the Angoustrine and Llivia channels.

95. On 10 May 1879 a Convention was concluded between the Swiss Federal Council and the Government of the Grand Duchy of Baden "with a view to regulating the use of the waters

of the Rhine, from Neuhausen to below Basle, in an appropriate manner and in accordance with existing legislation, with special reference to industry and to communication requirements." Article 5 of this Convention is one of the first explicitly to mention the utilization of water for purposes of hydro-electric development: "Within the limits of its territory, each of the Governments shall take steps to ensure that, in the case of artificial works (such as roadways or other ways, permanent installations of fishing apparatus, water-wheels, bridges etc.) or of water works and dams, which may be set up or substantially modified on the part of the river situated from Neuhausen to below Basle, the necessary measures are taken to prevent water communications from being seriously hampered or jeopardised or the bank belonging to the other State from being damaged."

To this end the two Governments undertake to ensure that no installation or substantial modification of works of this type or, in general, of any works which might appreciably affect the water flow, shall be made in the river itself or on its banks, in so far as the latter are below the highest known water level (flood zone) until the plans of the proposed work have been submitted to the competent authority of the other State in order to safeguard the interests involved and to bring about, if possible, an agreement.

96. The Protocol signed at Rome on 15 April 1891 by Great Britain and Italy, stipulates (Article 3) that: "the Italian Government undertakes not to construct on the Atbara any works which might sensibly modify its flow into the Nile".

A similar provision is to be found in the agreement concluded between Great Britain and Ethiopia, signed at Addis Abbaba on 15 May 1902; "H.M. the Emperor Menelek II, King of Kings of Ethiopia, engages himself towards the Government of His Britannic Majesty not to construct, or allow to be constructed, any work across the Blue Nile, Lake Tsana, or the Sobat, which would arrest the flow of their waters into the Nile, except in agreement with His Britannic Majesty's Government and the Government of the Soudan."

97. A Convention, annexed to the Treaty of Karlstad, between Norway and Sweden (the Treaty governing the dissolution of the former union between the two countries), dated 26 October 1905, ⁽⁹¹⁾ is specially important. We read in Articles 1 and 2: "Art. 1: "if, in the territory of either State, the question arises of damming a lake, lowering its level, or diverting its waters, or constructing works on a waterway, diverting its waters or taking any other action to alter its depth, its bed or its direction the legislation of that State shall be applied with regard to the right to undertake the works, even if such works might affect the waters situated in the other State. Nationals of this latter State shall have the same facilities for enforcing their rights as are enjoyed, in similar circumstances, by the nationals of the State where the works are being undertaken, and they shall also enjoy the same rights in all respects as the latter in regard to the conditions under which the said works are carried out." Article 2: "in accordance with the general principles of international law it is

(91) Martens, "Recueil Général des Traités", 2nd Series, Vol. 34, page 710.

understood that the works mentioned in Article 1 cannot be carried out in either State except with the consent of the other, whenever such works, by affecting the waters situated in the other State, might result in substantially modifying the waters over a considerable area."

98. Article 3 of the Treaty concluded between Great Britain and the Congo in London on 9 May 1906 provides that: "The Government of the Independent State of the Congo undertakes not to construct, or allow to be constructed, any work over or near the Semliki or Isango River which would diminish the volume of water entering Lake Albert except in agreement with the Sudanese Government."

99. We shall see in the following chapter, in our study of case-law in the United States, the unusual findings of Attorney-General Harmon in the dispute between the United States and Mexico over the use of the Rio Grande in 1895. The United States which had, to begin with, upheld the principle of absolute sovereignty, later renounced it *de facto* if not *de jure*, in the clauses of the treaty concluded with Mexico at Washington on 21 May 1906, (92) concerning this same Rio Grande.

The United States undertake to deliver to Mexico a fixed quantity of water varying according to the months of the year and the state of drought. But they state quite explicitly, in Article V, that this agreement shall not be taken as a precedent or as the application of a general principle and that they therefore recognize no real title on the part of Mexico to receive any quantity of water whatsoever from the Rio Grande.

(92) Martens, "Recueil Général des Traités", 2nd Series, Vol. 35, page 46.

The Washington Treaty of 11 January 1909 (93) between Canada and the United States contains very detailed provisions governing the questions to which the harnessing of the boundary waterways between the United States and Canada might give rise on either side. It is particularly important in view of the number and size of the waterways to which it refers and on account of the numerous discussions which preceded it.

Before this Treaty was finally concluded the two countries had been estranged for a very long period, by a whole series of legal disputes over the St. Mary River, the Milk River, the Birch Lake Basin (which drains into the Rainy River), the Lake of the Woods, the utilization of the Niagara Falls and the so-called Chicago diversion from Lake Michigan. As the United States were in almost every case the upstream riparians they upheld the principle of absolute sovereignty over their waters, which was to their advantage. On the other hand, Canada which was thus the downstream riparian upheld the principle that restrictions may be placed on a State's right to dispose of its waters and that any diversion, in particular without prior agreement, is illegal.

In defending her case Canada cited the principles of International Law. In fact, Great Britain and Canada described the United States' attitude as "contrary to International Law"⁽⁹⁴⁾, in the diplomatic notes exchanged on the subject. They requested the United States to give their support to the principles governing the practice of

(93) Martens, "Recueil Général des Traités", 5th Series, Vol. 15, page 200.

(94) Smith, British Year Book, 1929, page 152.

international law"⁽⁹⁵⁾ and claimed that their own attitude was "in accordance with a principle recognized in the practice of International Law".⁽⁹⁶⁾

A writer, Simsarian, ⁽⁹⁷⁾ explaining the attitude of Great Britain and Canada in this connection, admits that "Great Britain and Canada, on the other hand, have contended on several occasions that international law does place restrictions on the right of the United States to the use or diversion of the waters of tributaries to boundary waters and the waters of a river flowing across the boundary."

The same author however summarizes the dispute as follows: "In the diplomatic correspondence and negotiations with Great Britain, and, later, Canada, the United States has been consistent in maintaining the position that the United States has a legal right under international law to use or divert (1) the waters of tributaries (which are wholly within the territory of the United States) to boundary waters, and (2) the waters of a river flowing across the boundary, while the river is within the territory of the United States. Even when the situation was reversed, and Canada diverted the waters of the Milk River while it flowed in Canadian territory, the United States did not claim that there was any limitation in international law on the action of Canada On the other hand, Great Britain and Canada have maintained that international law limits the right

(95) Garner, "The Chicago Sanitary District Case", American Journal of International Law. Vol.22, (1928) page 839.

(96) Garner, *ibid*, page 837.

(97) Simsarian, "The Diversion of Waters Affecting the U.S.A. and Canada". AM/JL. of I.L., Vol. 32 (1938) pages 488 et seq.

of the United States to divert the waters of tributaries
.... It is unfortunate that the diplomatic correspondence
has not always observed the sharp distinction between
rights under international law to the use or diversion of
waters in the above two situations from the diversion of
boundary waters The proposed 1938 draft Great Lakes-
St. Lawrence water way treaty is not concerned with
the determination or maintenance of existing rights under
rules of international law, but instead it endeavours to
terminate disagreements of the past by means of
compromises and the exchange of benefits."

The signatories of the Treaty of 11 January 1909,
who, though both invoking the principles of international
law, thus started from theories diametrically opposed,
seem finally to have reached agreement on the principle
upheld by Canada, but with certain reservations. Article 2
in fact reads: "Each of the High Contracting Parties
reserves to itself or to the several States Governments
on the one side and the Dominion or Provincial Governments
on the other, as the case may be, subject to any Treaty
provisions now existing with respect thereto, the
exclusive jurisdiction and control over the use and
diversion, whether temporary or permanent, of all waters
on its own side of the line which in their natural
channels would flow across the boundary or into boundary
waters." So much for the reservations. There we have
a re-affirmation of the principle upheld by the United
States. But the same Article continues as follows:
".... but it is agreed 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; but this provision shall not apply to cases already existing or to cases expressly covered by special agreement between the parties hereto. It is understood, however, that neither of the High Contracting Parties intends by the foregoing provision to surrender any right which it may have to object to any interference with or diversion of waters on the other side of the boundary the effect of which would be productive of material injury to the navigation interests on its own side of the boundary." (98)

If therefore any injury is caused, the country and its nationals that have suffered it enjoy rights and legal remedies, and the principle laid down at the beginning of the Article is tempered by this reservation.

What is the exact meaning of the above text and what are its implications? For a full understanding of it, reference must be made to some of the preliminary work leading up to it.

The first draft Treaty, dating from 1907, prepared by the joint waterways commission, covered all boundary waterways including Lake Michigan, as well as all their tributaries and all rivers flowing across the boundary. The commission fixed permissible diversions at 18,800 c.f.s.

(98) The provisions of this Treaty led to the settlement of disputes concerning the Rainy River, Niagara Falls (Article 5), the St. Mary and Milk Rivers (Article 6). As we have seen, the dispute over the Chicago diversion was still outstanding in 1925. We shall see later the special Treaty concerning the Lake of the Woods dealing with the delimitation of the boundary formed by an international waterway.

for the United States and 36,000 c.f.s. for Canada with the exception of water taken for domestic and sanitary purposes or for purposes of navigation.

The American State Department issued a counterdraft. It started from the principle that the jurisdiction of the new international commission to be set up would extend only to boundary rivers proper and not to their tributaries or to waterways crossing the frontiers. Moreover, it was assumed that the United States' right to divert the water of the Rainy and St. Mary rivers as well as of Lake Michigan without the prior consent of Canada was fully recognized by international law.

This American counterdraft, when defining "boundary waters" excluded rivers flowing across the boundary and tributary waters flowing into boundary waters; on the other hand a new Article II was inserted, by which each State was given the right of diversion, but the injured parties of the other State were entitled to the same legal protection as nationals, subject to the reservation however that this provision should not apply to cases already existing; Article III declared that no further diversions of boundary waters would be made except with the prior approval of the joint commission, and Article IV limited the average withdrawal from Lake Michigan in the neighbourhood of Chicago to 10,000 c.f.s.

During subsequent negotiations, the whole of Article IV was omitted at the express request of the Secretary of State Elihu Root. Canada, on the other hand, urged that a further paragraph be added to Article II specifying that neither Government

surrendered its right to protest against any diversion which injured it. It was in this form that the Treaty was signed in Washington on 11 January 1909.

On this subject Secretary of State Root stated before the Senate that he had taken good care not to allow the Chicago drainage canal to be made illegal. The definition of boundary waters had been drawn up so as to exclude Lake Michigan. Article II was applicable only to watercourses flowing across the boundary and tributaries which were wholly under the sovereignty of one or other of the States, while Article III only applied to boundary waters. Third parties injured in the other State would be in the same legal position as injured nationals, but the other State did not have the right to intervene in order to protect the private interests of its citizens; hence private Canadian interests remained subject to United States jurisdiction.

For his part the Canadian Minister of Public Works stated before Parliament:

"I must say that this Treaty simply confirms an international principle which has always been upheld by the United States and which as far as I know has never been disputed by lawyers of our country, namely that any country may divert watercourses situated on its territory and prevent them from crossing its frontiers. The United States consider that the right of any country to divert waters on its own territory - apart from the question of navigation - represents a principle of international law.

This case may arise between the inhabitants of Montana and Alberta in the event of an individual or group in the former diverting for purposes of irrigation a watercourse crossing the State's boundary with Canada. This would result in a riparian living downstream in Canada who used these waters for the same purposes being deprived of them. Before the conclusion of this Treaty, this could have happened without the downstream riparian being able to make any objection. Now, however, under the provisions of the Treaty, he can lodge a complaint and claim compensation.

The only complaint arising out of a diversion which is recognized in international law relates to navigation. This is the only case in which the right of sovereignty is contested. It is however acknowledged that the right of a State to dispose of watercourses on its territory, as of any other of its possessions, results from its rights of sovereignty, and, under international law, is subject to only one restriction, namely that if another State's navigational interests are affected, it may protest against the diversion. The one and only restriction then on rights of sovereignty is in connection with serious injury caused to navigation."*

100. On 30 September 1915⁽⁹⁹⁾ France and the Netherlands signed a Convention to fix the boundaries between French Guiana and Surinam. In Article 3 they state that "No works, whether for purposes of

* Translation
(99) Smith, op.cit. (par.90), page 181.

public or private utility, are to be constructed in the frontier section of the river, such as to be capable of constituting an obstacle to navigation or of modifying the nature of the river, except by consent of both parties. Such consent shall not be required for works such as quays and landing stages etc. which merely facilitate access to the river."

101. Article IX of the Treaty of Berlin of 27 August 1918 between "Germany and the Russian Federal Soviet Republic" stipulates that the waters of Lake Peipus "shall not be artificially diverted in any direction whatsoever so as to cause a lowering of the level of the Lake."

102. The peace Treaties concluded after the 1914-18 war contained certain articles dealing with international rivers. These treaties are the Treaty of Versailles with Germany dated 28 June 1919, of St. Germain dated 10 September 1919 with Austria, of Neuilly dated 27 September 1919 with Bulgaria, of Trianon dated 4 June 1920 with Hungary, of Sevres dated 10 August 1920 with Turkey (replaced by the Treaty of Lausanne dated 24 July 1923).

Article 309 of the Treaty of St. Germain, repeated in Article 292 of the Treaty of Trianon and 363 of the Treaty of Sevres (Article 109 in the Treaty of Lausanne) ⁽¹⁰⁰⁾ provides that "in default of any provisions to the contrary, when, as the result of the fixing of a new frontier, the hydraulic system... in a State is dependent on works executed within the

(100) League of Nations Treaty Series, Vol. 28, (1924)

territory of another State, or when use is made on the territory of a State, in virtue of pre-war usage, of water or hydraulic power, the source of which is on the territory of another State, an agreement shall be made between the States concerned to safeguard the interests and rights acquired by each of them."

Article 359 stipulated that "no works shall be carried out in the bed or on either bank of the Rhine where it forms the boundary of France and Germany without the previous approval of the Central Commission or of its agents."

The four peace treaties concluded by Russia should also be mentioned:

- with Esthonia⁽¹⁰¹⁾ the Treaty of Tartu signed on 2 February 1920, which provides (Annex 2 to Article 16) that a Convention shall be concluded between the two countries for the utilization of the waters of Lakes Peipus and Pskov;
- with Lithuania⁽¹⁰²⁾, the Treaty of Moscow signed 12 July 1920.

Article 2, note 4 of this Treaty, which was repeated in the Treaty of Riga of 17 August 1920 between Russia and Latvia (Article 3), states: "the artificial diversion of water from the frontier rivers or lakes causing a lowering of the average level of the water of same is not permitted";

(101) League of Nations Treaty Series, Vol. 11, (1921).

(102) League of Nations Treaty Series, Vol. 3, (1920-21)

With Latvia⁽¹⁰³⁾ the Treaty of Riga, signed 11 August 1920, Article 3, note 3 provides that "in rivers and lakes forming part of the frontier, the artificial withdrawal of waters liable to cause a lowering of the average level is forbidden. In the case of such rivers and lakes, navigation and fishing shall form the subject of regulations established by mutual agreement";

- lastly, with Finland⁽¹⁰⁴⁾, Article 18 of the Treaty signed at Dorpat on 14 October 1920 stipulates that "the level of the water of the Lake of Ladoga shall not be altered without previous agreement between Finland and Russia,"

103. The Peace Treaty of 18 March 1921 between Poland and the Ukraine⁽¹⁰⁵⁾ signed at Riga, contains similar provisions. Article 2 states: "The alteration by artificial means of the water-level of the frontier-rivers and lakes resulting in a modification of their courses in such parts of them as constitute the frontier line, and likewise the alteration of the average water-level in the territory of the other Party is forbidden", and Annex 5, paragraph 3, adds that "without the special consent of the other Party, it shall not be lawful for either Contracting Party to undertake works on the banks or in the neighbourhood of the river (the Dvina) or to set up hydraulic plant as a result of which the waterways in the territory

(103) League of Nations Treaty Series, Vol.2 (1921)

(104) League of Nations Treaty Series, Vol. 3 (1921)

(105) League of Nations Treaty Series, Vol. 6 (1921)

of the other Contracting Party might be deteriorated.
The same rule shall apply to any construction which
might raise the level of the water beyond the frontier
of the State."

104. The Paris Convention of 23 July 1921⁽¹⁰⁶⁾
instituting the definitive statute of the Danube
stipulated in Articles 14 and 17 that on those
portions of the Danube which form the frontier between
two or more States, the execution of the works they
consider necessary for their economic development,
especially works designed to prevent inundation and
those undertaken for purposes connected with irrigation
and the utilisation of hydraulic power and the
apportionment of the expenditure involved shall be
determined by agreement between the States concerned.

105. The Statute of Navigation of the Elbe signed at
Dresden on 22 February 1922⁽¹⁰⁷⁾ contains similar
provisions. With reference first to maintenance work
on the section constituting the frontier between
Germany and Czechoslovakia, the two riparian States
agree to determine "by common accord" the mode of
execution (Article 40). They also agree to furnish
the Commission with a description of all works which
they propose to execute in the interests of navigation
or in those of irrigation and the use of hydraulic
energy. Article 43 provides that the Commission may
settle a programme of works of which the execution
would be "a matter of primary interest." Save where
there is reasonable ground, a riparian State may not

(106) League of Nations Treaty Series, Vol.26, p.173(1924)

(107) League of Nations Treaty Series, Vol.26, p.219(1924)

refuse to execute the works included in the said programme, on condition that it is not bound to assume a direct share of the expenses. These works, however, may not be undertaken in the event of the State upon whose territory they are to be executed opposing them on the score of vital interest.

106. When the sovereignty over North Sleswig was transferred to Denmark, an agreement between Denmark and Germany signed at Copenhagen on 10 April 1922⁽¹⁰⁸⁾ settled all the questions which might arise from this transfer. The first four agreements of the eighteen which this Treaty comprises, relate to the utilisation of the new frontier waters⁽¹⁰⁹⁾. The first agreement has as its object the maintenance of the frontier-line between the two countries. Article 1 stipulates that "no changes shall be made, without proper authority, in the form of the lakes, water courses which mark the frontier, and their shores, dykes, etc., shall not be damaged." Article 19 states that "In drawing up the regularisation plans for the water courses mentioned in Article 1, the following rules adopted by the International Boundary Commission in its statement of 3 September 1921, with regard to the frontier shall also be observed."

"Schemes for the regularisation of frontier water courses may be executed after agreement has been reached between the two States, on condition that the proposed alterations are not of great importance and do not amount to more than four hectares per kilometre on an average."

(108) League of Nations Treaty Series, Vol. 10, p. 186 (1922)

(109) The frontier water courses referred to in this Convention are parts of the following: Krusaa, the Skelboek, the Gammelaa, the Sönderaa, the Rudabøl Lake.

If these regularisation works cause any damage, the injured party shall have right to compensation (Article 26). Finally, Article 29, the most important one, stipulates that "the establishment of new, or the extensive alteration of existing works on any of the frontier water courses" requires the Frontier Water Commission.

This provision applies in particular to the right:

1. Of using and consuming water, especially the right of diverting it directly or indirectly and above or beneath the land surface;
2. Of conveying water or other liquids directly or indirectly and over or under the land surface;
3. Of lowering or raising the level of the water, especially the right of causing a permanent accumulation of water by checking the flow of the stream.

The water course may not be used in such a manner that:

1. the height of the tidal water would be altered or the water polluted to the detriment of other persons;
2. the height of the water would be so altered that prejudice would be caused to others in the exercise of their rights or that harm would be done to the land of others;
3. additional burdens would be placed on any other party for the upkeep of watercourses or their

banks, unless the advantages which may be obtained by means of the works are greatly in excess of the loss or damage anticipated. If the proposed use of the watercourse is likely to prove highly detrimental to the public interest, authorisation should be refused or granted only upon conditions which would take the public interest fully into account.

The works should, as a rule, be so constructed that the water which is not employed in the works themselves should be conveyed back into the original watercourse in such a way that the water is not caused to flow round a property abutting on the watercourse unless the owners and usufructuaries of the property have given their consent.

In the case of works on a large scale, the Frontier Water Commission may however direct that the water should be caused to flow round one or more properties adjacent to the watercourse or that the water shall be discharged into another watercourse without regard to the opposition of the parties concerned. In such cases, compensation shall be granted to persons suffering prejudice for any loss and damage caused.

Finally, Article 53 extends the above provisions to "watercourses which are connected with frontier watercourses, but do not form part of them."

107.

The Convention between Finland and the Russian Socialist Federal Soviet Republic signed at Helsingfors on 28 October 1922 must also be mentioned. (110)

Article 3 states that, unless a special agreement has been concluded in each case between the contracting (110) League of Nations Treaty Series, Vol. 19 page 193.

states, water may not be diverted, nor may any constructions be erected or any steps be taken such as to cause damage, by altering the depth, direction or level of the watercourses situated in the territory of the other contracting state, or to its fish or land, or thereby to damage the fairway or to encroach upon channels used for navigation or timber floating. It should be noted however that Article 4 provides for exceptions: "Exceptions to these provisions may be allowed in virtue of the laws in force in each country: but only on condition that the owners of the land or water concerned in the other Contracting State shall be indemnified in a manner to be agreed upon beforehand for any damage or inconvenience which may be caused. (111)

108. The Colorado River rises in the State of the same name. It flows through the States of Nevada, Utah, Wyoming, New Mexico, Arizona and California and finally empties into the sea in Mexican territory. The State through which the river flows for the furthest distance and which under British customary law would have priority of rights is Arizona. On the other hand, the State which most needs the water because of the density of its population and industry is California. Moreover California would like to tap the river in order to supply Los Angeles. In other words the political divisions do not correspond with the economic

(111) The frontier watercourses referred to in this Convention are parts of the following: Tuulomanjoki and Luttojoki, Kutajoki, Pistojoiki, Lieksa, Tuulijoki, Tulenmanjoki and Miinalanjoki.

geography of the region. Inter-State agreements are therefore necessary to provide any solution of this problem.

Under the chairmanship of Mr. Herbert Hoover, then Secretary of Commerce, a Federal Commission representing all the States concerned was set up in 1921. Its deliberations resulted in 1922 in a federal statute, which however was never ratified owing to the opposition of Arizona, which, basing itself on the principle of absolute territorial rights, would accept no compromise. In 1926 the Governor of Arizona summed up his position as follows: "I'll be damned if California ever will have any water from the Colorado River as long as I am Governor of Arizona." Finally, after hard negotiation a solution was reached and a federal statute enacted in 1928 by which the downstream States were guaranteed a flow necessary for certain uses. The upstream State was in turn forbidden to divert the river by unilateral action.

In the ratification provisions, the principle of unanimity was abandoned and the scheme could be put into operation when it had been approved by six out of the seven States. Arizona's plea that this provision was an infringement of the Constitution was rejected by the Supreme Court.

109. In 1923 Germany concluded on behalf of Bavaria, an agreement with the Austrian Republic on the impounding of the waters of the Lower Lech and their diversion into the Rhine-Main-Danube Canal. Under the Bavarian scheme, work on which has not yet begun, a maximum of 80 cu.m. per second of water will be

diverted from the Lower Lech above its confluence with the Danube and emptied into the Main basin by means of the canal.

In this agreement Austria abandons the principle of territorial rights which she had always vigorously upheld and she claims the right for herself, this time as downstream owner, to make measures by the upstream owner subject to her own agreement and to a whole series of obligations.

110. An agreement was signed on 18 February 1924⁽¹¹²⁾ between Madras and Mysore relating to the construction of a storage dam at Krishnarajasagara on the Cauvery River which includes similar provisions, some of which refer to the regulation of waterways. In 1892 an earlier agreement between the parties had provided that the State of Mysore should not construct reservoirs without the consent of the Madras Government, which consent was not to be unreasonably withheld. Detailed figures were laid down for the water to be stored, but a dispute arose as to whether the agreed figures applied in the case of exceptional floods. The agreement provided for the reference of disputes to legal arbitration, and an arbitration was held, from which the Madras Government appealed to the Secretary of State. The parties then agreed to set aside the arbitration and refer the question to a joint board of technical experts. The agreement referred to above is based upon the experts' report.

In Article 10 the Madras Government consents to the construction of the dam, provided that it is of a certain cubic content only, "fixed limits" being stipulated for the extension of irrigation. The ⁽¹¹²⁾ Aitchison's Treaties, 5th ed. IX, page 234.

agreement further stipulates: "Both States are at liberty to construct reservoirs and other works, within certain limits, provided that the impounding of water therein does not diminish the supplies to which each government is entitled under this agreement, nor affect the diversion of the surplus water which, it is anticipated, will be available for division upon the termination of the Agreement."

111. In the agreements signed at Rome on 27 January 1924 between Italy and the Kingdom of the Serbs, Croats and Slovenes there is a chapter dealing with the Fiume aqueduct and the River Recina.⁽¹¹³⁾ In view of the fact that the regulation of the waters of this river requires the upkeep of dykes and may require the construction of new works, the Governments of the contracting parties agree that the execution of such operations shall be entrusted to the riparian communes "which shall make proper provision by common agreement."

112. Article 2 of the Convention signed at Bucharest on 14 April 1924 between Hungary and Roumania⁽¹¹⁴⁾ states that: "Should new works be carried out which might affect the hydraulic system of the territory of the other contracting party, an agreement shall be concluded before such works are undertaken concerning the manner of their execution and the share of the cost to be borne, or the compensation to be paid by each national association."

(113) League of Nations Treaty Series, Vol. 24, page 32
(1924).

(114) League of Nations Treaty Series, Vol. 46, page 41
(1926)

Article 3 stipulates that:

"The contracting parties guarantee to each other the right to utilise waters intersected by the frontier or running along the frontier and the upkeep and working of the respective waterworks."

113. Article I of the Treaty between Norway and Finland of 14 February 1925⁽¹¹⁵⁾ concerning the contiguous rivers Pasvik (Patsjoki) and Jacobselv (Vuoremajoki) also prohibits any measure taken on the territory of one of the Contracting States "to the detriment of the other State and without its consent," which "might involve a change in the natural régime of the waterways." A protocol to this Treaty deals explicitly with the utilization of hydraulic power from these watercourses and requires in such cases a "separate concession from each of the Contracting States in respect of its own territory."

114. We have referred above to the long-standing dispute between Canada and the United States of America, and have seen that the Treaty of 11 January 1909 had settled the main points at issue. It was not until 24 February 1925 that a new agreement was signed between the two countries at Washington to regulate the level in the Lake of the Woods, a question which had remained pending. ⁽¹¹⁶⁾

Article II confirmed more explicitly the principles already laid down in the previous agreement: "No

(115) League of Nations Treaty Series, Vol.49, page 381
(1926)

(116) Björskén, op. cit., (par.48) page 169, and League of Nations Treaty series, Vol. 43, p.252.

diversion shall henceforth be made of any waters from the Lake of the Woods watershed to any other watershed except by authority of the United States or the Dominion of Canada within their respective territories and with the approval of the International Joint Commission."

115. Germany and Poland signed at Pila on 14 March 1925 an agreement regarding the administration of the frontier sections of the Notec and the Glida Rivers, frontier water-courses between these two countries.⁽¹¹⁷⁾ Each undertakes to administer one section. "The section of the Notec extending from the mouth of the Glida to a point south-west of Neu-Bellitz and forming the Polish-German frontier shall, for the purposes of administration be divided at km. 142.57 into an upper eastern and a lower western section Poland shall undertake the administration of the upper, and Germany that of the lower section." (Article 1). This administration involves (Article 2) "the maintenance and operation of the canalized waterway together with the weirs, locks and other river works, with the exception of the upkeep of the river banks above and below water-level it shall also comprise the river police service and the health police service". But "should it be necessary to carry out supplementary work in the frontier sections of the Notec or Glida, the competent authorities shall be at liberty to conclude special arrangements to this effect". (Article 15).

116. One of the subjects covered by the Treaty signed at Nettuno on 20 July 1925 between Italy and the Kingdom of the Serbs, Croats and Slovenes⁽¹¹⁸⁾ (Annex B) is the utilization of the water of the Fiume aqueduct which is

(117) League of Nations Treaty Series, Vol. 95, p. 239 (1926)

(118) League of Nations Treaty Series, Vol. 83, p. 87 (1928-29)

required to supply certain frontier communes in Yugoslavia and also certain power stations.

Similar detailed provisions are contained in Article 6 of the Lateran Treaty between the Vatican City and Italy, and Article 11 (paragraph 8) of a treaty between Germany and Lithuania signed at Berlin on 16 July 1925 (Additional Agreement to the Treaty properly known as that of 1 June 1923) relating to certain obligations of the town of Tilsit. ⁽¹¹⁹⁾

117. In the Treaty of Paris signed 14 August 1925 ⁽¹²⁰⁾, by which Germany and France defined certain of their frontiers, there were several articles regulating the use of the waters. No modification might be made in the course of non-navigable watercourses forming the frontier and no construction liable to modify the flow of water might be undertaken without previous agreement between the two countries (Article 13). Existing or proposed installations must not obstruct the flow of water or diminish its volume, and in general must not cause "serious detriment" to the inhabitants on the river banks (Article 14). The use of these waters must be regulated by legally responsible persons in conformity with local custom. It is also stipulated that watercourses or canals which, though not forming the frontiers, discharge into a frontier watercourse, shall maintain their natural flow.

118. Similar provisions are embodied in Article 29 of the Treaty of Poznan between Poland and Germany signed on 27 January 1926 ⁽¹²¹⁾, the general purpose of which is

(119) League of Nations Treaty Series, Vol.85, p.388 (1929)
(120) League of Nations Treaty Series, Vol.75, p.103 (1928)
(121) League of Nations Treaty Series, Vol.64, p.158 (1927)

analagous to that of the Treaty referred to in the foregoing paragraph. Constructional work on, or alterations in, the frontier watercourse, may not be carried out without previous agreement. Article 29 stipulates in fact that "work on, or alterations in, the watercourse in the case of frontier waterways.....[and] the construction of dams or other installations by which the course of a frontier waterway might be altered, or the water level might be influenced, or the discharge of flood water might be impeded", may only be carried out with the permission of the competent authorities of the other country and with the authorization of the Mixed Committees. Article 31 provides that: "the flow of the water must not be impeded by installations set up on and in frontier waterways.....".

The two countries shortly afterwards concluded two other Treaties, one signed at Kozle on 19 August 1926⁽¹²²⁾ concerning the administration of the frontier portion of the river Oder, the other at Poznan on 16 February 1927⁽¹²³⁾ referring to the frontier portion of the Warta. In both cases, it was specified that "with a view to maintaining a regular flow of water, the portion of the river ... shall be administered ... in accordance with rules to be laid down by mutual agreement between the competent authorities".

119. Article 2 of the Treaty signed at Poznan provides that, should it be necessary to undertake maintenance works, such works shall be carried out in the upper section by Poland, and in the lower section by Germany, regardless of the territorial boundary.

(122) League of Nations Treaty Series, Vol. 64, p. 429 (1927)

(123) League of Nations Treaty Series, Vol. 77, p. 370 (1928)

Article 2 of the Protocol signed at Saarbruck on 13 November 1926 (124) between Germany, France and the Governing Commission of the Saar Territory deals with frontier watercourses and the Saar River in particular.

Paragraph 2 affirms the principle of prior agreement, "Along these frontier watercourses, and also along all watercourses, streams or artificial watercourses intersecting the frontier line, no building shall be constructed or installation erected on one side of the frontier which may modify the existing course on the other side of the frontier, unless such buildings or installations have been authorized by both sides of the frontier ... the foregoing applies in particular to the maintenance of the hydraulic system, hydraulic works"

The foregoing Protocol was concerned with usufructs on the Germano-Saar frontier. On the same day (125) another Protocol was signed regarding the France Saar frontier, Article 20 of which reproduces almost the same provisions as the foregoing. It reads as follows: "No building or construction whatsoever shall be undertaken, nor any water drawn off, without the common consent of the two riparian countries" on frontier portions of the watercourse.

Similarly, Article 2 of a third Protocol regarding the upkeep of this same frontier (126) provides that "Watercourses of which the median line or one of the banks forms the frontier must not be damaged or altered without the special

(124) League of Nations Treaty Series, Vol.77, p.250 (1928)

(125) League of Nations Treaty Series, Vol.77, p.218 (1928)

(126) League of Nations Treaty Series, Vol.77, p.172 (1928)

sanction of the Governing Commission of the Saar Territory and of the French Government. On all parts of the frontier where the two adjacent territories are separated by the median line or by one of the banks of a watercourse, no building or works of any kind may be erected which might disturb the present course or alter its regime, unless such building or works are of common benefit to both parties and have been sanctioned jointly by the Governing Commission of the Saar Territory and by the French Government. Similarly, no building may be erected and no change made in the ground between the flood limits wherever the latter are the subject of a special agreement."

120. Articles 5 to 8 of a Treaty regulating the use of frontier waters concluded between the Union of Soviet Socialist Republics and Turkey on 8 January 1927⁽¹²⁷⁾ provide that each party may construct artificial works for power and irrigation, but all plans must be approved by a "Mixed Commission". These works must not interfere with the free flow of water to which each party is entitled, and any damage caused creates a right to equitable compensation.

121. Section III of the Treaty between the German Reich and the Czechoslovak Republic signed at Berlin on 3 February 1927 deals with frontier waters.⁽¹²⁸⁾

Article 21 lays down the general principle that "if an installation is likely to cause any considerable or

(127) Quoted by Smith, "The Economic Uses of International Rivers" who gives as reference the Russian newspaper "Izvestia" of 12 January 1927. The author of the article adds that the Arax and other rivers are excluded from the scope of this Convention which concerns only lesser waterways.

(128) League of Nations Treaty Series, Vol.109, p.244 (1930-31).

permanent change in the flow..... of waters.each of the two States shall take account of the legitimate claims of the interested parties in the other State." In particular, care should be taken to prevent the land situated on either bank from becoming excessively dry, and to render possible its irrigation. Article 23, dealing with hydro-electric installations, provides that previous agreement is necessary even if the installations are entirely in the territory of one of the Contracting States, but are likely to affect rights and interests in the territory of the other State. An adjustment must then be made.

122. The Agreement between Germany and Poland signed at Poznan⁽¹²⁹⁾ on 16 February 1927 stipulates in Article 9 that "should an extension of works be necessary in the frontier section, the competent authorities shall conclude special agreements for this purpose."
123. The Legal Protocol concerning the hydraulic system in one Austro-Hungarian frontier region (in particular the Raab), signed at Vienna on 11 March 1927⁽¹³⁰⁾ is an interesting document. "The Austrian and Hungarian Governments undertake .. not to adopt any unilateral measure affecting the hydraulic system in the region adjoining the Austro-Hungarian frontier, or to carry out any work which might modify the existing hydraulic system in the territory of the other Contracting State; they undertake to preserve in good condition all hydraulic works contributing to the maintenance of the present hydraulic system This obligation shall in no way restrict the right of each State to carry out independently on its own territory purely local

(129) League of Nations Treaty Series, Vol.71, p.369 (1928)

(130) League of Nations Treaty Series, Vol.80, p.68 (1928)

works which will not affect the territory of the other State.... With a view to protection against floods, the Contracting Governments undertake to maintain in good condition works for the protection of threatened areas in the neighbouring State..... No fresh work which would involve a change in the hydraulic system of the (frontier) areas... may be carried out without previous agreement between the two States.... When works affecting the territory of both States are to be carried out, the said States undertake in principle to require their nationals to share the expenditure in proportion to the benefits accruing to them respectively from the said works.. A special agreement must be concluded in each individual case."

124. The Convention between the German Reich and the Lithuanian Republic signed at Berlin on 29 January 1928 relates to frontier waterways viz. the Kurische Haff and the Memel. (131)

Articles 2 and 15, in particular, stipulate that it is prohibited to make any change in the bed or the course of the waterways without previous agreement between the two Contracting States. A joint commission is to carry out an inspection of the frontier sectors each year.

Article 27 entitles the Reich to employ the waters of the Wystit Lake for Hydraulic power, subject to the conclusion of a special agreement should any change in the water-level result therefrom.

Special notice should be taken of Article 26. It lays down that each State shall take steps to ensure that "the frontier waterways branching off from the frontier in each

(131) League of Nations Treaty Series, Vol.89, page 353 (1929)

territory and the waterways entering its territory from the adjacent territories, are kept in such a condition that the flow of water from the frontier is unimpeded." Each State is therefore obliged not only "to refrain", but to take positive steps within its own territory in order to avoid possible injury.

125. In the Convention between the Polish Republic and the Czechoslovak Republic concerning the improvement of the rivers Olsa and Petruvka, signed at Katowice on 18 February 1928⁽¹³²⁾, Article 3, paragraph 2 stipulates that detailed plans for the regulation of the rivers shall be drawn up by the competent organs of the one State "in agreement with the competent organs" of the other State, and shall require the approval of the two Governments before being put into execution.

Similarly, the Treaty of Prague of 22 March 1928 between Germany and Czechoslovakia regarding the Oder frontier⁽¹³³⁾ stipulates in Article 3 that river concessions in this section shall be granted by the authorities of the competent State, "in agreement with those of the other State".

126. Articles 25 and 26 of the Convention signed at Prague between Hungary and Czechoslovakia on 14 November 1928⁽¹³⁴⁾ laid down the principle that "if the construction of a water-power plant is likely to cause any considerable or permanent change in the supply of water of a frontier watercourse or of a water-course intersected by the frontier, the Contracting Parties shall... take account

(132) League of Nations Treaty Series, Vol. 100, page 287 (1930)

(133) League of Nations Treaty Series, Vol. 93, page 245 (1929-30)

(134) League of Nations Treaty Series, Vol. 110, page 439 (1930-31)

of the legitimate demands of the persons affected in both countries". Further, "all work connected with regularization and the construction of dykes on frontier waterways must be jointly examined and carried out by the Contracting Parties".

127. A treaty was signed on 12 December 1928 at Prague by Czechoslovakia and Austria, regarding the settlement of legal questions connected with the frontier defined by the Peace Treaty. ⁽¹³⁵⁾

Article 28 stipulates that "if the construction of an installation is calculated to cause any considerable or permanent change in the supply of water of a frontier waterway or of a waterway which cuts the frontier, the Contracting States shall as far as possible take account of the legitimate interests of the inhabitants of the other State".

On the same date, the two countries signed a Convention ⁽¹³⁶⁾ for the settlement of technical and economic questions on the frontier sectors of the Danube, Morava and Thaya. It stipulates that whenever regulation operations have to be carried out and the necessary constructions erected in both territories, a previous agreement is required.

128. Article 10 of the Treaty of Peace, Friendship and Arbitration between the Dominican Republic and the Republic of Haiti signed at Santo Domingo on 20 February 1929 ⁽¹³⁷⁾, also states that "in view of the fact that

(135) League of Nations Treaty Series, Vol. 108, page 57 (1930)

(136) League of Nations Treaty Series, Vol. 107, page 159 (1930-31)

(137) League of Nations Treaty Series, Vol. 105, page 216 (1930)

rivers and other streams rise in the territory of one of the two States and flow through the territory of the other or serve as boundaries between them, the two High Contracting Parties undertake not to carry out or be a party to any constructional work calculated to change their natural course or to affect the water derived from their sources'.

"This provision shall not be so interpreted as to deprive either of the two States of the right to make just and equitable use, within the limits of their respective territories, of the said rivers and streams for the irrigation of the land or for other agricultural and industrial purposes".

129. Notes were exchanged between Great Britain and Egypt at Cairo on 7 May 1929, ⁽¹³⁸⁾ paragraph 4(b) of which reads: "Save with the previous agreement of the Egyptian Government, no irrigation or power works or measures are to be constructed or taken on the River Nile and its branches, or on the lakes from which it flows, so far as all these are in the Sudan....which would, in such a manner as to entail any prejudice to the interests of Egypt, either reduce the quantity of water arriving in Egypt, or modify the date of its arrival, or lower its level".

130. On 11 May 1929, Sweden and Norway signed a new Convention at Stockholm on the law on watercourses. ⁽¹³⁹⁾ This Convention does not abrogate the provisions of that of 26 October 1905 already mentioned which continue to be applicable to works which had already been completed or had been begun before the latter Convention came into force.

(138) League of Nations Treaty Series, Vol. 93, page 46 (1929-30)

(139) League of Nations Treaty Series, Vol. 120, page 277 (1931-32)

Article 1 defines the scope of the Convention. It relates to installations on watercourses in one country, which are of such a nature as to cause "an appreciable change" in watercourses in the other country, in respect of their depth, bed, direction, level or volume of water, or to hinder the movements of fish. When works are planned which might be likely to cause "considerable disturbance in conditions governing water supply over an extensive area", Article 12 provides that they can only be undertaken "when the other country has given its approval", and, in paragraph 2, that if there is no reason to believe that such works will produce the effects mentioned in the other country, that country cannot oppose the execution of the undertaking.

If a nuisance has been caused, and if the other country agrees to accept it, that country shall receive compensation.

131. Article 56 of the Agreement of 25 October 1929 between Germany and Belgium⁽¹⁴⁰⁾, signed at Aix-la-Chapelle, stipulates that both States undertake "to come to an agreement with regard to the necessary measures" before making any alterations in the present Losheim-Hergersberg and Krehwinkel water-mains which might decrease the flow.

132. The principles set forth in paragraphs 38 and 41 are reproduced almost identically in the Convention between Roumania and Czechoslovakia signed at Prague on 15 July 1930.⁽¹⁴¹⁾ Article 24 of this Convention says "Where hydraulic plant is of such a kind as to involve permanent or considerable change in the flow of a frontier water-course or of watercourses intersected by the frontier, each of the Parties shall have regard to the fair claims

(140) League of Nations Treaty Series, Vol. 121 page 359 (1931-32)

(141) League of Nations Treaty Series, Vol. 164, page 157 (1935-36)

of the inhabitants of the other State"; and Article 25 provides that both countries shall encourage the erection of plant for exploiting the power of frontier watercourses.

133. On 14 December 1931 Roumania and Yugoslavia signed a number of conventions and agreements at Belgrade concerning the hydraulic system of their frontier watercourses.

The most important of these is the General Convention ⁽¹⁴²⁾ where the principles we have encountered before are re-stated several times. The two States undertake to abstain from any alteration of existing installations and from any measures which might appreciably modify the water system (Articles 1 and 3). If either of the two States proposes to undertake any such operations, it must give notice to the other by registered letter with notification of receipt which must be confirmed within 15 days. If within two and a half months the other State has not raised any objections the said operations may be undertaken.

Articles 6, 7 and 9 further provide that the two States will remain in close contact while the work is going on, even though the operations may be on their own territory, that they will organize joint inspections of the areas through which the frontier watercourses flow for the purpose of ascertaining what equipment is needed; and lastly the two States undertake to communicate to one another any particulars concerning legislation regarding the hydraulic system as well as any useful hydrometrical, meteorological and geological data.

Article 23, which relates to the utilisation of hydraulic power reads as follows: "No modification may be made, no measures taken and no works carried out such

(142) League of Nations Treaty Series, Vol.135, page 31(1932-33)

as to affect the water system unless a fresh agreement has first been concluded between the two States". This is reaffirmed explicitly in the other special conventions (Article 20 of the Convention concerning the hydrotechnical system of the Bega Canal and River, ⁽¹⁴³⁾ Article 27 of the Agreement regulating the operation of the hydrotechnical system of the former "Association for the regulation of the waters of the Temes-Bega Valley"; ⁽¹⁴⁴⁾ Articles 21 and 23 of the Agreement concerning the transfer of the former "Association for the regulation of the waters of the Tamisaiz Valley" to the Yugoslav Zadruga za dvodnjavanje Tamisac and to the Roumanian Sindicatul Tamisat; ⁽¹⁴⁵⁾ and Article 4 of the Agreement concerning the hydrotechnical system of the Tolvadia Association. ⁽¹⁴⁶⁾

134.

On 10 April 1932 a Convention was signed at Moscow between Poland and the USSR. ⁽¹⁴⁷⁾ Frontier waters may be used for economic purposes up to the line of the State frontier without special permission from the other contracting party provided no special hydraulic plant or buildings are employed. The erection of dykes and exploitation of the hydro-electric power must in every case ⁽¹⁴⁸⁾ be subject to prior agreement between the competent authorities.

(143) League of Nations Treaty Series, Vol. 135, page 72 (1932-33)

(144) League of Nations Treaty Series, Vol. 135, page 100 (1932-33)

(145) League of Nations Treaty Series, Vol. 135, page 118 (1932-33)

(146) League of Nations Treaty Series, Vol. 135, page 133 (1932-33)

(147) League of Nations Treaty Series, Vol. 141, page 349 (1933-34)

(148) This Convention relates to the whole or part of the following watercourses: the Dzwina, Lake Luniczne, Bystrzyca, Lake Iwaniec, Lake Korowajno, Lake Supionec, Lake Beloe, the Czernica, Lake Miadziol, Miadzielica, Ponia, Wilja, Dzwinosza, Ilja, Wiazanka, Niemen, Morocz, Sluoz, Prypec, Stwiha, Pareweznia, Korczyk, Zbrucz, Horyn and Bolwaniec.

135. We should mention the Agreement concluded between the International Commission of the Danube, Roumania and Yugoslavia at the Semmering on 28 June 1932 ⁽¹⁴⁹⁾ by which the "Administration of the Iron Gates and Cataracts" was constituted and which likewise provides for prior agreement before the construction of any new installations.

136. Similarly, paragraph (vi) of the Exchange of Notes between Brazil and the United Kingdom, signed at London on 1 November 1932 ⁽¹⁵⁰⁾ states that "no works shall be permitted other than those intended solely to retain the river in its present course and not involving any risk of altering that course except with the mutual consent of the Government of both States and any work such as canalization, irrigation, or the development of electrical power shall only be undertaken subject to the mutual consent of both riparian States".

137. The same clause is met with in the Convention between Brazil and Uruguay signed at Montevideo on 20 December 1933. ⁽¹⁵¹⁾ When there is a possibility that the installation of plant for the utilization of the water may cause an "appreciable and permanent" alteration in the water system the State concerned "shall not carry out the work necessary therefore until it has come to an agreement with the other State."

The same principle is embodied in a clause contained in the Exchange of Notes in regard to the boundary between

(149) League of Nations Treaty Series, Vol. 140, page 191 (1933-34)

(150) League of Nations Treaty Series, Vol. 177, page 128 (1937)

(151) League of Nations Treaty Series, Vol. 181, page 69 (1937-38)

Afghanistan and India formed by the Arnawai Khwar, dated Kabul, 3 February 1934; (152) and it is also found in the Exchange of Notes between Great Britain and Northern Ireland, India and Siam, regarding the boundary as formed by the River Pakchan (Bangkok, 1 June 1934). (153)

138.

The Agreement between Belgium and Great Britain and Northern Ireland regarding water rights on the boundary between Tanganyika and Ruanda-Urundi signed at London, 22 November 1934 (154), provides: "Water diverted from a part of a watercourse situated wholly within either territory shall be returned without substantial reduction to its natural bed at some point before such watercourse flows into the other territory or at some point before such watercourse forms the common boundary". (Article 1). In the event of either Government desiring to utilize the water on the boundary it shall give the other Government six months' notice before commencing operations, "in order to permit of the consideration of any objections which the other Government may wish to raise". (155)

139.

On 24 August 1937 the Kingdom of Hungary and the Czechoslovak Republic signed a Convention (156) at Budapest concerning the settlement of technical and economic questions on the Hungarian-Czechoslovak frontier section of the Danube and on that of the Tisza below the

(152) League of Nations Treaty Series, Vol. 154, page 349 (1934-35)

(153) League of Nations Treaty Series, Vol. 154, page 372 (1934-35)

(154) League of Nations Treaty Series, Vol. 190, page 104 (1938)

(155) The watercourse affected is a part of the Kagera River. See League of Nations Treaty Series, Vol. 190, page 96.

(156) League of Nations Treaty Series, Vol. 189, page 404 (1938)

confluence of the Szamos. This Convention provides that all constructions shall be executed in accordance with plans drawn up by agreement between the parties (Chapter I, Article 2, para.2, Article 3, para.2, Article 4, para.2; Chapter IV, Section B, Article 14, para.1).

The Convention deals mainly with measures for protection against floods, the regulation of waters at normal level and at low water level, and with dredging. No express mention is made of the construction of hydro-electric power stations.

140. In the Convention between Lithuania and Poland signed at Kaunas on 14 May 1938, Article 18 states that no works on the common waters may be constructed save with the consent of both parties. (157)

141. Among the most recent examples may be cited the Exchange of Notes between the United Kingdom and Brazil, dated 15 March 1940, (158) concerning the demarcation of the boundary-line between British Guiana and Brazil: "No works shall be permitted other than those intended solely to retain the river in its present course and not involving any risk of altering that course except with the mutual consent of the Governments of both States and any work such as canalization, irrigation, or the development of electrical power shall only be undertaken subject to the mutual consent of both riparian States".

142. We will end with the most recent treaty between the United States and Mexico signed at Washington, 3 February

(157) League of Nations Treaty Series, Vol. 191, 1938, page 373. Convention relating to the frontier sections of the Niemen, the William Canal, the Willia, the Zejmiana, the Merkis, and the Prypec with the Oginski Canal system.

(158) United Nations Treaty Series, Vol.5, page 72 (1947)

1944 (Supplementary Protocol of 14 November 1944) relating to the utilization of the waters of the Colorado and Tijuana rivers, and of the Rio Grande from Fort Quitman (Texas) to the Gulf of Mexico. (159)

Relations between these two countries have already been studied (Section 24 and 42). This new treaty is particularly important. If it is compared with that of 11 January 1909 concluded between the United States and Great Britain on the subject of the Canadian frontier, the evolution of the attitude of the United States on this matter can be clearly perceived.

Section II of the Treaty relates to the Rio Grande. Article 5 embodies the idea of a common agreement prior to the construction of works on the river.

"The two Governments agree to construct jointly, through their respective Sections of the Commission, the following works"

The construction of the international storage dams and of the dams required for the diversion of the flows of the river shall be initiated on the dates "approved by the two Governments".

A Commission (Art:7) shall study, investigate and prepare plans for plants for generating hydro-electric energy which it may be feasible to construct on the river; it shall also report to the two Governments the works which should be built by each of them and the estimated cost thereof, while "each Government agrees to construct such works as may be recommended by the Commission and approved by the two Governments". Furthermore, either

of the two countries may, at any point on the main channel of the river, divert and use the water belonging to it and construct any necessary works provided such diversions and works are submitted to and approved by the Commission. The latter has also the power to authorize the temporary or final diversion by either country of water not belonging entirely to such country when it can be used without injury to the other country and can be replaced at some other point on the river.

Article 9 contains a special clause providing for mutual assistance:

"In case of the occurrence of an extraordinary drought in one country with an abundant supply of water in the other country, water stored in the international storage reservoirs and belonging to the country enjoying such abundant water supply may be withdrawn, with the consent of the Commission, for the use of the country undergoing the drought."

As regards the production of hydro-electric power:

"Each country shall have the right to divert from the main channel of the river any amount of water, including the water belonging to the other country, for the purpose of generating hydro-electric power, provided that such diversion causes no injury to the other country and does not interfere with the international generation of power and that the quantities not returning directly to the river are charged against the share of the country making the diversion. The feasibility of such diversions not existing on the date this Treaty enters into force shall be determined by the Commission which shall also determine the amount of water consumed, such water to be charged against the country making the diversion.

Section III of the Treaty relates to the Colorado River. It contains a large number of clauses concerned with regulating the flow of the river, the essential feature of them being the idea that both Parties shall come to an agreement within the Commission.

The same remark applies to Article 16 dealing with the Tijuana River.

In the general provisions at the end of the Treaty, Article 17 states:

"The use of the channels of the international rivers for the discharge of flood or other excess waters shall be free and not subject to limitation by either country, and neither country shall have any claim against the other in respect of any damage caused by such use. Each Government agrees to furnish the other Government, as far in advance as practicable, any information it may have in regard to such extraordinary discharges of water from reservoirs and flood flows on its own territory as may produce floods on the territory of the other.

Each Government declares its intention to operate its storage dams in such manner, consistent with the normal operations of its hydraulic systems, as to avoid as far as feasible, material damage in the territory of the other".

Finally, in Article 23, the two Governments "recognize the public interest attached to the works required for the execution and performance of this Treaty".

Section III Multilateral Conventions Relating to the Hydro-Electric Development of Waterways of Common Interest

143. The only general convention concluded in this field is the so-called Geneva Convention.⁽¹⁶⁰⁾ (See Annex 6)
(160) Official Journal of the League of Nations, page 289.

On 19 May 1920 the Council of the League of Nations, meeting at Rome, adopted a resolution which was confirmed by the first Assembly of the League on 9 December of the same year, setting up the organization for communications and transit. A "General Conference on Communications and Transit", and an Advisory and Technical Committee, were thus brought into being. The Conference met for the first time at Barcelona in 1921, and on a second occasion at Geneva in 1923. It was the Committee that was responsible for the important work accomplished in the course of twenty-two sessions held at Geneva, the first in July 1921, the last in June 1939.

Shortly after it had been established, the Committee set up a Sub-Committee for Hydro-Electric Questions, which held two sessions (31 August 1922 at Geneva, 7 May 1933 at Paris).

Finally at the second General Conference a Permanent Committee on Electric Questions was established (16 November to 6 December 1923).

The first of these two bodies drafted the international conventions relating to electric power with which the present study is concerned, and, in particular, the "Convention relating to the Development of Hydraulic Power affecting more than one State".

This Convention (Rapporteur Mr. Génissieu - France) was adopted by 24 votes to 3 with 6 abstentions, on 9 December 1923. It was to come into force on the ninetieth day after deposit of the third ratification. This took place on 30 June 1925. Up to the present only a few States have ratified the Convention, these being Austria, Danzig, Denmark, Egypt, Great Britain (including

some colonies, protectorates and mandated territories), Greece, Iraq, New Zealand (and Western Samoa), Panama and Siam.

144. In the course of the preliminary discussions, the Secretary-General of the Conference, Mr. Haas, made a statement on the purpose of the work undertaken.

The draft statute relating to the development of hydraulic power dealt with three distinct questions:

1. It aimed at facilitating agreements between States whose co-operation was technically necessary for the execution of the hydro-electric development of a waterway;
2. It aimed at protecting those States whose interests might be prejudiced by such a development;
3. It provided for the setting up of international commissions in certain special cases in which the work of development, once executed, might constitute a threat to the security of a State.

145. The final text of the Convention, comprising twenty-two articles and a supplementary protocol, should not be analysed merely in its final form; for during numerous discussions which took place the scope of the text as initially submitted was radically changed. Consequently it is not proposed to examine it strictly article by article but to take note of the preparatory work and to bring out as far as possible the principles underlying the debates.

What, first of all, is the expressed aim of the Convention, or more exactly, its guiding principle? We

know that national laws concerning hydro-electric equipment differ widely. We have also noticed that countries are particularly sensitive where their national sovereignty is concerned and that the construction of hydro-electric plants may provoke considerable disturbances up or downstream or on a river's banks. Hence, in the absence of general rules, or a body of doctrine, or of international laws, the exploitation of certain rivers and with it the development of electric installations is likely to suffer serious detriment.

Hence, at the beginning of the Convention, the Contracting countries express their desire to "promote international agreement for the purpose of facilitating the exploitation and increasing the availability of hydraulic power". To this end certain principles had to be established by means of which the interested States could come to an agreement and negotiate. These principles are laid down in the Convention.

146.

The initial draft called for obligatory agreement on the development of hydraulic power within a single drainage area by all the riparian States of a given waterway whose installations might alter its nature; as well as all States having any rights over certain sectors of such watercourses. This development was to be realized exclusively from the point of view of technical convenience, "without reference to any political frontier". On the other hand, this obligation was offset by a guarantee, namely the optional or compulsory constitution of international commissions - optional in regard to the first principle in question, compulsory if requested by one of the States to safeguard installations affecting security or the exercise of its rights.

Hence States were to undertake to conclude an agreement with all other interested States, the latter being defined in a very broad and comprehensive manner.

This notion of an obligatory agreement gave rise to very strong objections. First of all, it is in practice difficult to require a State to reach agreement with other States, since the interests of the other States may be very different from or even opposed to its own and this would frequently give rise to disputes. To establish a rational development programme for a waterway, the most suitable place for the construction of dams, and the erection of the necessary installations must be considered. But while agreement is desirable between two countries in order to determine the most suitable arrangements, and apportion between them the benefits obtained, according to the natural wealth of each, or on any other basis, it is clear that the obligation to conclude such agreements may be detrimental to the interests of one of them.

The following is an example of two adjacent countries A and B:

A has a well developed industry and needs hydraulic power.

B, on the other hand, possesses a high hydro-electric potential but has no need of the power at the moment.

By the terms of the Convention as first proposed, A would be justified in requiring State B to collaborate in its schemes, which might well be detrimental to the future interests of the latter country.

Power may be easy to sell in one country, but quite difficult in another, and one State may be easily able to support charges which cause grave inconvenience to the other.

A single technical undertaking may present very different problems in one country or in another.

If the obligation to conclude agreements requires that the damage caused to a State be compensated, it cancels the value of such compensation, which in many cases is made unwillingly, and hence with scant justice towards the interested State.

This principle made an exaggerated appeal to the spirit of sacrifice of States whose interests are divergent; this was the first reason why it was rejected.

148.

The second reason was that the obligation to conclude an agreement imposed on one State in the interests of the others, did not in this imperious form seem compatible with the respect for national sovereignty.

To understand how, in contradiction to the theories in favour of absolute national sovereignty current in the 19th century, a draft convention could be submitted bearing such a compulsory character, it must be remembered that after the 1914-18 war and the creation of the League of Nations, that is at the time when the convention was drafted, the concept of absolute State sovereignty had broken down. It seemed at the time that, since the League of Nations was to be a kind of Parliament whose decisions might have had coercive force, a kind of super-State to which the majority of civilised nations had acceded, the traditional concept of this sovereignty had become incompatible with the new regime established by the Covenant. This doctrine was dominated by the idea of a higher universal good. The sovereignty of States was reduced to mere "jurisdiction", limited on the one hand by the obligation to conform to the general social well-being which was the

basic legal principle as defined by the League of Nations, and on the other hand by the obligation to follow the legislative directives given by this organ. (Sovereignty presupposes that the decision taken by a country is at its own discretion. The idea of jurisdiction implies that this sovereignty is used in a given direction in conformity with a right).

This utopianism which dominated the constitution of the League of Nations, did not last long, but the draft Convention in question appears to have interpreted this change in doctrinal trend - a point of some interest.

149. If one were to seek a further reason for the failure of the initial draft, it would be that its scope was too wide. These negotiations, often delicate in themselves, involved "all" States possessing any right whatsoever over sections of a given waterway, and it was realized that there was not sufficient justification for their inclusion.

Moreover, any State which might benefit from the development of waterways could take part in the negotiations, even on its own initiative. This constituted a type of interference in the domestic affairs of a country which was not readily acceptable.

The form the opposition took at the time can be seen from the record of the discussions which took place on the initial draft. The delegate of Belgium, for instance, pointed out that the problem raised questions involving the sovereignty of States. The State which possessed natural riches could in no circumstances be pledged to part with them, or with a part of them, to a neighbouring State which did not possess such riches. If a State possessing electric power, for instance, were to be forced

to share a certain quantity of that power with another State, why should not the same principle be applied to States owning coal mines, iron mines or diamond mines or any other form of natural wealth?

The delegate of Switzerland was also of the opinion that "the provisions of the Convention proposed might interfere with the sovereignty of States". It could not be stipulated, for instance, that every country through which a river flowed had the right to give its opinion as to how a dam which one of the countries proposed to erect should be constructed.

150.

If the final text of the Convention is now examined it can be seen that very few of the articles in the initial draft have been retained.

In the first place this text recognizes that a State must be free to dispose of its territory and natural resources as it wishes and must be sole judge of its material interests; and it affirms this principle categorically in Article 1: "The present Convention in no way affects the right belonging to each State..... to carry out on its own territory any operations for the development of hydraulic power which it may consider desirable". The principle of national sovereignty thus reappears very clearly.

The new theories, however, have left their mark. The text is of course no longer based exclusively and too theoretically on international solidarity, but States have recognized their inter-dependence, and have realized that their theoretical absolute autonomy is in practice limited by numerous economic or cultural factors. Hence, once this principle has been stated, the Convention introduces limitations.

The first of these is embodied in the text of the very first article which provides that the activities of States carrying out the development of hydraulic power may only be exercised "within the limits of international law"; and Articles 3 and 4 contain a second definition of the limits to this basic right. Such activity by States can only be carried on with due regard to the rights of other States.

Thus the extent of each State's sovereignty is specified, and the number of parties interested in a given development scheme is limited.

151. Articles 3 and 4 are drawn up in the same form, although they have different ends in view.

If a State desirous of carrying out operations for the development of hydraulic power needs to utilize part of the territory of another, or if in so doing it may cause prejudice to the other State, the interested parties "shall enter into negotiations" with a view to the conclusions of agreements which will allow such operations to be executed.

The scope of these two articles can be briefly analysed as follows. Here there is no longer any obligation, as in the preliminary draft, to conclude or reach an agreement, but only the obligation to negotiate.

Such negotiations must obviously be conducted with the intention of reaching a conclusion. But it can also be assumed that a State will not take the initiative in forcing negotiations on other States unless it sees some hope of success. In other words, a State will only submit serious proposals, which, from its acquaintance - at least in broad outline - with the economic situation of its neighbours, it considers are likely to interest them.

If these provisions are calculated to reduce the number of negotiations, at least the agreements resulting from them will be more numerous, and will be concluded in an atmosphere of courtesy rather than one of constraint.

What, now, is their field of application?

Article 3 envisages the possibility of operations involving "alterations on the territory". The term is general. The authors of the Convention did not consider it necessary to set forth every case which might involve such alterations.

First of all there are the temporary alterations involved in operations - submersions, drainage, the setting up of operational bases, the construction of permanent works, in short anything liable to bring about a topographical alteration in the territory of the neighbouring State.

Article 4 supplements the preceding article. Negotiations shall be entered into whenever serious prejudice may be caused to the neighbouring country. Here again, the authors have not defined the various kinds of prejudice. Let us merely retain for further consideration the description "serious" by which they qualify them.

In connection with the possibility of prejudice, it should be noted that at the time of signature a protocol was added stating that the provisions of the Convention did not in any way modify the responsibility or obligations imposed on States, as regards injury done by the construction of works for development of hydraulic power, by the rules of international law.

The Geneva Convention contains a second fundamental idea which is expressed in Article 2, and is aimed at increasing

the yield of rivers of common interest and lakes: before resorting to the negotiations mentioned in Article 1, the interested country or countries will already have studied the technical problems of the development scheme in question. They will have drawn up plans and projects, even before considering their actual execution. What Article 2 recommends is the joint study and comparison of the various projects. The interested States "shall agree to such investigation", which shall be carried out conjointly with a view to arriving at "the most favourable solution" and thus obtaining the maximum yield. It is quite certain that this comparison of different techniques will make for better results. Moreover, this preliminary investigation will automatically lead to the negotiations essential for effective application of the schemes.

153.

These then are the two basic ideas of the Convention. The remaining articles can be briefly summarized as follows:

Article 5 provides that the technical solutions adopted should be based solely on "considerations which might legitimately be taken into account in analogous cases of development of hydraulic power affecting only one State,.... without reference to any political frontier". Technical selection, such as the site for a dam, is thus to be made as if there were no frontiers, only the physical factors which will ensure the maximum yield being taken into account.

But any such selection made by technical experts must obviously be submitted to the national authorities in respect of the installations to be set up on their own territories. These authorities will then proceed to make, according to their own administrative regulations the necessary enquiries, expropriations, purchase of land etc. This is expressed by Article 7: "The establishment and

operation of works for the exploitation of hydraulic power shall be subject, in the territory of each State, to the laws and regulations applicable to the establishment and operation of similar works in that State".

In other words, and this is a leading idea of the Geneva Convention, the negotiators have sought to create the necessary conditions for an "ideal hydro-electric development". Articles 5 and 7 conjure up the following picture: the boundary stones having been removed, expert engineers are called in who, working as though they were dealing with a single homogeneous territory, draw up the plans of what, in their view, is the best technical solution of the problem. The boundary stones are then replaced and the construction and operation of the works is carried out in each country in accordance with its own laws.

We shall quote without comment Article 6 which gives a list (which is not exhaustive) of some of the most usual points on which negotiations can take place. They are:

- (a) General conditions for the establishment, upkeep and operation of the works;
- (b) Equitable contributions by the States concerned towards the expenses, risks, damage and charges of every kind incurred as a result of the construction and operation of the works, as well as for meeting the cost of upkeep;
- (c) The settlement of questions of financial co-operation;
- (d) The methods for exercising technical control and securing public safety;
- (e) The protection of sites;
- (f) The regulation of the flow of water;

- (g) The protection of the interests of third parties;
- (h) The method of settling disputes regarding the interpretation or application of the agreements.

Article 11 states that the Convention shall not affect or modify former international agreements.

154.

If the final text of the Convention is compared with the original draft, the results obtained may be regarded as insignificant.

As had already been pointed out, the Convention, in spite of its modest aims, was finally ratified by very few States and, what is more, no two of those States possessed a common frontier.

Smith, speaking of the Convention, describes its "drafting" as unfortunate. The general principle by which States should co-operate is well stated, but it is at once annulled by the terms giving each State the right to oppose its veto to any development plan for reasons of vital interest of which the State itself seems to be the sole judge. That is to say, the Convention fails us at the very point where we most need an authoritative guide.

As for Björnsken, he regards Article 1 as providing a sound argument in support of his theory that sovereignty is limited by good neighbourly relations. (161) "Hence the Convention does not wish to restrict the freedom of action of the individual State in respect of the utilization of waterways, to a greater degree than that prescribed by general international law. From which it may be concluded that the restrictions imposed by the Convention are to be regarded as representing standards of general international law."

(161) Björnsken, op cit. par 48, page 168.

Although it could not be applied in practice, the Geneva Convention and, indeed, the discussions to which it gave rise none the less mark a considerable step forward. A number of bilateral agreements show signs of its influence and many authors base their arguments upon it.

Its importance lies not so much in the new legal ties which it created as in the fact that it constitutes an authoritative expression of general principles on which it would be desirable for negotiations between States to be based.

No longer is it possible for a State to oppose its veto, even in a case where local modifications would entail serious prejudice. The idea has come into being that, in spite of the seriousness of the prejudice, the State is morally obliged to negotiate with a view to finding a means of carrying out the projected works. (162)

155. Ten years later, in 1933, at the Seventh International Conference of American States, held at Monte-Video, the Argentine delegate, Mr. Isidoro Ruiz Moreno, submitted a draft convention adapting the Geneva Convention to American conditions but retaining the essential clauses. (See Annex 4).

Section IV. Multilateral Conventions concerning the General Use of Waterways of Common Interest

156. The number of these Conventions is very limited. To begin with, there are the provisions of Articles 108 to 117 of the Final Act of the Congress of Vienna in 1815, according to the general principles of which Powers, whose States are separated or crossed by a navigable waterway, engage to regulate, by common consent, all that regards

(162) Annex 6 gives the complete text of the Geneva Convention.

its navigation. In other words, the principle of collective action by the riparian States is thereby established.

The rules to be observed relate chiefly to navigation:

- freedom of navigation of a waterway, along its whole navigable course, to its mouth, with no prohibition in respect to commerce.

The 1814 text spoke of freedom of navigation for all States, whether riparian or not. The text of the Final Act is more restrictive, however. Freedom of commerce exists but the vessels used must fly the flag of a riparian State.

- The regulations governing navigation must be uniform throughout the whole course of the river, i.e. each State lost the right of framing its own navigation regulations for its section of the river.

- The dues and charges imposed must be as favourable as possible and the same for all. The levying of these dues and charges must not entail inspection of cargo.

- Finally, it was laid down that each State would be responsible for keeping the section of the river in its territory open to traffic and for maintaining tow-paths, i.e. territorial jurisdiction with regard to works.

Thus, and this is a most important point, we are, for the first time, in the presence of a body of coherent principles relating to international rivers which will subsequently make possible considerable limitations of the territorial rights of riparian States.

157.

Some new and equally important principles were added to the above at the Paris Congress of 1856.

Freedom of navigation was affirmed for non-riparians as well as for riparians and was extended as far as the open sea. Until this time, the State exercised complete jurisdiction in the zone of its territorial maritime waters, a fact which gave rise to the famous Rhine 'estuaries' dispute lasting almost twenty years.

Finally, the same Congress of 1856 established the principle of the right of the great Powers to approve the navigation regulations framed by the riparians of the Upper Danube. Navigation regulations are henceforth no longer the sole concern of the riparians, and the great Powers as a whole must give their consent or approval. In a word, they are of international concern. The tendency at that time, then, is towards a considerable limitation of the territorial jurisdiction of riparian States in the interests of international trade.

The principles of the Congress of Vienna and of the Treaty of Paris provided the basis for a whole series of regulations governing the principal rivers concerned, particularly the Rhine and the Danube. The development of such regulations until the present day is outlined in Annex 9.

158. The Barcelona Convention of 24 April 1921 resumes in broad outline the principles of the Vienna and Paris Congresses. As has already been seen, the convention allowed the international regime to be applied to a national river which had international importance by virtue of its geographical situation, such as, for instance, a river giving access from the open sea to a port well equipped for handling sea-going vessels.

The Convention begins by establishing the principle of freedom of navigation for the "Contracting States".

This appears to be a more restricted solution than that offered by the Versailles Treaty, which provided for absolute freedom. Such a restriction seems to have been formulated with a view to attracting the largest possible number of signatures to the Convention by reserving the benefit thereof for signatories. It is also stipulated that the execution of works is at the discretion of the riparians. The principle is laid down, however, that a riparian may be obliged to execute works of improvement at the request of another riparian and if the latter agrees to pay whole or part of the costs.

The situation for which this clause provides is worth detailed examination since it is comparable to that arising in the case of hydro-electric development.

Let us take the case of the river Scheldt. This river, on which the port of Antwerp stands, passes through Belgian territory but reaches the sea in the territory of the Netherlands. The Dutch can do without the Scheldt as a waterway, since they possess a large number of others serving well-equipped ports such as Rotterdam, Amsterdam, etc. For the Belgians, on the other hand, the improvement of the course of the Scheldt is essential for the prosperity of the port of Antwerp. Now the Scheldt has a tendency to silt up and not only is a great amount of dredging required but it may also prove necessary to deepen the navigable channel and even to dredge new channels at the bends. Such works are of great importance to Belgium and of very little to Holland. According to the principle of territorial sovereignty and even to the traditional principle in river matters, Belgium had no means of obliging the Netherlands to carry out these works, even if it offered to pay. If the Dutch did not

wish to carry out the works, they were absolutely free not to do so. The provisions of the Barcelona Convention aim at remedying situations of this kind and at giving a riparian the right to oblige another riparian to execute certain works on its territory, the former assuming the material cost.

159. Although it takes the form not of a convention but of a declaration, the text adopted by the 7th International Conference of American States at Montevideo on 24 December 1933⁽¹⁶³⁾ (see Annex 7 for the text) should be cited. Article 2 proclaims the exclusive right of a State to exploit, for industrial or agricultural purposes, the margin which is under its jurisdiction of the waters of rivers of common interest. This right, however, is conditional in its exercise "upon the necessity of not injuring the equal right due to the neighbouring State over the margin under its jurisdiction". In consequence, no State may "without the consent of the other riparian State, introduce into watercourses of an international character, for the industrial or agricultural exploitation of their waters, any alteration which may prove injurious to the other interested State".

Article 7 further stipulates that when a State plans to perform works in waters of common interest it shall announce them to the other riparian States and furnish all the necessary technical documentation.

160. After the second world war, a conference was held in London in September 1945.

(163) Final Act, 7th International Conference of American States, page 113.

There were two opposing views upheld. The United States of America favoured the maintenance of the international principle, but wished to participate in European river commissions. The Union of Soviet Socialist Republics, on the other hand, though in favour of international regulation, wished to limit it to riparians. It was this latter solution which triumphed in 1948 at the Convention at Belgrade. It is too early, however, to talk of a new general tendency.

CHAPTER VII ADDITIONAL CLAUSES

161. In the outline of legal practice in Chapter VI our aim was to deal solely with matters relating to the main principles it was sought to bring out. However, a large number of the treaties cited contain additional clauses which call for mention before we conclude.

Some of them govern the arrangements to be made for obviating interference with other possible uses of the waterways concerned (navigation, fishing, irrigation etc.).

Others constitute reservations pure and simple, and spring from a desire to comply with Customs regulations or the requirements of national defence. Some expressly provide for the amount of compensation and the apportionment of benefits. Still others relate to the organization of joint Commissions. Finally, the procedure to be adopted in the event of disputes is dealt with in special clauses.

Section I Provisions safeguarding other uses of waterways

162. Navigation

It is obvious that the construction of a dam at a given point on a navigable waterway can make all navigation impossible precisely because of the physical obstacle it creates and the difference of water level it causes. A certain number of locks must therefore be constructed to restore to the river its original navigability.

The treaties provide for this in more or less explicit terms.

Thus the Berne Convention of 4 October 1913 between France and Switzerland, concerning the works at La Plaine, stipulates in Article 2 that the dam must have a lock

gate at one end to facilitate navigation, if necessary. The construction of power stations on the Rhine - that at Kembs and that at Ottmarsheim, now under construction - was preceded by a detailed study of the conditions required to avoid impeding navigation. In this connection, the Rhine Commission set forth in detail the conditions necessary for the construction of these stations, defining the flow, level of the water draft, moorings, and especially the number of and working of locks, turning basins, waste canals etc.

163 Fishing

Dam construction hinders the free movement of fish. Certain treaties stipulate that this must be restored by suitable means. One of these, notably, is the construction of a "fish ladder" or "fish lift" to enable the fish to surmount the difference in water level.

Thus Article 9 of the above-mentioned Berne Convention stipulates that the two Governments must draw up regulations for the protection and free movement of fish.

Article 7 of the Convention relating to the Roya declares in similar terms that "the two Governments shall reach agreement on the provisions to be applied for the conservation, protection and movement of fish."

Article 12 of the concession, dated 28 January 1947, for the Châtelot plant, situated on the Doubs between France and Switzerland, stipulates that "the concessionary shall comply with the decisions to be adopted by the Swiss authorities in agreement with the French authorities to safeguard the interests of fishing. In virtue of Article VII of the Federal Law of 21 December 1888, however, the concessionary is exempted from the

obligation of installing a fish ladder ... He will be required to provide facilities for fishing at a certain number of points on the bank of the reservoir basin ... He will still be required, even when the plant is in operation, to take all other measures deemed necessary by the authorities to protect fishing."

164 Other uses

Similar provisions are to be found in respect of irrigation and timber floating. We have seen the extent to which the various uses of a waterway are interdependent. The installation of hydro-electric power stations should accordingly preserve the rights attaching to other uses. As a general rule, this necessitates the construction of accessory works. It also involves the adoption, at the time of installation, of full precautions to prevent substances or gravel from being carried down into the downstream State.)

Mention must also be made of the clauses designed for site preservation. The construction of an artificial reservoir may adversely affect the picturesqueness of a valley which is a centre of tourist traffic. Perhaps the diversion of water from a river may cause a waterfall to dry up. Thus the exchange of notes between the United States and Canada in 1940 provided that consent to the diversion of the Albany River, which normally flowed into the Hudson Bay, was to take due account of "the assurances of engineers that there would be no material adverse effect to the scenic beauty of the Falls."

In the case of the Châtelet Concession, Article 14 stipulates that the works should mar the countryside as little as possible: the scenic beauty should be conserved to the utmost. Specific details then follow.

We shall pass over the clauses governing the maintenance by the riparians of the banks or bed of contiguous waterways, such maintenance being a duty even when the waterways are not subjected to any specific development.

On the other hand, mention must be made of the fact that the protection of forests is also stipulated in certain cases. The creation of an artificial reservoir often results in the flooding and submersion of wooded areas. Article 13 of the Châtelot Concession provides that the disappearance of a plot of woodland as a result of the creation of a storage basin shall be compensated for by the afforestation of an area of equal size.

Section II

Reservations

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These call for little comment. Generally speaking, they are almost invariably couched in analogous terms; their aim is to safeguard Customs or national defence regulations. Thus the Treaty of Fontainebleau of 1785 between Germany and the Netherlands stipulated that locks shall not be constructed at any point of their territory where they might prejudice the defence of their frontiers. Article 9 of the Berne Convention of 1913 stipulates that France and Switzerland reserve their freedom with regard to the measures to be adopted in the interests of national defence and the Customs service. A similar provision is contained in Article 8 of the Convention relating to the Roya.

Article 15 of the Châtelot Concession is on similar lines. It provides that "the concessionary shall conform with the decisions adopted by the Swiss authorities with regard to Customs matters. He shall carry out ... measures to be decided on by the Swiss authorities in the interests of national defence insofar as such measures relate to the construction of works and their operation".

Section III Compensation and apportionment of benefits

166 Irrespective of its gravity, any prejudice which may be caused to a riparian State on its territory by the development of a waterway of common interest by another State calls for compensation. This principle springs mainly from the maxim of Roman Law, "In suo quisque non prohibetur dum alteri non nocet". Certain authors have relied on this dictum to justify the obligation to refrain from any action which might create an injury. It merely signifies that reparation should be made if an injury has been caused; in other words, that the damage should be compensated for.

This obligation recurs in a large number of treaties, for example that of 7 May 1923 between the United Kingdom and France.⁽¹⁶⁴⁾ "The Government of Palestine shall have the right to build a dam to raise the level of the waters of Lakes Huleh and Tiberias above their normal level, on condition that they pay fair compensation to the owners and occupiers of the lands which will thus be flooded." Article 28 of the Prague Treaty of 12 December 1928⁽¹⁶⁵⁾ specifies that if the construction of an installation is calculated to cause "any considerable or permanent change" in the supply of water, the States should take account of the "legitimate interests" of the inhabitants of the other State.

There are several ways, however, of providing compensation for any injury suffered.

Let us first consider the case of contiguous waterways and take that of successive waterways afterwards.

(164) League of Nations Treaty Series, Vol. 22, p.364 (1924)

(165) League of Nations Treaty Series, Vol. 108, p.69

167 In the case of the former, one method consists in dividing up the watercourse into "sections" by lines perpendicular to the actual frontier.

 This is the procedure adopted in the Convention relating to the Roya:

 "The High Contracting Parties recognize (in Article 2) that each of them has equal rights to the waters and fall of the Roya and its tributaries in all the sections where this watercourse forms the frontier between France and Italy." However, to simplify the issue and enable the frontier sections of this river to be used more effectively for industrial purposes, both countries have voluntarily modified the general rule affecting their property rights. France agrees that between the tributaries Goa and Pagami, the Italian bank is to have sole use of the water; and between the Masque ravine and the di Rio vale, Italy agrees that the French bank is to have sole use.

 Similar provisions apply to the Lisbon Convention of 11 August 1927. Each of the two Contracting Parties accords the other the exclusive right of utilizing the entire fall in level of the river on a certain stretch of the frontier section. Portugal is to enjoy this right between the beginning of the said section and the confluence of the Tormes and the Douro, and Spain between the latter point and the lower limit of the international section.

 Thus two zones of utilization are created, each State having the right to utilize for the production of electric power the entire volume of water which flows through its zone. But it is specified that both States

undertake mutually not to reduce the volume of water which should reach the beginning of each zone of utilization of the international section of the Douro or of the Portuguese Douro. Each State shall proceed to the hydro-electric utilization of its zone directly or by means of concessions granted in accordance with its laws, with the proviso that all the works and installations necessary for such utilization shall be situated on the national territory of the State to which the zone is granted. An exception is, of course, to be made in the case of dams or certain accessories, which would have to be built in the bed or on the other bank of the river, on the understanding that the other State undertakes to establish the necessary servitudes with respect to reservoirs, dam supports and off-lets, and, if need be, to decree expropriations.

168. Taking a wide view of the subject, the two Parties in question frequently have recourse to the Convention to apportion the benefits of development between themselves in the form of reciprocal compensation.

The fact that the two riparian countries bordering on the same waterway accord each other equal rights in the bed and fall in level of the river results in many cases in the equal division of electric power production.

Thus Article 5 of the Berne Convention of 4 October 1913 provides that each riparian State shall be entitled to a part of the power thus created, proportionate to the fall of the river within the sections of the banks which belong to it, that is to say, the Canton of Geneva will be entitled to the whole of the power corresponding to the fall in the region where it owns both banks, and each of the two States will have the right to half the power

corresponding to the fall in the region where the left bank is Swiss and the right bank French.

Under Article 2 of the Prague Convention of 10 March 1921 concerning the Thaya, the Czechoslovak Republic undertakes to require its concessionaire to compensate downstream riparians for the loss caused by upstream works. Compensation is to be given in the form of the supply of current to Austria, which is entitled, should she so request, to the quantity of power specified in the Convention, i.e., six million kilowatt hours annually at a fixed price.

Switzerland and France agree in the Berne Convention of 19 August 1930 that each is entitled to half the power produced by the power station constructed on the Doubs frontier section. Each State may freely dispose of that power, either by using it for its own needs or by leasing it to a third party. It will be in the same position as if its share of power were produced in its own territory (Article 5).

The Châtelot Concession of 28 January 1947 likewise specified (Article 23) that the concessionaire shall apportion the capacity and electric power produced by the plant equally between France and Switzerland.

It may be pointed out that a similar provision is to be found in the Convention of 30 September 1915 regarding the Maroni River, but with specific reference to dredging. Article 5 states in effect that produce thus obtained "shall be deemed to be drawn in equal shares from the French portion and the Netherlands portion".

169. In the case of successive rivers, it is less easy to determine the injury caused than in the previous case. It depends, for the upstream State, on the rise in the water level caused in its territory, and for the downstream State on the alteration in the flow. Hence it - and the resultant compensation due - is a variable factor. As a rule, compensation takes the form of power supplies.

For example, Article 7 of the Washington Convention of 14 November 1944 relating to the Rio Grande stipulates that the Governments of the United States and Mexico shall jointly operate hydro-electric plants constructed on that river, each of them paying half the costs and the energy generated being assigned to each country in like proportion.

The purpose of the agreement concluded at Strasbourg on 10 May 1922 by the Central Rhine Navigation Commission was to stipulate that the rise in the water level produced by the weir of the Kembs plant should extend upstream as far as Birse on Swiss territory. Article 2 of the Convention accordingly provides that twenty per cent of the power generated, representing the power from the fall produced on Swiss territory by this rise in the water level, shall be conveyed by way of compensation to Switzerland. This part of the electric power is exempted from all charges whatsoever, so that it can be freely conveyed to Switzerland under exactly the same conditions as if it were produced in Swiss territory.

Article 2 of the Convention between Belgium and Portugal signed at Sao-Paulo de Loanda on 20 July 1927 concerns the construction of a dam on the M'Pozo river in Congo territory to raise the level of the river in the part

of its course situated in Angola territory. The two Governments agreed that compensation for injury caused should take the form of an electric power supply (actually fifteen per cent of the total power produced).

Conversely, the Stockholm Convention of 11 May 1929, while providing that the country suffering any injury which may be caused, shall receive compensation, stipulates in Article 9 that no obligation may be imposed upon a country to supply power as compensation from a waterfall situated in one of the two countries.

Mention may be made, finally, of Article 5 of the Reno di Lei agreement. Having regard to the waterways and fall utilisable in the respective territories, it is agreed that the hydraulic power produced in the Inner Ferrera plant is to be allotted between Switzerland and Italy in the proportions of 70 and 30 % respectively. Each of the States will be entitled to that proportion of the electric power produced by the plant, and may dispose of it in such form and under such conditions as it deems fit. The share of electric power falling to Italy and produced on Swiss territory is to be exempted by Switzerland from all public dues, charges or restrictions whatsoever, being freely conveyed to Italy under exactly the same conditions as if it had been produced in Italian territory.

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The above-mentioned cases relate to voluntary prejudice caused with the consent of the riparian State destined to sustain it. It may so happen that the damage is involuntary, resulting from a natural modification of the watercourse. The State sustaining such injury is likewise entitled to compensation.

For instance, the notes exchanged on 11 May 1936 and 28 December 1937 between the United Kingdom and Portugal stipulated that "Should the bed of the river undergo any alteration in the sense of clause (2) of this Agreement the Government of the territory prejudiced thereby shall have the right, which shall expire at the end of four years, to divert the river into its old bed, or, if this proves impracticable, to compensation on terms to be agreed upon with the Government benefited. But, even in the event of the diversion being practicable, either of the Contracting Parties may, if it prefers, agree upon compensation with the Government of the other territory."

171 To sum up, we find that whenever damage is caused, the State prejudiced is entitled to compensation proportionate to the extent of the injury. Such compensation is usually made in the form of power supplies, as one might expect. When a State constructs a hydro-electric plant on its territory, making use of a section of a waterway of common interest, this usually reduces the power potential of the other State. However, this is not an absolute rule. The power requirements of States vary, and they may compensate themselves in various ways through the medium of treaty clauses.

Section IV

Commissions

172 Whenever it is planned to construct a hydro-electric station, lengthy preliminary studies are needed in order to determine the best site. When this has been selected and a preliminary plan studied, it rests with the government concerned to grant the concession enabling the concessionary company to undertake the works and operate the new plant in accordance with the pre-established conditions.

Where such plants are to be constructed on a contiguous or successive river, however, additional difficulties arise. The plants are usually located on two different territories. In such cases, the presence of the frontier may hamper the harmonious development of the studies and construction works. The project should be so devised as to enable the potential power production to meet the requirements of both parties. Moreover the grant of the concession (or concessions) becomes a more delicate business. There is a simple method of removing these difficulties and ensuring the full implementation of the original agreement embodying the common desire of the parties - viz. through the establishment of a joint commission. This may be temporary or permanent, and may have restricted or more general functions. We shall examine below certain concrete cases.

A - Temporary joint commissions for hydro-electric development

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Clause 9 of the Cape Town Agreement of 1 July 1926 regulating the use of the waters of the Kunene River for the purpose of generating hydraulic power provides that the Governments of the Union of South Africa and of the Portuguese Republic shall each appoint an equal number of members on a joint technical commission which shall proceed to the site of the proposed works. The terms of reference of the commission are:

- to report on the feasibility of diverting the water of the Kunene River;
- to fix the point or points for such diversion;
- to design the necessary diversion works and canals;
- to estimate the cost of construction and maintenance of such works; and

- to submit proposals regarding the operation and maintenance of the works after construction.

Chapter IV of the Prague Convention of 15 July 1930 regarding the River Tisza, specifies (in Article 44) that with a view to the conclusion of agreements in regard to proposals for hydraulic works on the Tisza, and in order to expedite the execution of such proposals, a joint technical commission shall be set up consisting (Article 45) of two technical officials as plenipotentiaries of their respective governments. This commission shall meet within the territory of each Contracting Party alternatively. Its functions are laid down in Article 47, and consist in the preparation of proposals regarding hydraulic plants and instructions concerning their execution. The two plenipotentiaries shall be entitled to associate with themselves such experts as they may require.

The Convention between France and Switzerland of 19 November 1930 regarding the concession of the Châtelot plant on the Doubs River provides that the two Contracting States reserve the right, during the period of construction, to set up a Supervisory Commission of four members, two of whom would be nominated by the Swiss Government and two by the French Government. The function of the Commission is to supervise the execution of the work and submit its observations in the form of a report to the competent French and Swiss authorities.

Finally, Article 10 of a recent agreement dated 18 June 1949 between Switzerland and Italy regarding the concession of the hydraulic power of the Reno di Lei likewise provides that during the construction period the two Governments reserve the same right as was specified in the preceding Convention.

From a more general standpoint, mention should be made of the decisions adopted by the Pan-American Conference at Montevideo (Annex 8) which provides for a meeting of a joint Commission composed of technical experts appointed by the two parties in cases where one State plans the execution of works in international waters for the purposes of industrial or agricultural exploitation. It is self-evident that the establishment of this joint Commission should be preceded by the exchange of documentation on the proposed works, as recommended by us in the preceding chapter.

17. B - Permanent joint commissions for hydro-electric development

174. In the Convention between France and Italy for the utilization of the waters of the Roya referred to above, Article 4, provides for the establishment of a permanent International Commission to apply the principles set forth in the preceding Articles, the Commission consisting, for France, of the Engineer in Charge of bridges and highways and of hydraulic services in the Maritime Alps region and, for Italy, of the Engineer in Charge of public works, within whose area the territory in question comes. Plans for all construction works or any application in respect of a project on which agreement is required, shall be communicated in conference by the representative of the State in which the work is to be carried out to his colleague from the neighbouring State. Failing such communication, the representative of the State affected by the work may demand that such conference be opened. After receiving instructions from their respective Governments, the members of the Commission shall give their sanction to the works in question, if these are approved.

Article 4 of the Convention adopted on 10 May 1922 by the Central Rhine Navigation Commission for the construction of the Kembs power station provides that the two Contracting States - Switzerland and France - shall appoint a Permanent Committee of four members, consisting of two French and two Swiss engineers. The task of the Committee, during the construction period, was to supervise the execution of the works and submit its observations in the form of a report. During the period of operation, it is empowered to examine and resolve all questions concerning the execution of the French and Swiss concessions alike and to supervise the implementation of its decisions. The additional protocol to the Convention stipulated that the Committee must be unanimous in its decisions.

The Convention of 11 August 1927 relating to the hydro-electric development of the international section of the Douro provides (in Article 14) for the establishment of a Spanish-Portuguese International Commission, the special duty of which shall be to regulate the exercise of the rights recognized on either side and to decide the legal or technical questions to which such rights may give rise. The Commission, the duties of which are three-fold - advisory, deliberative and supervisory - is composed of three members appointed by the Portuguese Government and three members appointed by the Spanish Government. Its decisions are to be adopted by a majority vote.

Finally, attention should be drawn to Article 7 of the Treaty of 3 February 1944 relating to the waters of the Rio Grande whereby the United States and Mexico, International Boundary and Water Commission is instructed to study and prepare plans for hydro-electric power stations

which it may be feasible to construct at the international dams on that river.

It may be recalled, in this connection, that the Madrid Declaration had already recommended (in Article 7) the appointment by the States concerned of "permanent joint commissions which shall render decisions, or at least shall give their opinion, when, from the building of new establishments or the making of alterations in existing establishments, serious consequences might result in that part of the stream situated in the territory of the other State".

C - Joint Commissions on the Utilization of Waterways of common interest for some specific purpose.

175. Quite apart from hydro-electric development, Commissions are frequently set up when waterways of common interest are to be put to some other use. Some of these Commissions deal with their use for a specific purpose. In this connection, Article 6 of the treaty of 8 November 1785 between Germany and the Netherlands may be quoted: "Within one month after the exchange of ratifications, commissioners shall be appointed by each party to determine the most suitable sites for the said locks."

Article 33 of the Treaty of Cleves, concluded on 7 October 1816, establishes a joint Commission of experts for the regular inspection of waterways.

The Treaty of Nettuno, concluded on 20 July 1925, provides for the establishment of a joint Commission to supervise works on the River Eneo, and to see that the use of the water for the production of power does not cause serious detriment.

Article of the Treaty of Poznan, concluded on 27 January 1926, provides for the constitution of mixed committees consisting of three Polish members and three German members. They are to give the necessary authorization for the construction of dams or any other installations likely to alter the course or flow of frontier waterways.

For the inspection of waterways on the frontier between Germany and the Saar, Article 2, paragraph 3, of the protocol of 13 November 1926 sets up joint inspection commissions on which each party is equally represented.

Mention must also be made of the Convention concluded between Hungary and Czechoslovakia on 14 August 1947, which stipulates that all works on the frontier section of the Danube between the two countries, and on the Tisza below the junction of Szamos, must be carried out in accordance with mutually agreed plans. Agreement on these plans is to be reached by a technical commission comprising one representative of each contracting State, the views of the commission being submitted to the governments, by which the plans are to be approved.

Finally, Article 17 of the Convention concluded between Sweden and Norway on 11 May 1929 for the regulation of their common waterways, provides that each State may require the constitution of a commission consisting of two, four or six members, half of whom are to be appointed by each State. This commission is first to give its opinion as to whether the undertaking should be carried out. If so, it is to decide how the

work is to be executed in order to safeguard the public interest by preventing any possible damage. It is also to decide what rules should be laid down regarding water conservancy; what security is to be given for fulfilling the stipulated conditions governing the work and any obligations which may result therefrom; within what period the work is to be begun and completed and any other questions concerning the two countries in connection therewith.

D - Joint Commissions on the General Development of Waterways of Common Interest.

176.

Article 18 of the Additional Act of 26 May 1866 to the Treaty of Bayonne of 2 December 1856 establishes an international Commission of engineers to examine the position of frontier waterways between France and Spain. The Commission is to determine in each case the amount of water available at low-water and the area of immediately adjacent irrigable lands, belonging to riparian proprietors, which are not yet irrigated. It is also to propose measures and precautions to ensure proper observance of the regulations established by the Convention and to settle any disputes between riparian proprietors of either State. If mixed syndicates are constituted, the Commission would be authorized to examine the scope of the powers to be granted them.

Article 7 of a Treaty concluded between the United States and Canada on 11 January 1909 provides for the appointment of a permanent international joint Commission consisting of six members, three appointed by the United States and three by Canada.

A similar Commission had previously been constituted by the United States and Mexico on 1 March 1889, and on 3 February 1944 was named the International Boundary and Water Commission, United States and Mexico.

Article 293 of the Treaty of Trianon of 4 June 1920 provides that, in order to facilitate agreement between the States interested in utilization of the frontier waterways created by the dissolution of the former kingdom of Hungary, there shall be set up "in the common interest of the States possessing sovereignty over the territories in question a permanent technical hydraulic system Commission composed of one representative of each of the States territorially concerned and a chairman appointed by the Council of the League of Nations". The Commission is to bring about the conclusion, and supervise and, in urgent cases, ensure the carrying out of agreements between riparian States. It is also to maintain and improve the uniform character of the hydraulic system as well as the services connected therewith such as the hydro-metric service. It has full powers to undertake works or schemes and to establish all services with which it may be charged by the unanimous consent of the interested States.

Article 2 of the treaty of 10 April 1922 regarding waterways on the German-Danish frontier provides for the establishment of a commission on frontier waterways to examine and settle all questions affecting such waters.

In Annex 9 we give the regulations governing certain large international rivers such as the Rhine and Danube, for which there have long been international commissions to supervise conservancy and utilization.

A similar commission was set up for the Elbe on 22 February 1929. The Convention instituting the Statute of Navigation of the Elbe provides that all works affecting the use of hydraulic energy on that river shall be submitted to the International Commission of the Elbe for approval.

On 9 November 1924 Switzerland and Austria concluded a treaty for the regulation of the Rhine. Under the terms of Article 9, the regulation of the Rhine and all matters connected therewith are to be supervised by an International Commission for the Regulation of the Rhine consisting of four members and four alternates, each of the two governments being represented by two representatives and two alternates.

The United States and Canada which had already set up an international joint commission on 11 January 1909 established, on 24 February 1925 an International Control Board for the diversion of the waters of the Lake of the Woods watershed. The Board consists of two engineers, one appointed by the Government of Canada and the other by the Government of the United States. The decisions of the Board must, however, be submitted for approval to the joint commission referred to above.

For the joint execution of improvement and maintenance works on the frontier section of the Drewenz forming the boundary between Germany and Poland, these two countries signed an agreement on 11 April 1927, Article 2 of which provides for the constitution of a joint committee consisting of three Polish members and three German members or their alternates.

In order to facilitate agreement on the matters dealt with in the Convention of Katowice, of 18 February 1928,

concerning the improvement of frontier waterways between Czechoslovakia and Poland, a joint technical commission was established, to which each State appointed its plenipotentiary representative and his alternate, to whom advisers might be assigned. The duty of the commission is to draw up a works schedule, to propose the method of execution and to inspect and pass the work. The plenipotentiaries occupy the chair alternately and the commission meets alternately in the territory of the two States at least once a year. Resolutions which receive the assent of both plenipotentiaries are held to be adopted; they are binding on the contracting States only after endorsement by their governments.

177. We have seen that in practice States have willingly resorted to the establishment of joint commissions consisting of technicians to plan, carry out and supervise works they have jointly agreed to undertake on waterways of common interest. This procedure is most strongly recommended, particularly in the case of hydro-electric installations.

We have already pointed out while considering the Geneva Convention, that in order to determine the best site, States should ignore the frontier and send a group of technicians to study the scheme as though the frontier did not exist, and that governments should subsequently grant the necessary concessions. Such studies and the subsequent execution of the work will be greatly facilitated if they are carried out by a joint commission of competent engineers.

It is now necessary to comment briefly on the grant of such concessions.

Generally speaking, a common concessionaire is designated by the two countries and the conditions governing the grant of the concession are drawn up beforehand by the commission. But in practice, the application of this procedure meets with many difficulties, for on either side of the frontier legislation varies and methods of applying the concession, expropriations and the constitution of servitudes are essentially different in each country.

One of the conclusions to be drawn from this study is that it appears necessary and urgent to make a comparative survey of national legislation on these specific questions. It is certainly no part of our intention to propose forthwith a standard type of concession for all European countries, but a knowledge in one country of the law in another would greatly facilitate the close relations they must entertain when a hydro-electric plant is to be jointly erected.

Section V

Procedure for Appeals

178. It may so happen that a dispute arises between two Contracting States as to the interpretation of the terms of the Convention between them. Three types of solution are envisaged in the case of those cited by us in the present study.

The first is to refer the dispute to an international body.

Certain treaties provide for arbitration procedure. This may either be a preliminary to an appeal to an international body, or complete in itself.

Finally, the dispute may be settled by an ad hoc commission - in certain cases the technical commissions referred to in the preceding section.

We will now examine these various possibilities.

A. Direct Appeal to an International Body

179. This action consists in submitting the dispute to the international bodies specially designed for that purpose - the Permanent Court of Arbitration at The Hague and the International Court of Justice. These two Courts are independent of each other. The former was established by the Peace Conference of 1899 and given its present modified form by the Hague Convention of 18 October 1907. The latter, which was set up on 26 June 1945 under Article 7 of the United Nations Charter, supersedes the former Permanent Court of International Justice established in 1920 under Article 14 of the Covenant of the League of Nations. The reference in treaties or conventions to "the organ to be established by the League of Nations" was to this latter Court.

Annex 10 sets forth the main provisions governing the operation of these two International Courts.

180. Only a few treaties provide for direct appeal to these Courts, the chief ones being:

The Convention of 30 September 1915 between France and the Netherlands concerning the frontier between French Guiana and Surinam constituted by the Maroni River (Article 6);

The Convention of 28 April 1924 between Norway and Finland concerning the frontier between the province of Finnmark and the territory of Petsamo along the course of

the Jakobselv, and that of 14 February 1925 between the same two countries concerning the international legal regime of the waters of the Pasvik;

The exchange of Notes of 11 May 1936 and 28 December 1937 between the United Kingdom and Portugal constituting an agreement regarding sovereignty over islands in the river Rovouma and the boundary between Tanganyika Territory and Mozambique, with regard to the rights of the two parties in the event of any alterations in the bed of the river;

The Treaty of Versailles (Article 336), for its part, provides that if a State neglects to comply with its obligation with regard to upkeep of international navigable waterways, the matter may be brought before "the tribunal instituted for this purpose by the League of Nations".

Finally, mention may be made of Article 12 of the Convention of 19 November 1930 between France and Switzerland concerning the Châtelot Falls; "Should any dispute arise between the two Contracting States as to the interpretation or application of the present Convention or one of the concessions covered by this Convention, which it has not been possible to settle within a reasonable period of time through the diplomatic or other agreed channels, such dispute shall be submitted to the Chamber of the Permanent Court of International Justice which, in accordance with the terms of Article 29 of the Statute of the Court, shall determine the question by summary procedure. Nevertheless, at the request of one of the Parties, the dispute shall be submitted to the Court of Justice sitting at a plenary session". An Article on similar lines was included, as will be seen below, in the Convention between

the same countries concerning the Kembs power station, being modified in that instance, however, by an additional protocol.

B. Appeal to Arbitration

181. Apart from these appeals at common law to international bodies set up to deal with international disputes, a large number of treaties and conventions provide for the settlement of disputes by arbitration procedure. Appeals from the award may, or may not, be made to another Court, according to the case in point.

The relevant provisions of the principal treaties or conventions studied are as follows:

Convention of 20 October 1905 between Norway and Sweden (Article 6): "Disputes as to the interpretation or application of the present Convention which it has not been possible to settle by direct diplomatic negotiations, shall be referred to an Arbitral Tribunal composed of three members, one to be appointed by each of the two States and the third by the two members thus appointed or, failing agreement by them on that choice, by the President of the Swiss Federal Council or, alternatively, in accordance with the procedure laid down in Article 32 of the Hague Convention of 29 July 1899".

Articles 309 and 310 of the Treaty of St. Germain of 10 September 1919: Should riparian States of an international waterway fail to reach agreement regarding the use of those waters, "the matter shall be regulated by an arbitrator appointed by the Council of the League of Nations".

Agreement of 14 June 1923 between Germany and Poland concerning the handing over of the records of the Water

Conservancy Association and Associations for the Upkeep and Construction of Dykes (Article 5): "Cases of dispute, where the two Contracting Parties cannot come to an agreement, shall be decided, with the co-operation of a representative of each Party, by an expert, whom, should occasion arise, the Netherlands Government shall be asked to nominate".

Treaty of 19 November 1924 between Austria and Switzerland for the regulation of the Rhine (Article 16): "Should the two Governments disagree with regard to the interpretation or application of individual provisions of the present Treaty, the matter shall be referred to a court of arbitration. Each of the two Governments shall appoint one member of this court. The umpire, who shall not be a national of either of the Contracting States, shall be appointed by agreement between the two Governments. Should no agreement have been reached within six months from the date one of the Parties has proposed a settlement of the dispute by arbitration, the umpire shall be appointed in conformity with the procedure laid down in Article 45, paragraph 4 et seq., of the Hague Convention of 1907".

Agreement of 14 May 1925 between Germany and Poland regarding the administration of the frontier sections of the Notec and the Głda (Article 16): "Disputes arising in regard to the interpretation or execution of this Agreement shall be settled by the President of the German-Polish Arbitration Court for transit questions at Danzig, should he consent to do so. Otherwise, the Contracting Parties shall agree upon the choice of another person".

Treaty of 14 August 1925 between Germany and France regarding the delimitation of the frontier (Article 51):

"Any dispute which may arise between the High Contracting Parties as regards the interpretation or application of the present Treaty, and which cannot be settled by friendly agreement or submitted by common consent to a special arbitral tribunal shall be referred to the Permanent Court of International Justice."

Agreement between Portugal and the Union of South Africa of 1 July 1926 regulating the use of the waters of the Kunene River for the purposes of generating hydraulic power and of inundation and irrigation (Article 19):
"All disputes between the Parties ... shall be settled by arbitration".

Treaty of 3 February 1927 between Germany and Czechoslovakia (Article 35): "Should a dispute arise with regard to the interpretation or application of the present Treaty, such dispute shall, at the request of either State, be submitted to an arbitral tribunal for decision The decision of the arbitral tribunal shall be binding. For every dispute, the arbitral tribunal shall be constituted as follows: each State shall appoint as arbitrator one of its nationals and the two Parties shall choose as President a national of a third State. If, within one month of the date on which the request for an arbitral decision has been made, the Contracting Parties have not agreed on a President, they shall jointly request the President of the Permanent Court of Arbitration at the Hague to make the appointment".

These provisions recur in the Convention of 29 January 1928 between Germany and Lithuania regarding the maintenance and administration of frontier waterways. The same procedure is also adopted by the Convention of 14 November 1928 between Hungary and Czechoslovakia relating to frontier

questions, with special reference to the settlement of the legal position with regard to frontier watercourses, and that of 15 July 1930 between Roumania and Czechoslovakia concerning the settlement of questions arising out of the delimitation of the frontier, but with the following modification: in the event of disagreement between the Parties on the election of the President of the Arbitral Tribunal, he will be appointed by the President of the Permanent Court of International Justice.

Convention between Belgium and Portugal of 20 July 1927 regarding the M'Pozo dam and other questions of economic interest (Article V): "All disputes between the Parties concerning the interpretation of this Convention shall be settled by arbitration".

Exchange of Notes between United Kingdom and Egypt in regard to the use of the waters of the Nile (7 May 1929): "In case of any difference of opinion arising as to the interpretation or execution of any of the preceding provisions, or as to any contravention thereof, which the two Governments find themselves unable to settle, the matter shall be referred to an independent body with a view to arbitration."

Treaty of 3 June 1929 between Chile and Peru for the settlement of the dispute regarding Tacna and Arica (Article 12): "If the Governments of Chile and Peru disagree as to the interpretation of any of the provisions of this Treaty, and if, in spite of their goodwill, they can reach no agreement, the dispute shall be settled by the President of the United States of America".

Agreement of 22 November 1934 between Belgium and the United Kingdom regarding water rights on the boundary between Tanganyika and Ruanda-Urundi (Article 10): "In

the event of any dispute arising between the Contracting Governments in respect of any matter covered by this Agreement, the Contracting Governments shall refer such matter to such arbitrator or court of arbitration as may be mutually agreed upon".

To conclude our survey of treaties providing for arbitration, mention may be made of Article 13 of the Agreement of 18 June 1949 between Italy and Switzerland regarding the concession of the hydraulic power of the Reno di Lei: "Should any dispute arise between the two Governments as to the application or interpretation of the present Agreement or one of the concessions covered by the Agreement, which it has not been possible to settle within a reasonable time through the diplomatic or other agreed channels such dispute shall be submitted to an arbitral tribunal, whose decision shall be binding. The tribunal shall consist of two members and an umpire. Each of the two Governments shall appoint one member. The umpire, who must not be a national of either of the two States, shall be appointed by common agreement between the two Governments. Should the joint appointment of the umpire not have been made within six months from the date one of the two Governments has proposed a settlement of the dispute by arbitration, such appointment shall be made by applying, by analogy, Article 45, paragraph 4 et seq. of the Hague Convention of 18 October 1907 for the pacific settlement of international disputes. Any disputes between the two Governments as to the interpretation and enforcement of the arbitral award shall be referred for decision to the tribunal which made the award".

C. Appeal to a Commission

182. We have examined, in the preceding section, the composition and appropriateness of commissions of technical experts; some of these also possess juridical powers, and disputes may be referred to them. In other cases, special commissions have been set up for that purpose, which act, to some extent, as arbitral tribunals.

The Treaty of 11 January 1909 between the United States and the United Kingdom relating to boundary waters and questions arising along the boundary between Canada and the United States, set up a joint commission to which disputes could be referred by consent of the two parties (Article 10): "A majority of the said Commission shall have power to render a decision . . . If the said Commission is . . . unable to render a decision . . . it shall be the duty of the Commissioners to make a joint report to both Governments" which shall thereupon refer the dispute "to an umpire chosen in accordance with the procedure prescribed in . . . Article 45 of the Hague Convention for the pacific settlement of international disputes, dated the 18th October, 1907."

The Agreement of 10 April 1922 for the settlement of questions relating to watercourses and dykes on the German-Danish frontier also provided for the establishment of a commission to settle questions arising in connection with those watercourses. Article 3 provided that "Appeal may be made from the decisions of the Frontier Water Commission . . . to a Supreme Frontier Water Commission as a court of final appeal . . . It shall consist of two members appointed by the German Government and two by the Danish Government, together with a president appointed by the Netherlands Government, who must be a man of legal training

and thoroughly conversant with the matters in question."

The Agreement of 7 March 1923 between France and the United Kingdom respecting the boundary line between Syria and Palestine stipulates that "any dispute arising between the said Government (of Palestine) and the persons so authorized (to build a dam to raise the level of the waters of Lakes Huleh and Tiberias) on the one hand, and the owners or occupiers of the land on the other hand, shall be finally settled by a Commission consisting of four members, each of the two Mandatory Powers nominating two of the members of such Commission."

In the event of any disagreement between the members of the International Lake of the Woods Control Board, the body dealing with them is the International Joint Commission, set up under the above-mentioned Treaty of 11 January, 1909. The Commission's decision is final (Article 6 of the Treaty of 24 February 1925 between the United States and Canada).

The following treaties and conventions may also be mentioned:

Convention of 23 July 1921 instituting the Definitive Statute of the Danube, (Article 38): "All questions relative to the interpretation and application of the present Convention shall be submitted to the (International) Commission (of the Danube). A State which is prepared to allege that a decision of the International Commission is ultra vires or violates the Convention may, within six months, submit the matter to the special jurisdiction set up for that purpose by the League of Nations... When a State neglects to carry out a decision taken by the Commission in virtue of the powers which it holds from the Convention, the dispute may be submitted to the jurisdiction referred to in the preceding paragraph..."

The Statute of Navigation of the Elbe of 22 February 1922 provides for the same procedure.

Convention of 11 August 1927 between Spain and Portugal to regulate the hydro-electric development of the international section of the Douro (providing for the establishment of a Spanish-Portuguese International Commission) (Article 21): "The decisions of the International Commission shall be taken by a majority vote. If (after a second vote) no agreement has been reached, the Commission shall bring the dispute before the two Governments. Should the Governments not arrive at an agreement by direct negotiations, the question shall be submitted for decision to an Arbitral tribunal, composed of the members of the International Commission themselves and presided over by an umpire. If the dispute refers to a legal question, the umpire shall be a legal expert appointed by the Permanent Court of International Justice at the Hague; if the question is of a technical nature the umpire shall be an engineer appointed by the Zurich Polytechnical Institute, in both cases at the request of the two Governments. Should the two Governments not agree as to whether the dispute is of a legal or technical nature, this previous question shall be decided by the Hague Court itself".

Agreement of 14 December 1931 between Rumania and Yugoslavia concerning the regulation of the waters of the Tamasca Valley (Article 31): "Any dispute arising out of the application of Part II of the present Agreement (Hydraulic System) shall be referred to the delegates of the two States accredited to the Permanent Technical Hydraulic System Commission of the Danube (C.R.E.D.). If the two delegates are unable to reach agreement, the Governments of the two States shall note such disagreement. Either State shall

thereupon be at liberty after having given the other State one month's notice of its intention, to have recourse to the intervention of the C.R.E.D., in accordance with its Regulations".

183. In conclusion, we shall make separate mention of the provisions of the Convention of 27 August 1926 between France and Switzerland with regard to the legal regime of the future Kembs derivation (Article 12): "Should any dispute arise between two Contracting States as to the application or interpretation of the present Convention or of either of the concessions covered by this Convention, which it has not been possible to settle within a reasonable period of time through the diplomatic channel, such dispute shall be submitted to the Chamber of the Permanent Court of International Justice which ... shall determine the question by summary procedure. Nevertheless, at the request of one of the Parties, the dispute shall be submitted to the Court of Justice at a plenary session. The Parties may also agree to submit the dispute to an arbitral tribunal appointed in conformity with Article 45 of the Hague Convention of October 18, 1907, for the pacific settlement of international disputes".

The Additional Protocol adds: "The decisions of the Committee provided for in Article 4 (Joint Committee of four members to supervise the execution of the work and, during the period of operation, to examine and settle any questions which concern both the French and Swiss concessions) shall require unanimity. Should the French and Swiss members be unable to agree upon any one of the questions which, by virtue of the said Article 4, are within their competence and which do not concern

either the application or the interpretation of the Convention ... the dispute, if it has not been settled within a reasonable period through the diplomatic channel, shall be decided by an arbitrator appointed jointly by the two Governments".

Section VI: Conventions as Sources of Law

184. In the preceding sections a number of conventions have been examined. Before concluding, it may be useful to ascertain to what extent these agreements are capable of constituting a source of law, in view of the fact that these texts were submitted as a sequel to our study of theory and case-law to enable certain principles to be singled out. Actually, conventions do not necessarily express a national principle or reflect customary practice. On the other hand, however, they do bring out certain common factors which may be helpful in negotiating other agreements.

Bilateral conventions, in particular, obviously establish rights only as between the Contracting States. This point is stressed in Article 38 (a) of the Statute of the International Court of Justice. To settle disputes in accordance with international law, the Court, in reaching its decisions, is required to apply the standards expressly recognized by international conventions, whether general or particular, in force in the States party to the dispute. Hence bilateral agreements cannot establish rights in respect of a third State.

Nevertheless, the examination of these conventions is of value insofar as it provides a clue to the conception of international law held by nations generally. If, in fact, the same problem is resolved in the same way in a

large number of agreements, it may be concluded that that solution is in line with the principles generally recognized by civilized States.

Such for example, is the case in connection with extradition. The interests of the various States more or less coincide on that question. Each of them is anxious to regain custody of any wrongdoers who, by escaping abroad, have succeeded in evading punishment by its own courts. It is therefore to be assumed that an extradition agreement concluded between France and Switzerland will be more or less identical with one, say, between France and Italy.

185

With regard to the hydro-electro development of waterways, the solution is less clearly apparent, or at any rate more complicated,

Certain clauses of the conventions are bound up with the physical nature of the river in question, and with circumstances which vary as between one country and another. Nevertheless, a certain number of basic principles can be singled out, provided no attempt is made to generalize from specific clauses.

Moreover, there has also been a development in point of time. As political and economic relations improved, and particularly as the idea of the essential nature of the solidarity and interdependence existing between the various countries gained ground it became easier to conclude agreements, and States became less inclined to adopt unilateral decisions.

It must also be borne in mind that in many cases, treaties of this kind form part of a series of negotiations from which they cannot be dissociated. Thus in the course of discussions as to the assessment of damages and compensation, a negotiating country may grant the other party a legal, economic or political privilege outside the scope of the treaty in question.

186. Lastly, a certain number of treaties were concluded under the pressure of external events. Hence we shall be wary of extrapolating the clauses of peace treaties or other clauses applicable to States which happened to find themselves in a position of relative vassalage.

Thus Article 358 of the Treaty of Versailles gives France, which had become a Rhine riparian State, "the right to take water from the Rhine to feed... canals.. or for any other purpose, and to execute on the German bank all works necessary for the exercise of this right". It also gave her the exclusive right to the power derived from works of regulation on the river, subject to the payment to Germany of the value of half the power actually produced. "For this purpose France alone shall have the right to carry out in this part of the river all works of regulation (weirs or other works) which she may consider necessary for the production of power."

The right to take water from the Rhine was similarly granted to Belgium.

187. Some treaties also make special mention of emergency procedure. Decisions adopted in case of emergency may, in fact, be subject to the pressure of events and agreement be reached more rapidly; it is therefore not possible to generalize from the principles involved.

Article 13 of the Convention of Paris of 23 July 1921 stipulates that the riparian States of the Danube will have the right to carry out within the limits of their own frontiers, and without the consent of the Commission, any works which may be necessitated "by unforeseen and urgent circumstances". They must, however, apprise the Commission without delay of the reasons which have necessitated the works, of which a summary description must be furnished.

Similarly, Article 23 of the Treaty of Berlin of 3 February 1927 provides for the contingency in which there would be "danger in delay". In that case, measures may be taken by one side alone before an agreement has been reached. Article 31 of the Treaty of Prague of 14 November 1928 contains a similar clause: "Should there be a danger in delay, protective measures may be taken by one side alone before such agreement has been reached".

Mention should be made, finally, of the reasons underlying the exchange of Notes between the United States of America and Canada in 1940: "Canada's war effort and ... the major national defence effort in the United States" had created an urgent and vital demand for electric power supply which led those countries to intensify the hydro-electric development of certain international rivers.

CHAPTER VIII

CONCLUSIONS

188.

The purpose of this study, it need hardly be repeated, is primarily to supply the various governments with full and impartial documentation on a particular and important problem of public international law.

It is in that spirit that we shall attempt to select certain common principles derived from the preceding study.

189.

We have found that when a waterway crosses two or more territories in succession, each of the States concerned possesses rights of sovereignty and ownership over the section flowing through its territory. The same applies to frontier waterways. Each state possesses equal rights on either side of the boundary line.

However, hydro-electric development works carried out by a riparian State may adversely affect the other riparian State.

Within what limits and under what conditions can such developments be carried out?

None of the theories elaborated to limit the sovereignty of a State can well withstand critical analysis. Such sovereignty exists and it is absolute. Each riparian State has a right of ownership over the section of the waterway which traverses it, and this right restricts the freedom of action of the others. Nevertheless, the fact that each State is obliged to respect the right of ownership of the other States in no way impairs its sovereign power. On the contrary this

power resolves itself into the consent which the State may give for the execution of the works, and finds expression in the agreement.

It is found in practice that such agreement is the rule when a riparian State may be adversely affected by any alteration made to the hydraulic system by another riparian State.

190.

Physically, a waterway constitutes an indivisible unit. Political frontiers, which change from time to time with historical events, may alter the apportionment of rivers, but the latter still follow their unchanging course. Moreover, waterways have a natural mission to perform: that of serving the interests of the commonalty of mankind. It is difficult to establish priorities among these interests, and consequently difficult to classify the uses to which the waterways can be put. The intrinsic importance of each of them is a part of this difficulty, and the advancement of the common weal implies to some extent the development of the use of waterways.

This idea of community of interests and of equity and international comity should facilitate the conclusion of the necessary agreements.

191.

In the particular case of hydro-electric development, it is no use concealing the fact that difficulties may arise varying according to the interests at stake. The relative importance of the latter are completely different for any given State according as it is situated downstream or upstream. The absolute value of the injury suffered likewise varies considerably.

Hence the following principles would appear to emerge from the foregoing:

A State has the right to develop unilaterally that section of the waterway which traverses or borders its territory, insofar as such development is liable to cause in the territory of another State, only slight injury or minor inconvenience compatible with good neighbourly relations.

On the other hand, when the injury liable to be caused is serious and lasting, development works may only be undertaken under a prior agreement.

Conversely, a State has no right to oppose the hydro-electric development of a section of an international waterway situated in the territory of another State if this will entail only slight injury to itself. In the event of serious injury, the States concerned should enter into negotiations and supply each other in advance with all the information necessary for the execution of the projects in hand.

192.

Is it possible, however, to establish a criterion as a basis for the distinction between slight and serious injury?

Some authors contend, like Kaufman, that States are obliged to have regard "in just measure" (166) for the interests of other States; like von Ullmann, that riparian States are bound to act in conformity with the principle of "equity" (167); or, finally, like von Bar that a State must not make use of a waterway in such a manner as to change "its character" (168). Treaties are

(166) Kaufman, *Annuaire de l'Institut de Droit international*, vol.24, p.184.

(167) von Ullmann, *Blätter für administrative Praxis* 1910, p.65.

(168) von Bar, *Annuaire de l'Institut de Droit international*, vol.24, p.156.

concerned with safeguarding the "legitimate interests" of the other States... The truth is that it is impossible to lay down any hard and fast principle; only appraisal of the injury inflicted in concrete cases can determine how serious it is. But since a formula must be found, that of good neighbourly relations will be retained.

The concept of injury in international law is very complex indeed. It is difficult to set an absolute limit beyond which the injury is sufficient to provide legitimate grounds for opposing the action taken by another State.

Should the criterion for a distinction be sought in the absolute value of the development works to be carried out, i.e. the international economic advantages they represent, or rather in the extent of the modification caused to the "essential and utilizable" character of the waterway; or finally - which would seem preferable - in the relative value of this modification in relation to the utility of the development?

If a slight injury is to be taken into account, the danger is that a State may for a trivial reason refuse to take part in the necessary development. The limit therefore depends on the good will of States, on their readiness to negotiate and on the good relations between them. And if they sustain slight injury as a result of good neighbourly relations, that merely gives them the right to take part in the negotiations in order to claim fair compensation.

In studying the additional clauses we have seen examples of this compensation for injury being made in the form of power supplies. We have also seen the considerable

extent to which these negotiations, essential in the case of hydro-electric development, are facilitated by the appointment for that purpose of a joint commission composed of technicians.

193. Scientific discoveries should be accompanied by the spiritual aggrandizement of which the philosopher Bergson used to speak to Georges Blondel in the last years of his life.

The increasing rate of progress in all branches of human activity is reflected in the long run in an increased demand for electric power.

To cope with those requirements and satisfy them under optimum economic conditions, it is therefore necessary for the countries of Europe to feel themselves linked together by bonds of solidarity which are themselves growing stronger. If it is not to remain an empty symbol, expression should be given to that solidarity in the form of the negotiations advocated by us; and it will thus help to promote the harmonious development of natural resources - unfortunately limited - with a view to their improved utilization.

LIST OF TREATIES FIXING THE BOUNDARY LINE
IN CONTIGUOUS WATERWAYS OF COMMON INTEREST

Provisions for the delimitation of the boundary line in contiguous waterways of common interest are to be found in a very large number of treaties. These treaties may be classified in four main categories:

- I. Treaties taking the "median line" of the waterways as the boundary;
- II. Treaties laying down the "thalweg" as the boundary;
- III. Treaties differentiating between navigable and non-navigable waterways:
 - for navigable waterways, the thalweg forms the boundary
 - for non-navigable waterways the median line forms the boundary.
- IV. Certain treaties which on grounds of a right of prior occupation, purchase, cession, or other valid and legitimate title, or for practical reasons affecting the administration or utilization of the waters of the river, stipulate either that the whole waterway shall belong to one of the two adjacent States, or that sovereignty shall be shared in accordance with special provisions.

We shall mention the main treaties belonging to these four categories in chronological order.

- I. The boundary is formed by the "median line" of the river.
 - (1) 20 July 1819 General Treaty of Frankfort between Great Britain, Austria, Prussia and Russia.

Art.XII: "as to the rivers and rivulets which are to determine the new frontier "between the States of the King of Sardinia and the Canton of Geneva), the centre of their courses shall form the boundaries"

- (2) 2 December 1856: Treaty of Bayonne between France and Spain.

Art.IX: "from Chapitelacoarria to the mouth of the Bidassoa the middle of the principal course of the waters of that river, at low water, shall form the line of separation of the two Sovereignties....."

- (3) 29 September 1864: Treaty between Spain and Portugal.

Art. XVIII: "the line ... shall enter the river Douro near the confluence of the rivulet Castro. From that point the international line shall go along the centre of the principal stream of the Douro to its confluence with the Agueda."

Art XXI: "... the frontier shall proceed along the centre of the principal stream of the river Tagus, the line shall then go up the principal stream of the latter river....."

- (4) 14 June 1898: Convention between Great Britain and France for the delimitation of the British colony of the Gold Coast and of the French possessions of the Ivory Coast and Sudan.

Art. III: "from the point.... where the frontier strikes the Niger it shall follow the median line of the river, upstream....."

Art. IV: The frontier shall follow "the median line of the Dallul Mauri". (Nevertheless Article I of this Convention states that the frontier shall follow the thalweg of the Black Volta.

- (5) 30 September 1915: Convention between France and the Netherlands for the delimitation of the frontier between French Guiana and Surinam.

Art. I: "The frontier line is drawn along the middle waters" of the Maroni River.

- (6) 29 June 1920: Exchange of Notes between Finland and Norway on the subject of adoption of rules for the fisheries at the Tana watercourse.

Art. 8: "no fishing appliances or implements may be fixed beyond the mid-line...."

- (7) 12 July 1920: Peace Treaty of Moscow between Lithuania and the USSR.

Art 2: "In those cases where the frontier is carried along lakes, rivers and canals, it shall pass through the middle of these lakes, rivers and canals, unless otherwise provided for in this treaty."

- (8) 11 August 1920: Treaty between Latvia and USSR.
Same provisions.

- (9) 19 October 1920: Convention signed at Riga between Estonia and Latvia. Annex to Article 2, para 8: "The frontier line passing in the centre of a river is to be determined by perpendiculars from the headline of the polygons on both sides of the river."

- (10) 14 May 1921: Convention between Latvia and Lithuania
Same provisions.

- (11) 21 January 1924: Exchange of Notes between France and the United Kingdom agreeing to the Ratification of the Protocol defining the Boundary between French Equatorial Africa and the Anglo-Egyptian Sudan.

Wherever the boundary follows a waterway it is specified that it shall follow the median line of the river-bed.

- (12) 27 January 1926: Treaty between Germany and Poland for the Settlement of Frontier Questions - Additional Protocol.

Para.II: "In those parts of the frontier in which the frontier is situated in a waterway, the territorial frontier shall consist of the median line of the waterway at its normal level."

- (13) 1 July 1926: Agreement signed at Cape Town between the Union of South Africa and Portugal in relation to the boundary between the Mandated Territory of South-West Africa and Angola.

"The boundary between the Territory and Angola is accordingly declared and agreed to be the middle line of the Kunene River, that is to say, the line drawn equidistant from both banks"

- (14) 13 November 1926). Agreements between France and Germany
22 December 1926): regarding the delimitation of the Franco-Saar frontier.

These Agreements always show the boundary as following the "median line" of the various rivers.

- (15) 3 February 1927: Treaty between Germany and Czechoslovakia regulating Frontier Relations.

Section III, Art. 12: "... the median line of the water-course forms the frontier in the case of watercourses which mark the frontier (frontier watercourses)".

- (16) 11 April 1927: Agreement between Germany and Poland concerning the improvement and maintenance of the frontier section of the Drewenz.

Art. 5: "... the two Parties will enter into negotiations with a view to the possible transfer of the frontier to the middle of the improved waterway."

- (17) 31 January 1930: Treaty between Germany and Czechoslovakia concerning frontier waterways.

Art. 1: the frontier "shall be constituted by the median line of such waterway or according to circumstances, by the median line of its principal arm."

- (18) 15 July 1930: Convention between Roumania and Czechoslovakia concerning the settlement of questions arising out of the delimitation of the frontier between the two countries.

Art.1: "..... the frontier in the River Tisza follows the median line of the main branch....."

- (19) 16 July 1930 Treaty of Arbitration between Guatemala and Honduras concerning frontier delimitation.

"the definite boundary.... is as follows..... in a northerly direction in a straight line..... downstream along the median line of the said creek" (Rio Frio).

- (20) 5 September 1930 Agreement between Estonia and Latvia regarding the maintenance in good condition of the frontier between them.

Art. 1: "At places where the frontier follows a water-course which is gradually changing its bed, the frontier shall follow the median line of the river".

- (21) 25 January 1931: Agreement between Latvia and Lithuania.
Same provisions.

- (22) 27 February 1935: Boundary agreement between the Dominican Republic and Haiti.

Art. 1: "... the frontier line shall be the median line of the river Artibonite.....".

- (23) 9 April 1938: Treaty for the delimitation of the boundary between Guatemala and Salvador.
Art. 1 stipulates that wherever the boundary follows a watercourse it shall follow the "median line" of such watercourse.

- (24) 16 August 1945: Treaty concerning the Polish - Soviet State Frontier:

Art. 2: "... thence following the median line of the river San downstream to a point south of the settlement of Solina.

II. The boundary is formed by the "thalweg" of the river.

- (25) 1648: Treaty of Westphalia between France and Germany.
The Treaty of Westphalia itself fixed "the principal arm of the Rhine, known as the thalweg" as the limit of sovereignty between France and the German Empire (the right of ownership being limited by the median line).

- (26) 9 February 1801: Treaty of Luneville between France and Germany.

Art. 3: "His Imperial and Royal Majesty shall enjoy all rights of sovereignty and ownership over the areas hereinafter specified the line of demarcation being the thalweg of the Adige."

- (27) 7 July 1807: Treaty of Tilsit between France and Russia.
Art. 9: (Fixing the boundaries between Russia and the Duchy of Warsaw). The frontier follows "the thalwegs of the Lossona", the Narew, the Liza, the Nurzeck and the Bug.
- (28) 17 September 1808: Convention between Baden and Aargau.
The thalweg of the Rhine shall form the territorial boundary between the Grand Duchy of Baden and the Canton of Aargau".
- (29) 16 March 1810: Treaty between France and the Netherlands.
Art. 6: "...H.M. the King of Holland cedes to H.M. the Emperor of the French.....(here follows a list of territories).... in such a way that the boundary between France and Holland shall henceforth be the thalweg of the Waal..."
- (30) 19 March 1810: Act of Demarcation between Austria and Russia.
Art. II: "The question of which islands in the Dniestr shall belong to either Power shall be settled by reference to the thalweg or channel of that river...."
- (31) 8/20 November 1810: Act of Demarcation between Russia and Sweden.
Art. I: "The frontier.... shall follow the channel of the river Kongama then the channel of the Muonio..."
Paragraph 2 refers to the "channel or thalweg".
- (32) 14 May 1811: Convention between Prussia and Westphalia concerning the limits of navigation rights on the Elbe.
Art. 1: "In order to avoid any dispute over the exercise of territorial rights and sovereignty on the border between the two States, the High Contracting Parties have agreed to regard the thalweg, that is to say, the main channel of the Elbe, as the frontier....."

- (33) 10 May 1814: Treaty of Paris between France of the one part and Austria and her Allies of the other part.

Art. 5: "In the case of the Rhine, the boundary shall be the thalweg."

- (34) 9 June 1815: Final Act of the Congress of Vienna.

Art. IV: "The way or Bed (thalweg) of the Vistula shall separate ~~Gallia~~ from the territory of the Free Town of Cracow."

Art. XCV: "... the frontiers of the States of His Imperial and Apostolic Majesty, in Italy, shall be

2. On the side of the States of Parma, Placentia, and Guastalla, the course of the Po, the line of demarcation following the thalweg of the river"

- (35) 20 November 1815: Peace Treaty of Paris.

Art. I, 2: "The thalweg of the Rhine shall form the boundary between France and the States of Germany"

- (36) 30 January 1827: Boundary Convention between Baden and France.

Art. VIII: "The thalweg of the Rhine which forms the boundary between France and the States of Germany shall henceforth constitute the limit of sovereignty between the Kingdom of France and the Grand Duchy of Baden."

Art. IX: "The thalweg of the Rhine is the most suitable channel for downstream navigation at the normal lowest water levels. The line of its course as determined by the deepest soundings is known as the axis of the thalweg."

Art. X: "The thalweg shall be surveyed and determined annually at the end of the high water season, in the month of October."

Art. XI: "When the position of the thalweg has been surveyed it shall constitute the conventional limit of sovereignty between the two States, whatever changes the thalweg proper may undergo in the interval between one survey and another."

- (37) 19 April 1839: Treaty of London between Great Britain, Austria, France, Prussia and Russia, of the one part and Belgium of the other part.

Art. 2. "... the said line (of demarcation) shall follow the ~~course~~ of the Sure, the waterway (thalweg) of which River shall serve as the limit between the two States" (Belgium and Luxembourg).

- (38) 5 April 1840: Boundary Convention between France and Baden.

Art. I: "The object of demarcation of limits between France and the Grand Duchy of Baden is two-fold:

(1) except where otherwise provided in the present Treaty, to separate rights of sovereignty of the two countries to be determined by the thalweg of the Rhine, and (2), in accordance with the following provisions, to separate the rights of property on the islands and alluvial soil of the Rhine by a series of continuous and fixed lines."

Art. IV: "The axis of the thalweg, the position of which, shall have been surveyed and officially recorded shall constitute the limit of sovereignty between the two States until the next survey, notwithstanding any changes which may supervene before the date of each survey in the natural position of the thalweg".

- (39) 11 April 1857: Definitive Act establishing the new Frontier between Russia and Turkey in Bessarabia.

Art. II: "Wherever the line of demarcation follows a watercourse it shall be indicated by the thalweg of such watercourse."

- (40) 10 November 1859: Treaty of Peace between France and Sardinia (for the transfer of Lombardy).

Art. I: "... the frontier will follow the thalweg of the river (Minio).... will follow the thalweg of the Po to Luzzara.....".

- (41) 16 June 1860: Final Act of Demarcation of the Frontier between Austria and Sardinia.

Same provisions.

- (42) 12 May 1863: Treaty between Belgium and the Netherlands to regulate diversions of water courses.

Art. 12: "No works calculated to affect the flow.... may be constructed less than 150 metres from the thalweg of the Meuse....."

- (43) 13 July 1878: Treaty of Berlin fixing the frontiers of Bulgaria, Roumania, Montenegro, Serbia and Turkey.

Art. II: "The frontier follows upwards the mid-channel of the brook....".

Art. XXXVI: "The new frontier follows the ~~existing line~~ ascending the mid-channel of the Drina....."

- (44) 24 May 1881 Treaty of Constantinople between Austria-Hungary, France, Germany, Great Britain, Italy and Russia, concerning the Turco-Greek Frontier.

Art. I: "The new frontier line shall follow the thalweg of the Arta River"

- (45) 12 November 1884: Convention of Washington between the
United States and Mexico.

Art. I: "The dividing line shall follow the centre of
the normal channel of the rivers named."

- (46) 14 June 1898: Convention between Great Britain and
France for the delimitation of the
British colony of the Gold Coast and
of the French possessions of the Ivory
Coast and Sudan.

As was pointed out in paragraph 4, Article I of
this Convention stated that the frontier should follow
the thalweg of the Black Volta river.

- (47) 6 October 1898: Treaty between the Argentine Republic
and Brazil.

Art. I: "The dividing-line between Brazil and the
Argentine Republic starts from the river Uruguay.....
and follows the thalweg of that river....."

Same provisions in the later Articles.

- (48) 11 April 1908: Treaty between the United States and
Great Britain for the delimitation
of the frontier between the United
States and Canada.

Art. II: "... the line of boundary through the river
St. Croix shall be a water-line throughout and shall
follow the centre of the main channel or thalweg as
naturally existing"

- (49) 30 November 1911: Exchange of Notes between Great
Britain and Portugal concerning the frontier line in
the Rivers Huo and Chire.

".... it has been decided by common accord between
the two Governments to accept the line of the thalweg
of these rivers as the frontier-line."

- (50) 29 September 1913: Treaty of Constantinople between Bulgaria and Turkey.

Art. I, para. 8: "The frontier-line shall follow the thalweg of the brook"

para. 9: "The frontier shall follow the thalweg of the Marica."

- (51) 24 March 1922: Treaty of Lima between Colombia and Peru.

Art. I: "The frontier-line between the Republic of Colombia and the Peruvian Republic is agreed upon thence along the 'thalweg' of the River Putumayo to its confluence with the River Yaguas and thence along the 'thalweg' of the River Amazon"

- (52) 7 March 1923: Exchange of Notes between Great Britain and France respecting the boundary line between Syria and Palestine.

Wherever the frontier follows a water-course it is specified that it shall follow the thalweg of such water course.

- (53) 21 January 1924: Treaty between Belgium and the United States concerning Belgian Mandate for the Territory of Ruanda-Urundi.

Protocol, Art. 1: The frontier shall follow "the 'thalweg' of the river Kagera."

- (54) 28 April 1924: Convention between Norway and Finland concerning the frontier between the Province of Finnmark and the Territory of Petsamo.

Art.. 2: ".... the frontier shall follow the course of the Jakobselv (Vuoremajoki) running throughout along the median line of the channel"

- (55) 10 February 1925: Convention between the United States and the United Kingdom respecting the former German colony of East Africa.

Art. 1: "The territory for which a Mandate is conferred upon His Britannic Majesty comprises that part of the territory of the former colony of German East Africa situated to the east of the following line: the thalweg of the river Kagera....."

- (56) 29 June 1926: Boundary Convention between Spain and Portugal.

Arts. 3, 5, 6 all specify that the frontier shall follow the "thalweg" of the river.

- (57) 30 May 1926: Convention of Friendship and Good Neighbourly Relations between France and Turkey with a Protocol on the delimitation of frontiers between Turkey and Syria.

Same provisions as in the foregoing Convention.

- (58) 19 March 1927: Agreement between Belgium and Great Britain respecting the delimitation of the boundary between Northern Rhodesia and the Belgian Congo.

Appendix I to No. 2, III: "The agreed upon line - the thalweg of the Luapula River...."

- (59) 6 October 1927: Agreement between the Union of South Africa and Portugal for the settlement of the boundary between the Union of South Africa and the Province of Mozambique.

Annexure (A), para. 6: "The terminus of the boundary line at Pafuri to be the junction of the thalweg of

the Pafuri and Limpopo Rivers....."

- (60) 21 January 1929: Treaty between the Dominican Republic and Haiti concerning the delimitation of the frontier.

Art. i: "The frontier line starts from the thalweg at the mouth of the river Dajabon or Massacre....."

- (61) 25-26 August, 1931: Agreement between the United Kingdom and Guatemala respecting the boundary between British Honduras and Guatemala.

No. 1 defines the boundary line as "beginning at the mouth of the River Sarstoon.... and proceeding up the mid-channel thereof....."

- (62) 27 August 1931: Exchange of notes between the United Kingdom and Siam regarding the boundary between Burma (Kengtun) and Siam.

No. 3: ".... It has been agreed to adopt the new channel of the Meh Sai River as the boundary between Siam and Kengtun, on the understanding that in the future, should the Med Sai River again change its course, our two Governments would be prepared always to hold the 'Deep Water Channel' of the river as the boundary, irrespective of any territorial loss that may be caused by such change."

- (63) 27 October 1932
1 November 1932 Agreement between Brazil and Great Britain for the delimitation of the riverain areas of the boundary between Brazil and British Guiana.

No. I (iii): "the boundary line at any particular time shall be the thalweg of the river wherever the thalweg may be situated at that time Where, owing to rapids or

to any other cause, it is not possible to determine the position of the thalweg, the median line of the channel which offers the most favourable course for downstream navigation shall be the boundary."

- (64) 1 June 1934: Exchange of Notes between the United Kingdom and Siam regarding the boundary between Burma and Siam.

Enclosure in No. 2: It is recommended "(1) That to clarify the present situation and to provide against any future changes in the course of the River Pakchan, the present new channel, which is the deep water channel, should be adopted as the boundary in this instance, and, further, that the deep water channel of the River Pakchan, wherever it may be, should always be accepted as the boundary. The recommendation with regard to the deep water channel should, however, refer only to that part of the River Pakchan which is liable to change its course.."

- (65) 22 November 1934: Treaty between Belgium and Great Britain regarding the boundary between Tanganyika and Ruanda-Urundi.

As in the Exchange of Notes and Protocol above (17 May 1926) the thalweg is always taken as the boundary line in rivers. It is stated, however, that

"Where owing to rapids or any other cause it is not possible to determine the position of the thalweg, the median line of the widest channel shall be the boundary".

- (66) 27 September 1935: Treaty between Germany and Czechoslovakia concerning frontier waterways in the Saxon and Bavarian sectors of the frontier.

Art. 2: "The Elbe frontier, which is a movable frontier, shall follow the median line of the channel of navigation used by traffic proceeding uninterruptedly downstream."

- (67) 11 May 1936: Exchange of Notes between the United Kingdom and Portugal constituting an agreement regarding sovereignty over islands in the River Rovuma and the boundary between Tanganyika territory and Mozambique.

No. 1 (2): "Throughout the course of the River Rovuma in those places where there are no islands, the boundary shall follow the thalweg even when the position of the latter is changed by a natural alteration in the bed of the river. By thalweg is understood the line of minimum level along the river bed."

- (68) 4 July 1937: Boundary Treaty between Iraq and Iran.
Art. 2: "... the frontier.... shall run..... to the thalweg of the Shatt-el Arab....."

- (69) 15 March 1940: Exchange of Notes between the United Kingdom and Brazil concerning the demarcation of the boundary line between British Guiana and Brazil.

Appendix 3 (i): "... the boundary line at any particular time shall be the thalweg of the river, wherever the thalweg may be situated at that time. It is understood that the water, and not the river bed, is to be the boundary. The thalweg is understood to imply the line of minimum level along the bed of the river throughout its length. Where it is not possible to determine the position of the thalweg, the median line of the channel which offers the most favourable course for downstream navigation shall be the boundary."

- (70) 29 October 1940 Exchange of Notes between the United Kingdom and Portugal regarding the delimitation of the Southern Rhodesia-Portuguese East Africa frontier.

It is specified that the frontier shall follow the "thalweg" of the various rivers forming the boundary.

- (71) 10 February 1942: Treaty of Peace with Italy.

Section III, Article 22 - iv: "Thence the line follows the main improved channel of the Quieto to its mouth ..."

Annex II, 6: "The line then ascends the thalweg of Roya ..."

- III. The boundary in navigable rivers is formed by the thalweg, and in non-navigable rivers by the median line.

This theory appears to be of more recent date. It was adopted by the Institute of International Law in its Draft International Regulations for River Navigation (9 September 1887):

Art. 3, para. 2: "The boundary of States separated by a navigable river is marked by the thalweg, that is to say, the median line of the channel."

Virtually the same theory was adopted by the Supreme Court of the United States which stated in 1893: "according to International Law and the usage of European States the terms 'middle of the stream' and the 'mid-channel' as applied to a navigable river are synonymous and interchangeably used."

Again, in 1934, the Supreme Court stated: "International Law today divides the river boundaries between States by the middle of the main channel when there is one and not by the geographical centre half way between the banks."

This theory was adopted in the Peace Treaties which followed the 1914-18 War:

- (72) 28 June 1919: Treaty of Versailles between the Allied Powers and Germany.

Art. 30: "In the case of boundaries which are defined by a waterway, the terms 'course' and 'channel' used in the present Treaty signify: "in the case of non-navigable rivers, the median line of the waterway or of its principal arm, and, in the case of navigable rivers, the median line of the principal channel of navigation."

- (73) 10 September 1919: Treaty of Saint-Germain between the Allied Powers and Austria.

Art. 30: id.

- (74) 27 November 1919: Treaty of Neuilly between the Allied Powers and Bulgaria.

Art. 30: id.

- (75) 4 June 1920: Treaty of Trianon between the Allied Powers and Hungary.

Art. 30: id.

- (76) 10 August 1920: Treaty of Sèvres between the Allied Powers and Turkey.

Art. 30: id.

- (77) 18 March 1921: Treaty of Riga between Poland, Russia and the Ukraine.

Art. 2: "When the frontier follows a river, the line drawn along the middle of the main channel shall be understood in the case of navigable rivers; and in the case of non-navigable rivers the line drawn along the middle of their principal arm".

- (78) 24 July 1923: Treaty of Lausanne between the Allied Powers and Turkey.

Art. 6: Same provisions as in the Treaty of Versailles.

Art. 30.

- (79) 14 August 1925: Treaty between Germany and France regarding the delimitation of the frontier.

Art. 11: "When the frontier is formed by an offlet canal or a non-navigable waterway, the frontier line coincides with the median line of the canal or with that of the water course at its mean level."

Art. 16: "On the section of the frontier between France and Baden, the limit of sovereignty on the Rhine is constituted by the axis of the "thalweg" Annex II: "... the position of the frontier between France and the Grand Duchy of Luxembourg is given by the median line of the Moselle....."

- (80) 13 November 1926: Protocol between France and Germany regarding the usufruct on the German-Saar frontier.

Art. 2: "Where the median line of a water-course constitutes the frontier, the latter shall be determined by a line drawn in the direction of the stream and following the middle of the water-course at its mean level; for navigable water-courses, the median line of the navigable channel shall be taken."

- (81) 29 January 1928: Treaty between Germany and Lithuania regarding the settlement of frontier questions.

Art. 1: "... the frontier will follow the median line of the principal channel of the Gerade-Ost..... the Russ and the Memel....."

Art. 6: "In sectors where the frontier line follows a non-navigable waterway.... it is constituted by the median line at the usual level of the water."

- (82) 17 May 1935: Final Protocol regarding the delimitation of the frontier between Poland and Roumania.

Art. IIB: "Along the Mungelus (Munczelus), Percalab (Perkalab) and Ceremuşul Alb (Bialy Czeremosz) to Vijnîţa (Wynnica)-Kuty, the frontier shall follow the median line of the principal arm of the watercourse, seeing that these rivers have not been regulated; as soon as the river has been regulated, the frontier shall follow the median line of the artificial channel."

- IV. Treaties which, on various grounds (right of prior occupation, purchase, cession etc.) or for practical reasons, contain special provisions for the apportionment of sovereignty over boundary rivers

- (83) 11 April 1713: Treaty of Utrecht between France and Portugal concerning the delimitation of French and Portuguese possessions in South America.

Art.X: "H.M.C. Majesty agrees that H.Portuguese Majesty shall exercise sole rights of ownership, dominion and sovereignty over both banks of the River Amazon, North and South."

- (84) 18 September 1773: Treaty of Warsaw between Poland and Prussia.

Art.II: "H.M. The King of Poland shall cede to H.M. the King of Prussia in such a way, that the Netze shall constitute the boundary in the States of H.M. The King of Prussia and that the whole of the said river shall belong to him."

- (85) 11 July 1780: Convention between the King of France and the Prince Bishop of Basle respecting the Doubs.

"The limit of sovereignty and jurisdiction between the Kingdom of France and the Principality of Basle

from the farthest extremity of the territory of Valangin to the mill at Theusseret shall be constituted by the River Doubs in such a way that the whole bed and the whole watercourse shall be under the dominion of France."

- (86) 10 August 1797: Treaty between France and Portugal concerning the boundaries between French and Portuguese Guiana.

Art. 7: "The boundaries between French and Portuguese Guiana shall be determined by the river known to the Portuguese as the Calcuene and to the French as the Vincent Pinson"

Art. 8: "The French Republic shall have sole rights of ownership and sovereignty over the mouths and also the whole course of the said River Calcuene or Vincent Pinson"

- (87) 17 October 1797: Treaty of Campo-Formio between the French Republic and the King Emperor of Hungary and Bohemia.

Art. 6: "..... the boundary line shall follow the left bank of the Adige the left bank of the Blanc channel the left bank of the Tartaro and the left bank of the greater Po as far as the sea."

- (88) 9 June 1815: Act of the Congress of Vienna.

Art. XV: "From thence the line shall divide the Bailiwick of Pegau between the Floss-graben and the Weisse-Elster; the former, from the point where it separates itself above the town of Crossen from the Weisse-Elster to the point where it joins the Saale, below the town of Merseburg, shall belong, in its whole course between those two towns, with both its banks, to the Prussian territory."

- (89) 12 July 1826: "Official record of the delimitation arrangement between the Kingdom of France and the Canton of Berne:

Art. 1: "From this point upstream following the River Doubs as far as the boundary of the Canton of Neuchâtel, the frontier shall follow the right bank, the entire river bed thus belonging to France as in the past."

- (90) 14 September 1829: Treaty of Adrianople between Russia and Turkey.

"From this place the frontier line shall follow the course of the Danube as far as the embouchure of St. George, so that while leaving all the islands formed by the different branches of this river in the possession of Russia, the right bank will remain, as heretofore, in that of the Ottoman Porte. It is, nevertheless, agreed that this right bank, commencing from the point where the St. George branch separates from that of Souline, shall remain uninhabited, to the distance of two hours from the river, and that no establishment of any kind whatsoever shall be formed thereon"

- (91) 21 July 1832: Arrangement between Great Britain, France, Russia, and Turkey, for the definitive settlement of the continental limits of Greece.

Art. I, para. 3. "The boundary line to the east will in that case commence at the mouth of the River Sperchius, and will run up its left bank to the point of contact"

- (92) 17 December 1914: Treaty between France and Italy for the regulation and utilization of the waters of the Roya.

Art. 2: "The High Contracting Parties accord each other equal rights over the waters and slopes of the Roya and its tributaries wherever the watercourse constitutes the boundary between France and Italy." However, for the sake of simplicity and with a view to improving the industrial utilization of frontier sections of this river, the Contracting Parties decided that between the Guoa and the Pagami brooks the use of the waters shall be

exclusively reserved to the Italian bank, and between the Masque ravine and the Rio valley the use of the waters shall be exclusively reserved to the French bank."

- (93) 7 March 1923: Agreement between France and Great Britain respecting the boundary line between Syria and Palestine.

"Any existing rights over the use of the waters of the Jordan by the inhabitants of Syria shall be maintained unimpaired."

- (94) 12 December 1924: Exchange of Notes between Italy and Great Britain concerning the utilization of the waters of the River Gêch (between Eritrea and Sudan).

Art.1: "The flow of the waters up to a total volume of 5 cubic metres per second shall remain solely at the disposal of the Government of Eritrea for the works at Tessenei."

Art.2: "The flow in excess of 5 cubic metres per second up to a total volume of 20 cubic metres per second shall be allocated in such a way that, when a rate of flow of 20 cubic metres per second shall have been attained, 10 cubic metres per second shall be retained by the works at Tessenei and 10 cubic metres per second shall be released for the benefit of the Province of Kassala"

- (95) 14 March 1925: Agreement between Germany and Poland regarding the Administration of the frontier sections of the Notéc (Netze) and the Gêda (Kuddow) Rivers.

Art.1: "The section of the Notéc (Netze) extending from the mouth of the Gêda (Kuddow) to a point south-west of Neu-Bellitz and forming the Polish-German frontier

(frontier section), shall, for the purposes of administration, be divided at km. 142.57 into an upper eastern and a lower western section. Poland shall undertake the administration of the upper, and Germany that of the lower section."

Same provision with regard to the Głda, the frontier section being divided into two sections, Poland undertaking the administration of the upper, and Germany that of the lower section.

- (96) 16 February 1927: Agreement between Germany and Poland regarding the administration of the section of the Warta forming the frontier,

Art.1: " the section of the Warta which forms the Polish-German frontier (frontier sector), shall be sub-divided into an upper and a lower section at Wiesenkrug"

Art.2: "Should it be necessary to undertake dredging in the frontier section such work shall be carried out in the upper section by Poland and in the lower section by Germany, regardless of the territorial boundary."

Art.3: Same provisions with regard to shipping and sanitary control.

- (97) 11 August 1927: Convention between Spain and Portugal to regulate the hydro-electric development of the International Section of the River Douro.

Art.2(a): "Portugal shall have the exclusive right of utilizing the entire fall in level of the river in the zone included between the beginning of the said section and the confluence of the Tormes and the Douro."

Art.2(b): "Spain shall have the exclusive right of utilizing the entire fall in level of the river in the zone included between the confluence of the Tormes and the Douro and the lower limit of the said international section"

Art.2(d): "Each State shall have the right to utilize for the production of electric power the entire volume of water which flows through the zone of development allotted to it in accordance with the provisions of paragraphs (a) and (b)"

- (98) 26 March 1928: Convention between Great Britain and the Netherlands respecting the further delimitation of the frontier between the States in Borneo under British Protection and the Netherlands Territory in that Island.

Art.2: " the boundary line follows the Odong river on its right bank (to a point) on the left bank of the Tring stream"

- (99) 3 June 1929: Treaty between Chile and Peru for the settlement of the dispute regarding Tacna and Arica.

Art.2: "Chile cedes to Peru in perpetuity all her rights over the irrigation-channels Uchusuma and the Mauri (also known as Azucarero) In respect of both channels, Chile grants to Peru a perpetual and absolute easement over the sections which pass through Chilean territory. Such easement shall include the right to widen the present channels, to change their course, and to utilize all the water that may be collected in their passage through Chilean territory,

except the waters that at present flow into the river Iltuta and those which are used in the Tacora sulphur mines."

- (100) 16 July 1930: Treaty of Arbitration between
Guatemala and Honduras

" the boundary is established on the right banks of the Tinto and Motagua rivers at mean high water mark, and, in the event of changes in these streams, in the course of time, whether due to accretion, erosion or avulsion, the boundary shall follow the mean high water mark upon the actual right banks of both rivers."

- (101) 14 November 1944: Treaty between the United States and Mexico relating to the utilization of the waters of the Colorado and Tijuana rivers, and of the Rio Grande.

II. - Rio Grande, Art. 4: "The waters of the Rio Grande between Fort Quitnam, Texas and the Gulf of Mexico are hereby allotted to the two countries in the following manner:

A. To Mexico:

(a) All of the waters reaching the main channel of the Rio Grande from the San Juan and Alamo rivers, including the return flow from the lands irrigated from the latter two rivers.

(b) One-half of the flow in the main channel of the Rio Grande below the lowest major international storage dam, so far as said flow is not specifically allotted under this Treaty to either of the two countries.

(c) Two-thirds of the flow reaching the main channel of the Rio Grande from the Conchos

(d) One-half of all other flows not otherwise allotted by this Article occurring in the main channel of the Rio Grande"

The Treaty likewise allots waters to the United States.

Art.5: The two Governments agree to construct jointly a certain number of works, in particular international storage dams.

III. - Colorado river, Art.10: "Of the waters of the Colorado river, from any and all sources, there are allotted to Mexico:

(a) A guaranteed annual quantity of 1,500,000 acre-feet (1,850,234,000 cubic metres) to be delivered in accordance with the provisions of Article 15

(b) Any other quantities arriving at the Mexican points of diversion with the understanding that in any year in which, as determined by the United States section, there exists a surplus of waters of the Colorado river in excess of the amount necessary to supply uses in the United States and the guaranteed quantity of 1,500,000 acre-feet (1,850,234,000 cubic metres) annually to Mexico, the United States undertakes to deliver to Mexico additional waters of the Colorado river system to provide a total quantity not to exceed 1,700,000 acre-feet (2,096,931,000 cubic metres) a year. Mexico shall acquire no right beyond that provided by this sub-paragraph by the use of the waters of the Colorado river system, for any purpose whatsoever, in excess of 1,500,000 acre-feet (1,850,234,000 cubic metres) annually."

Then follow indications as to the method of delivery of these waters.

As in the previous case certain works are to be constructed jointly.

BRIEF EXPOSITION OF THEORY RELATING TO THE DETERMINATION
OF FRONTIERS ALONG CONTIGUOUS WATERWAYS OF COMMON INTEREST

As was seen in Annex 1, a number of different systems have been employed in practice. The same systems can be found described in the works of writers on international law.

I. The frontier is formed by the median line of the river.

1. A.G. HEFFTER - ("Le Droit International de l'Europe", Book I, para. 67, page 157-1883):

"When a river separates two States, the sovereignty of both extends as far as the middle of the river, unless there is an agreement to the contrary".

2. E. de Vattel - ("Le Droit des Gens ou Principes de la Loi Naturelle", Book I, chapter XXII, para. 266-1758):

"If neither of the two neighbours on the river can prove that they or those from whom they obtained their rights, were the first to become established in the area, it is assumed that both arrived at the same time, since neither has any reasons for claiming precedence. And in this case, the sovereignty of both extends as far as the middle of the river."

Para. 274: "If the lake lies between two States, it is considered divided between them along the middle, provided that there is neither title nor constant and manifest use to justify deciding otherwise".

II. The frontier is formed by the thalweg of the river.

3. A. BERRIEDALE KEITH - ("Wheaton's Elements of International Law", Vol.I, Part 2, page 384):

"Where a navigable river forms the boundary of conterminous States, the middle of the channel or 'thalweg' is generally taken as the line of separation between the two States ..."

4. J. DEVAUX - ("Traité Élémentaire de Droit International Public", page 295):

"When a river forms the frontier, the line of greatest depth or 'thalweg' is generally taken as the boundary line."

5. Ed. ENGELHARDT - ("Du Régime Conventionnel des Fleuves Internationaux", page 72):

"... How shall one determine the middle of a liquid mass whose width varies with its level? This point was raised at the Congress of Rastadt (1798) ... It was in these circumstances that a new formula was evolved called the 'thalweg formula' according to which the boundary lies along the middle of the channel or of the strong current, which usually marks the deepest place. The thalweg is the lowest part of the river's bed over which the current flows fastest".

6. P. FIORE - ("Nouveau Droit International Public", Vol. II, para. 780):

"As regards the dividing line a rule commonly accepted nowadays is that when neither of the two States can produce entirely positive titles to claim ownership of the whole river, it should be agreed that the median part serve as boundary. It should,

however, be noted that the median part of the river is not always the part which is equidistant from both banks, but the part which is situated in the middle of the river's bed and which is the deepest part, where the current is strongest. This line is called the "thalweg".

The same author adds in his work "Droit International Codifié", para. 1046:

"When two States are separated by a common non-navigable river the frontier of the two bordering States should be considered as determined by the line of intersection which is called the 'thalweg'. This line should be considered as determined by the median part of the current and as exactly following the course taken by the water which flows fastest."

7. R. GENET - ("Principes du Droit des Gens", page 264):

"... Since the Treaty of Lunéville in 1801 ... dividing lines have been taken to lie along the thalweg of the waterway, i.e. a line drawn through the points of greatest depth. This solution for rivers, which is similar to that proposed for high ground, has the advantage of making it equally possible for both riparian States to use the navigable parts of the river."

8. P. GEOUFFRE DE LAPRADELLE - (in his thesis "La Frontière") - puts forward three definitions of the term 'thalweg':

"According to a customary definition, the 'thalweg' is the variable route followed by boatmen on their way down the frontier river ... In cases of

doubt due to there being two routes, the criterion for fixing the boundary line can be obtained by comparing the tonnages passing along each route.

"According to a scientific definition, the 'thalweg' is determined by taking the line of deepest soundings at low water; that seems to be the best procedure for settling or avoiding disputes.

"According to a technical definition, of a pragmatical kind, the thalweg is the axis of the channel which is safest and most accessible to the largest vessels."

9. J.L. KLÜBER - ("Droit des Gens modernes de l'Europe", 2nd edition, 1874, page 188):

"In the matter of frontier rivers and lakes whose opposite bank is similarly occupied, a line along the middle ... usually separates the territories.

Instead of this line, the thalweg has recently been chosen as the boundary line, i.e. the (variable) route, or rather the middle of it, followed by boatmen going downstream.

10. L. Le FUR - ("Précis de Droit International Public", Chapter II, page 163 (1937)):

"In cases where a river forms the frontier, it long seemed natural to take the middle of the river as the boundary. Since the Treaty of Lunéville in 1801 which fixed the Franco-German frontier, the dividing line has been taken to be, not the middle of the river, but preferably the thalweg, i.e. the middle of the main channel, the line of greatest depth."

11. F. von LISZT - ("Le Droit International", 9th edition, 1913, page 86):

"In the case of rivers, it is the lowest point in the river's bed or thalweg which in the absence of special agreement forms the frontier."

12. A. PLOCQUE - ("Des cours d'eau navigables et flottables", Part III, 1879, page 417):

"According to a custom which the law of modern nations is tending more and more to turn into a general rule, the dividing line is what is called the river's thalweg. This term means the line formed by the lowest points of a valley or dale and corresponding to the maximum depth of the river."

13. J. WESTLAKE - ("International Law", chapter VII, page 144 - 1910):

"When a river forms the boundary between two States it is usual to say that the true line of demarcation is the thalweg, a German word meaning literally the "downway", that is the course taken by boats going downstream, which again is that of the strongest current..... It is said that the thalweg was first proposed for this purpose at the Congress of Rastadt."

III. The boundary line is formed by the thalweg on navigable rivers, and by the median line on non-navigable rivers.

14. S. BASTID - ("Cours de Droit International Public" 1948-49, Chapter II):

"Similarly when a river forms the frontier, it is generally agreed that if the waterway is not navigable the dividing line follows the river's median line, i.e. is situated in the middle of the river's course. On the other hand, in the case of navigable rivers the rule

applied since the beginning of the 19th Century is not that of the median line, but the one called the thalweg rule, i.e. that the dividing line should run down the middle of the navigable channel."

15. BLUNTSCHLI - ("Le Droit International Codifié", Book IV, p. 298):

"Where the boundary is formed by a river which has not become the sole property of one of the riparian States, it is agreed in cases of doubt that the dividing line runs down the middle of the river. The thalweg of navigable rivers is considered the middle in cases of doubt. The thalweg itself is considered as a common boundary. It is wrong to regard it as neutral as is sometimes done; it does not form part of either territory, but belongs to both in so far as that is possible.

16. W. E. HALL - ("A Treatise on International Law", 8th edition, 1924, para. 38):

"Where a boundary follows a river, and it is not proved that either of the riparian States possesses a good title to the whole of the bed, their territories are separated by a line running down the middle, except where the stream is navigable, in which case the centre of the deepest channel, or, as it is usually called, the thalweg, is taken as the boundary."

17. C. C. HYDE - ("Notes on Rivers as Boundaries", "The American Journal of International Law", vol. 6, 1912, pages 902 and 906):

"If a non-navigable river forms the boundary between two States, it is generally believed that the dividing line follows the middle of the stream ..."

"It has long been agreed that, when a navigable river forms the boundary between two States, the dividing line follows the thalweg of the stream. The thalweg, as the derivation of the term indicates, is the downway, or the course followed by vessels of large tonnage in descending the river."

18. G. F. de MARTENS - ("Précis du Droit des Gens Modernes de l'Europe", Book II, Chapter I, page 39 - 1864):

"... If the two banks are occupied by two different nations and it is not proved which was the first in occupation, the equality of rights between nations naturally leads to the principle confirmed by numerous treaties that each of the two nations owns the river and the islands in it as far as the middle of the river. In cases where the river is navigable, the current of the river is generally the factor considered when agreeing to take the middle as the boundary. Consequently this boundary changes if the current changes; but that does not affect the ownership of other parts once it is established".

19. Axel MOLLER - ("International Law in Peace and War", Part I, Chapter II, page 104 - 1931):

"Unless otherwise agreed, ... a line down the middle of the current, i.e. the strongest current of the channel, in the case of navigable rivers and a line down the middle in the case of unnavigable rivers is reckoned as the boundary."

20. L. OPPENHEIM - ("International Law", Vol. I, Part II, pages 484-485, 7th edition, 1948):

"Boundary rivers are such rivers as separate two different States from each other. If such a river is

not navigable, the imaginary boundary line as a rule runs down the middle of the river. If navigable, the boundary line as a rule runs through the middle of the so-called thalweg, that is, the mid-channel of the river."

21. J. SPIROPOULOS - ("Traité théorique et pratique de droit international public", 1933 - page 143):

"As regards rivers, in the absence of special provisions, the middle of the channel (thalweg) is usually taken to be the frontier, i.e. the imaginary line down the middle of the part of the river where the waters are deepest, in the case of a navigable river, and the median line of the waters, in the case of a non-navigable river."

22. Karl STRUPP - ("Eléments de Droit International Public universel, européen et américain", 1930, Book I, Chapter III, page 151):

"As regards rivers (which skirt States and serve them as frontiers), if they are not navigable, the dividing line is the median line of the waters; if they are navigable, it is the middle of the thalweg, or channel, i.e. a median line dividing into two the part of the bed where the waters are deepest."

HYDRO-ELECTRIC DEVELOPMENT SCHEMES ON
WATERWAYS OF COMMON INTEREST

Schemes outstanding

No attempt will be made to deal with all outstanding schemes; we shall confine ourselves to those brought to our notice by the various countries. This list is therefore incomplete.

Still less do we intend to suggest solutions since we are not authorized to do so and are not in possession of all the necessary data.

We shall merely deal impartially with certain schemes in order to bring out the importance of the question and the variety of the problems arising in this field.

1. To begin with, there is a scheme for the regulation of Lake Constance the purpose of which is to lower the level of the Lake at times of spate and do away with the somewhat serious flooding which occurs at such times. This aim is to be attained without transferring the flood danger to riparians downstream from the Lake. The scheme should also enable water to be stored in the Lake at the end of the summer and in autumn for release in winter to the hydro-electric plants downstream. But such a possibility is greatly restricted by autumn navigation requirements on the Rhine below Mannheim.

Regulation would entail the modification of the course of the river between the upper and lower Lakes and at the outlet of the lower lake and the construction of a dam near Hemishofen.

The establishment of a system of regulation that will satisfy all the interests involved is one of the major difficulties. One which seemed likely to meet with general approval was drawn up in the course of lengthy negotiations with the riparian States, but these negotiations were interrupted by the war.

Switzerland is now preparing a working plan to replace the more general plan of 1926.

2. The Lake of Geneva has been regulated since 1888 under an agreement concluded in 1884 between the three riparian Cantons of Vaud, Valais and Geneva. The bed of the Rhone at Geneva has been modified so as to increase outflow at times of spate with a consequent drop of approximately 0.60 m. in the flood levels of the Lake.

Furthermore, a dam has been built by Switzerland to regulate run-off, with the result that the low water outlet flow has risen from 40 m³/s. before the dam was constructed to approximately 80 m³/s. afterwards.

In 1918 negotiations were begun between Switzerland and France with a view to the development of the Rhone for river navigation between the Mediterranean and Geneva. France linked the question of opening a navigable channel as far as the Swiss frontier with that of further regulation of the Lake of Geneva to improve power production by the hydro-electric plants on the Rhone. At the last meeting of the Franco-Swiss Commission in 1939 agreement was reached on the maximum storage and low-water levels of the Lake and also on the run-off capacity of the outlet channel required to lower the flood levels of the Lake and reduce the risks to

which riparians may be exposed by the artificial raising of the storage level. The works to be carried out will be extensive and costly; plans are now ready.

Switzerland and France are to conclude an agreement concerning navigation on the Rhone and the regulation of the Lake of Geneva.

3. In 1938 a Convention was concluded between Switzerland and Italy concerning the regulation of Lake Maggiore which had remained in its natural state. This Convention lays down the maximum storage and low-water levels of the Lake, which are to be obtained artificially, and also the work to be carried out by Italy, namely a mobile weir on the Ticino, an outlet channel for flood waters, a modification of the bed of the Ticino and a navigation lock. The mobile weir is completed and has been in operation since 1943; other works are still unfinished or have not yet been carried out. The regulation already effected enables the low-water flow of the Ticino to be increased, an advantage for the hydro-electric plants downstream and for irrigation purposes. On the other hand, the high-water level of the lake has not been lowered as the outlet channel and the modification of the bed have not been completed.

After a certain trial period a damming system will be laid down by agreement between the two countries.

4. Italy and Switzerland would like to regulate the levels of Lake Lugano so as to do away with flooding due to spates, while bearing in mind other requirements and desires of the riparians with regard to agriculture, public health, fishing, lake shipping, and more especially the interests of the Tresa riparians and the hydro-electric plant at Creva.

To achieve the desired regulation, the Lavena narrows and the Tresa at the outlet from the Lake will have to be modified and a mobile weir built on this river at Ponte-Tresa. A system of regulation will also have to be devised. Regulation also presupposes modifications to the lake embankment at Melide and the reconstruction of the Ponte-Tresa bridge.

All the necessary data concerning hydrography, topography, geology, soil mechanics, fishing, traffic, agriculture etc. have been collected. Switzerland is now preparing general working plans, which are partially completed, and draft regulations. Negotiations with Italy on this subject took place before the war and continued up to April 1943, at which time the Italian delegation agreed to the plans already prepared by Switzerland.

5. Three hydro-electric plants have been installed on this section of the Bernese Doubs, namely: "Le Refrain", "La Goule" and "Le Theusseret". These are old plants of comparatively little importance.

Switzerland and France have long been at variance over their respective rights to hydro power from this section owing to the fact that a former treaty put the whole river-bed under the dominion of France while reserving to Switzerland rights to utilize hydro power.

A Franco-Swiss Commission on the Doubs is now dealing with these questions. Before the last war the Swiss delegation transmitted to the French delegation proposals on the harnessing of the Franco-Bernese section and the sharing of the power between the two countries. These proposals are now being examined by the French delegation in preparation for a forthcoming meeting of the Commission.

6. The Swiss and Italian Governments agreed to set up an Italo-Swiss Commission on the development of the hydro power of the Reno di Lei and the Spöl (Italo-Grisons boundary); the Commission met for the first time at Berne on 12 and 13 March 1948.

The negotiations which have dealt with two draft Italo-Swiss agreements submitted by the Swiss delegation, have made satisfactory progress. With regard to the Reno di Lei, a convention has already been signed and is now awaiting ratification by the two Governments, and the procedure for the grant of a concession has already been started. Negotiations concerning the Spöl are continuing, with a view to choosing, among the various technical solutions proposed, that calculated to yield the maximum total production and coincide most closely with the interests of the two countries. It may be mentioned that for the Reno di Lei valley and the Spöl valley alike, the construction of a storage basin on Italian territory is planned. The aim of these agreements is to harmonize any concessions granted by either country on its own territory with a view to the joint development of two large storage plants. The projected plants would provide a capacity of 1,500 million kWh per annum.

7. Agreements are in preparation between the Italian company, "SIP" (Societa idroelettrica Piemonte) and the French National Electricity Board (Electricité de France) with regard to the utilization of the Mont Genis reservoir which is situated on Italian territory now annexed to France.

8. Along the whole length of their common frontiers, from Lake Constance to ~~Joazeiro~~ (Danube), Bavaria and Austria have a large number of contiguous and successive waterways. To these two groups of natural waterways has recently been added i.e. since the construction of storage reservoirs began to be extended in the Alpine area, a third group composed of artificial basins some of which have necessitated the building of dams on foreign territory. As we have seen, ~~two~~ separate agreements had already been concluded between these two countries for the harnessing of certain rivers.

There are still many schemes outstanding.

The Weissach, which belongs to the Rhine basin, rises in Austrian territory, flows through Bavarian territory, then returns to Austria and joins the Bregenz Ach. There is an Austrian project for the Weissach the catchment area for which would amount to approximately 28 square kilometres and would divert a flow of approximately $1.5 \text{ m}^3/\text{s}$. from Bavarian territory. Conversely, a Bavarian project provides for the diversion into the Iller of the Bavarian section of the Weissach with a catchment area of approximately 12 square kilometres and a rate of flow of $1.2 \text{ m}^3/\text{s}$. Neither of these projects is ready to be put into operation, nor has either been the subject of negotiations between Bavaria and Austria. Since both States are at once upstream and downstream owners negotiations may be expected to lead to a reconciliation of the conflicting views now prevailing on transverse waterways.

9. With regard to the Breitach, which flows into the Iller (Danube basin), there is an Austrian project for the diversion of a volume of water of $5.8 \text{ m}^3/\text{s}$. from a catchment area of approximately 88 square kilometres into the Bregenz Ach (Rhine basin). The two States have not yet begun negotiations on this project or on another Austrian project providing for the diversion of the upper Lech with a catchment area of 35 square kilometres into the Bregenz Ach. In both cases Bavaria will take the view that these diversions cannot be carried out by Austria without its consent.
10. With regard to the Vils which rises in Austrian territory, crosses into Bavarian territory, then returns to Austria and flows into the Lech, a Bavarian project provides for the catchment on the Bavarian section of the river and its diversion to the Weissensee, which is in Bavarian territory, of a volume of water of $4.86 \text{ m}^3/\text{s}$. which will probably be raised to $7.16 \text{ m}^3/\text{s}$. with the building of the two reservoirs.

In this case Austria is the downstream owner.
11. An Austrian plan provides for the diversion into the Inn, at the rate of $1.28 \text{ m}^3/\text{s}$., of the waters of the Lentasch which rises in Austria and flows into the Isar in Bavarian territory. No discussions have so far taken place on this project between the two States.
12. The study of several hydro-electric schemes concerning waterways on the Austro-Bavarian frontier which has been carried out shows that better technical results and a higher power output could be achieved by building dams, partly on foreign territory. For instance, the Bavarian Vils project provides for two weirs on Austrian territory; again, the Weissach reservoir planned by Austria would be

entirely on Bavarian territory while the upper Breitach reservoir planned by Bavaria would also have to be entirely rebuilt on Austrian territory. The construction of the dam for the Sylvenstein reservoir, which is now the subject of much discussion and controversy in Bavaria, would entail the granting of land concessions in Austrian territory. The same applies to a Bavarian project concerning the Tyrolese Ach as regards the stage represented by the dam on the lower Lech. In the case of the Achenwald reservoir, which is situated in the Achensee area and is planned by Austria, barrage works would be built partly on Bavarian territory. None of the projects listed above has yet been carried out, so that there are as yet no concrete examples of the attitude of either State towards this question of works which have to be carried out partly on the territory of another State.

13. An Austrian scheme which goes back to 1930 proposes that a high-capacity reservoir representing an effective volume of 730 cubic kilometres should be built on Swiss territory in the Inn gorges near Martinsbruck. The dam and power plant connected with this reservoir would be built on Austrian territory. With a head of 364 metres this plant would have an annual output of 1,600,000 kW (half of it winter power), which would raise the winter flow of the Inn by $46.1 \text{ m}^3/\text{s}$.

All hydro-electric development schemes in this area entailing diversions of rivers or the building of reservoirs are of considerable interest to at least

three or even four States, if we include Italian projects, a unique situation, seeing that problems of international river law normally involve only two States.

14. We shall conclude this survey which, though brief, is nevertheless indicative of the importance of the problem under review, by mentioning the problem arising in connexion with the harnessing of the Drava.

The upper Drava is situated in Austrian territory while the lower Drava flows through Yugoslav territory. When plans were drawn up for the hydro-electric development of this river, provision was made for the building of nine power stations. Of these five have so far been erected. The Schnabeck power station, which has a large reservoir, and the Lavamülnch power station are in Austria. The Dravograd, Fala and Maribor power stations are in Yugoslavia. The operation of the three last-named stations, which are situated downstream, therefore largely depends on supplies made available by the upper power stations. As accumulation usually takes place at night, the first feed-water reaches the Yugoslav power stations outside peak hours.

An agreement must therefore be reached, regulating the operation of this chain of power stations in the best economic interest of them all.

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Furthermore, it is stated that Austria is contemplating the catchment of the Hohe Tauern and Pastiritja glaciers in the Salzburg area in order to feed a chain of Austrian power stations. Since the Drava now receives the waters from these glaciers and also the waters of the river Bela, its flow in Yugoslav territory would be diminished accordingly.

Madrid Declaration

INTERNATIONAL REGULATIONS REGARDING THE USE OF INTERNATIONAL WATERCOURSES FOR PURPOSES OTHER THAN NAVIGATION, ADOPTED BY THE INSTITUTE OF INTERNATIONAL LAW
AT MADRID, APRIL 20th, 1911.

I. ~~When~~ a stream forms the frontier of two States, neither of these States may, ~~without the consent of the other, and without special and valid legal title, make~~ or allow individuals, corporations, etc. to make alterations therein detrimental to the bank of the other State. On the other hand, neither State may, on its own territory, utilize or allow the utilization of the water in such a way as seriously to interfere with its utilization by the other State or by individuals, corporations, etc. thereof.

The foregoing provisions are likewise applicable to a lake lying between the territories of more than two States.

II. When a stream traverses successively the territories of two or more States:

1. The point where this stream crosses the frontiers of two States, whether naturally, or since time immemorial, may not be changed by establishments of one of the States without the consent of the other;
2. All alterations injurious to the water, the emptying therein of injurious matter (from factories, etc.) is forbidden;

3. No establishment (especially factories utilizing hydraulic power) may take so much water that the constitution, otherwise called the utilisable or essential character of the stream, shall, when it reaches the territory downstream, be seriously modified;
 4. The right of navigation by virtue of a title recognized in international law may not be violated in any way whatever;
 5. A State situated downstream may not erect or allow to be erected within its territory constructions or establishments which would subject the other State to the danger of inundation;
 6. The foregoing rules are applicable likewise to cases where streams flow from a lake situated in one State, through the territory of another State, or the territories of other States;
 7. It is recommended that the interested States appoint permanent joint commissions, which shall render decisions, or at least shall give their opinion, when, from the building of new establishments or the making of alterations in existing establishments, serious consequences might result in that part of the stream situated in the territory of the other State.
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PERMANENT COMMITTEE ON CODIFICATION OF PUBLIC

INTERNATIONAL LAW

Program of the Seventh International Conference

of

American States

Juridical Questions

7. "Report of the Permanent Committee on Public International Law of Rio de Janeiro on the general principles which may facilitate regional agreements between adjacent states on the industrial and agricultural use of the waters of international rivers."
3. The Institute of International Law, in 1911, laid down certain principles which constitute a well defined outline of juridical regulation of the subject.

(Here follows the text of the Madrid Declaration: See Annex 4).

"These principles are dictated by reason, having in view not only the complexity of the relations between States through whose territories streams run, but also interests of a more general character, such as those relating to navigation and public health, which might be injured by the contamination of the waters or the poisoning of fish."
4. From the body of these rules which were proposed by the Institute of International Law, and which have earned the support of the most distinguished internationalists, a general dominant principle arises: the industrial utilization of international streams, whether these cross

or form frontiers, presupposes the consent of the States directly interested with regard to the right of navigation and the safeguarding of public health.

If, for example, an attempt is to be made to utilize for industrial or agricultural purposes a certain waterfall of an international boundary stream, the prior agreement of the two States bordering on the stream will be indispensable; and the works for such utilization shall not obstruct navigation on that portion of the stream which is open to use by other States, nor shall they produce contamination of the waters used by riparian communities; and the amount of water diverted shall not be such as to alter the character of the stream.

5. International boundary rivers are subject to the jurisdiction of each of the bordering States to the center line or middle of the navigable channel (*filum aquae*, *thalweg*). Occasionally, waterfalls change in some respects the character of the waters. In this case, in that part of the stream the dividing line ought to be, more naturally, equidistant from the banks, unless the matter be settled otherwise by treaties. It happens, nevertheless, that frequently, from a technical or economic point of view, the utilization of a waterfall necessitates joint installations which require the occupation of both banks and thus result in the formation of an economic unit.

Whenever the utilization of waterfalls in streams forming international boundaries is undertaken, the principle of prior agreement is imposed by the nature of things.

6. On the other hand, it might happen that the two bordering States cannot reach an agreement to harmonize their interests or points of view. What will be the consequence? The good faith and the loftiness of ideals of the adjacent States, naturally, will lead them to overcome this obstacle; but the existence of the obstacle being possible, it is desirable to examine the consequences arising from it. If such a situation should arise, international law does not offer a solution, because it is impossible to force sovereign States to adopt a procedure which they may consider injurious or undesirable. On the other hand, as the most eminent internationalists hold, the industrial and agricultural utilization of international streams depends on an agreement between the States directly interested, and the idea of an agreement excludes by its very nature that of coercion.

It would be improper to consider applying expropriation in a case of this character. Expropriation presupposes a general interest superior to a particular interest which dominates the latter, and an authority vested with sufficient power to decree such expropriation. In the case under consideration, however, the interest is particular, that is, it pertains to an adjacent State, even though there may be a remote possibility that the expropriation in question will promote general human progress; and there is no superior authority, under international law, with powers to recognize the general utility and to decree the expropriation. A multilateral treaty could not constitute such an authority because treaties only obligate those parties that sign them or adhere to them,

and the riparian State which found the agreement over the utilization of the waters unsatisfactory, naturally would not sign a compulsory treaty nor adhere to it.

The previous creation of a commission charged with settling differences of this character would have the same result. The competency of such a commission to interpret an agreement made between riparian States, or even to suggest a solution for a case not foreseen in the agreement, may be admitted; but to impose a certain course of action on a State which rejects the agreement would be to disturb international life instead of working in the interests of its harmony and welfare.

Sovereignty does not constitute an absolute power, but we cannot eliminate it without disorganizing the life of nations. In civil society the right of the individual has the value which society grants to it, because society is that which is juridically organized and the individual cannot be conceived outside of it. In the society of States, juridical organization results from the grouping together of peoples, which is taking place slowly and which as yet is far removed from what it ought to be. If the doctrine of the social contract corresponds to reality in juridical organization, that reality will be based upon international law, as a result of concessions made by States in order to render possible their existence in common, which is imperiously imposed by the necessities of every order. Upon entering the international community, States carry with them the quality of sovereigns; and for this reason there has developed the theory of self-limitation to explain their submission to regulations spontaneously accepted by all. But even disregarding this doctrine, it is true that within its borders the State has the right to exercise

its jurisdiction over the persons and things found therein, and therefore cannot be obliged to accept the imposition of any authority which it has not voluntarily recognized.

Nor could the question now under consideration be submitted to the jurisdiction of the Permanent Court of International Justice, because, there being no treaty or convention which establishes the competence of that court, its authority cannot be obligatory.

The General Treaty of Inter-American Arbitration, signed at Washington on January 5th, 1929, and promulgated recently by Brazil (Decree No. 21158 of March 15th, 1932), submits to arbitration any question of international law, but it is necessary that such question, by its juridical nature, be susceptible of decision by the application of the principles of law; and, as has already been demonstrated, outside of the agreements between the interested States, there are no principles of law applicable to the question.

7. Without the agreement of the interested parties, it is not possible to build works for the industrial utilization of any volume of water of international streams. This thought, moreover, is found expressed in the program, which refers to the principles that may facilitate a regional agreement between the riparian States. The way to facilitate a regional agreement lies in the conviction of the interested parties of their advantage in entering into it. If this advantage should be mutually evident, the parties would have no difficulty in coming to an agreement.

If, on the other hand, one of the riparian States should not be convinced of the advantages of the proposed agreement, either because, in its opinion, it is not founded upon equitable grounds, or because it presents grave difficulties, or for other reasons based upon some immediate or permanent legitimate interest, the case could be referred to the study of a commission of experts appointed by the Pan American Union. Such a commission, composed of three members, none of whom is to be a citizen of the States involved in the question, or of States having similar interests, after examining the reasons of both parties and inspecting the sites on both banks, should render its opinion, not, of course, of an obligatory character, but which may serve to overcome the difficulties. Each of the parties should have the right to appoint one or more delegates to participate, without vote, in all the work of the said commission.

In American international relations, the directing thought, the beacon which serves as a guide, is cooperation based upon equality and directed toward the common good, respecting the rights and the legitimate interests of all the States of the continent. Therefore, in the particular case under consideration, if interests clash, a compulsory solution, which is admissible only in the case of a well-defined right, is not to be sought; an endeavour should be made, by impartial study, to enlighten the minds of the interested parties in order that they may freely determine as they see fit the best means of harmonizing their legitimate interests.

In conclusion: For the utilization of waters of international rivers for industrial or agricultural purposes, agreement between the riparian States is

indispensable, since such utilization on one side may in various ways affect the other bank if the river be the boundary, or affect the territory of the neighbouring State if the river runs through it. This fundamental principle is foreseen in the program.

If an understanding cannot be reached between the riparian States, in each specific case, either of them (or both) should have recourse to the Pan American Union in order that, in fulfilling its function of co-operating in the development of the economic, social and cultural relations of the American Republics, it may designate the investigating commission mentioned above. The result of the latter's technical study, in which will be considered the various aspects of the case, from the general and particular points of view, will facilitate the solution and furnish the elements of an agreement. If such an agreement is brought about, the bases accepted in cases of similar agreements will be valid, assuming that the situations are identical, in the judgment of the interested riparian States.

Rio de Janeiro, July 23rd, 1932.

CONVENTION OF GENEVA
RELATING TO THE DEVELOPMENT OF HYDRAULIC
POWER AFFECTING MORE THAN ONE STATE AND PROTOCOL OF
SIGNATURE

9 December 1923.

Article 1.

The present Convention in no way affects the right belonging to each State, within the limits of international law; to carry out on its own territory any operations for the development of hydraulic power which it may consider desirable.

Article 2.

Should reasonable development of hydraulic power involve international investigation, the Contracting States concerned shall agree to such investigation, which shall be carried out conjointly at the request of any one of them with a view to arriving at the solution most favourable to their interests as a whole, and to drawing up, if possible, a scheme of development, with due regard for any works already existing, under construction, or projected.

Any Contracting State desirous of modifying a programme of development so drawn up shall, if necessary, apply for a fresh investigation, under the conditions laid down in the preceding paragraph.

No State shall be obliged to carry out a programme of development unless it has formally accepted the obligation to do so.

Article 3.

If a Contracting State desires to carry out operations for the development of hydraulic power, partly on its own territory and partly on the territory of another Contracting State or involving alterations on the territory of another Contracting State, the States concerned shall enter into negotiations with a

view to the conclusion of agreements which will allow such operations to be executed.

Article 4.

If a Contracting State desires to carry out operations for the development of hydraulic power which might cause serious prejudice to any other Contracting State, the States concerned shall enter into negotiations with a view to the conclusion of agreements which will allow such operations to be executed.

Article 5.

The technical methods adopted in the agreements referred to in the foregoing articles shall, within the limits of the national legislation of the various countries, be based exclusively upon considerations which might legitimately be taken into account in analogous cases of development of hydraulic power affecting only one State, without reference to any political frontier.

Article 6.

The agreements contemplated in the foregoing articles may provide, amongst other things, for:

- (a) General conditions for the establishment, upkeep and operation of the works;
- (b) Equitable contributions by the States concerned towards the expenses, risks, damage and charges of every kind incurred as a result of the construction and operation of the works, as well as for meeting the cost of upkeep;
- (c) The settlement of questions of financial co-operation;
- (d) The methods for exercising technical control and securing public safety;
- (e) The protection of sites;

- (f) The regulation of the flow of water;
- (g) The protection of the interests of third parties;
- (h) The method of settling disputes regarding the interpretation or application of the agreements.

Article 7.

The establishment and operation of works for the exploitation of hydraulic power shall be subject, in the territory of each State, to the laws and regulations applicable to the establishment and operation of similar works in that State.

Article 8.

So far as regards international waterways which, under the terms of the general Convention on the Regime of Navigable Waterways of International Concern, are contemplated as subject to the provisions of that Convention, all rights and obligations which may be derived from agreements concluded in conformity with the present Convention shall be construed subject to all rights and obligations resulting from the general Convention and the special instruments which have been or may be concluded, governing such navigable waterways.

Article 9.

This Convention does not prescribe the rights and duties of belligerents and neutrals in time of war. The Convention shall, however, continue in force in time of war so far as such rights and duties permit.

Article 10.

This Convention does not entail in any way the withdrawal of facilities which are greater than those provided for in the Statute and which have been granted to international traffic by rail under conditions consistent with its

principles. This Convention also entails no prohibition of such grant of greater facilities in the future.

Article 11.

The present Convention does not in any way affect the rights and obligations of the Contracting States arising out of former conventions or treaties on the subject-matter of the present Convention, or out of the provisions on the same subject-matter in general treaties, including the Treaties of Versailles, Trianon and other treaties which ended the war of 1914-18.

Article 12.

If a dispute arise between Contracting States as to the application or interpretation of the present Statute, and if such dispute cannot be settled either directly between the Parties or by some other amicable method of procedure, the Parties to the dispute may submit it for an advisory opinion to the body established by the League of Nations as the advisory and technical organisation of the Members of the League in matters of communication and transit, unless they have decided or shall decide by mutual agreement to have recourse to some other advisory, arbitral or judicial procedure.

The provisions of the preceding paragraph shall not be applicable to any State which represents that the development of hydraulic power would be seriously detrimental to its national economy or security.

Article 13.

It is understood that this Convention must not be interpreted as regulating in any way rights and obligations inter se of territories forming part of or placed under the protection of the same sovereign State, whether or not these territories are individually Contracting States.

Article 14.

Nothing in the preceding articles is to be construed as affecting in any

way the rights or duties of a Contracting State as Member of the League of Nations.

Article 15.

The present Convention, of which the French and English texts are both authentic, shall bear this day's date, and shall be open for signature until October 31st, 1924, by any State represented at the Conference of Geneva, by any Member of the League of Nations and by any States to which the Council of the League of Nations shall have communicated a copy of the Convention for this purpose.

Article 16.

The present Convention is subject to ratification. The instruments of ratification shall be deposited with the Secretary-General of the League of Nations, who shall notify their receipt to every State signatory of or acceding to the Convention.

Article 17.

On and after November 1st, 1924, the present Convention may be acceded to by any State represented at the Conference of Geneva, by any Member of the League of Nations, or by any State to which the Council of the League of Nations shall have communicated a copy of the Convention for this purpose.

Accession shall be effected by an instrument communicated to the Secretary-General of the League of Nations to be deposited in the archives of the Secretariat. The Secretary-General shall at once notify such deposit to every State signatory of or acceding to the Convention.

Article 18.

The present Convention will not come into force until it has been ratified in the name of three States. The date of its coming into force shall be the

ninetieth day after the receipt by the Secretary-General of the League of Nations of the third ratification. Thereafter, the present Convention will take effect in the case of each Party ninety days after the receipt of its ratification or of the notification of its accession.

In compliance with the provisions of Article 18 of the Covenant of the League of Nations, the Secretary-General will register the present Convention upon the day of its coming into force.

Article 19.

A special record shall be kept by the Secretary-General of the League of Nations showing, with due regard to the provisions of Article 21, which of the Parties have signed, ratified, acceded to or denounced the present Convention. This record shall be open to the Members of the League at all times; it shall be published as often as possible, in accordance with the directions of the Council.

Article 20.

Subject to the provisions of Article 11 above, the present Convention may be denounced by any Party thereto after the expiration of five years from the date when it came into force in respect of that Party. Denunciation shall be effected by notification in writing addressed to the Secretary-General of the League of Nations. Copies of such notification shall be transmitted forthwith by him to all the other Parties, informing them of the date on which it was received.

A denunciation shall take effect one year after the date on which the notification thereof was received by the Secretary-General and shall operate only in respect of the notifying State.

Article 21.

Any State signing or adhering to the present Convention may declare, at the moment either of its signature, ratification or accession, that its

acceptance of the present Convention does not include any or all of its colonies, overseas possessions, protectorates, or overseas territories, under its sovereignty or authority, and may subsequently accede, in conformity with the provisions of Article 17, on behalf of any such colony, overseas possession, protectorate or territory excluded by such declaration.

Denunciation may also be made separately in respect of any such colony, overseas possession, protectorate or territory, and the provisions of Article 20 shall apply to any such denunciation.

Article 22.

A request for the revision of the present Convention may be made at any time by one-third of the Contracting States.

In faith whereof the above-named plenipotentiaries have signed the present Convention.

DONE at Geneva the ninth day of December, one thousand nine hundred and twenty-three, in a single copy, which shall remain deposited in the archives of the Secretariat of the League of Nations.

PROTOCOL OF SIGNATURE TO THE CONVENTION OF GENEVA
RELATING TO THE DEVELOPMENT OF HYDRAULIC POWER AFFECTING
MORE THAN ONE STATE

At the moment of signing the Convention of to-day's date relating to the development of hydraulic power affecting more than one State, the undersigned, duly authorised, have agreed as follows:

The provisions of the Convention do not in any way modify the responsibility or obligations, imposed on States, as regards injury done by the construction of works for development of hydraulic power, by the rules of international law.

The present Protocol will have the same force, effect and duration as the Convention of to-day's date, of which it is to be considered as an integral part.

In faith whereof the above-named Plenipotentiaries have signed the present Protocol.

Done at Geneva, the ninth day of December, one thousand nine hundred and twenty-three, in a single copy, which will remain deposited in the archives of the Secretariat of the League of Nations; certified copies will be transmitted to all the States represented at the Conference.

Seventh Pan-American Conference 1933

USE OF HYDRAULIC POWER OF INTEREST TO SEVERAL STATES

Project for Convention presented by the Argentine Delegate
Mr. Isidoro Ruiz Moreno, for the adaptation of the
Geneva Convention of December 1923

Art.1er. - See Art.I of the Convention de Genève relative
à l'aménagement des forces
hydrauliques intéressant plusieurs
états.

Art.2	-	" Art.2	do.	do.
Art.3	-	" Art.3	do.	do.
Art.4	-	" Art.4	do.	do.
Art.5	-	" Art.5	do.	do.
Art.6	-	" Art.6	do.	do.
Art.7	-	" Art.8	do.	do.
Art.8	-	" Art.9	do.	do.
Art.9	-	" Art.10	do.	do.
Art.10	-	" Art.11	do.	do.
Art.11	-	" Art.12	do.	do.

Art.12 - The present Convention shall not be put into
force until it has been ratified by three States,

Art.13 - The Director General of the Pan American
Union, with Article 21 in mind, shall keep a special
register to indicate which parties have signed or
ratified the present Convention, and which have adhered
to it or denounced it.

Art.14 - Under the reservations of the provisions
indicated in Article 11 of the present Convention, the
Convention may be denounced by any of the parties, after
ten years have expired from the date that it went into

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force. The Convention shall be denounced by written notice to the Director General of the Pan American Union who shall immediately send to the other parties a copy of the note, informing them of the date when it was received.

The denunciation shall take effect one year after the date of receipt by the Director General and shall take effect only with regard to the notifying State.

Art.15 - The provisions of this Convention do not in any way modify international law in that part which has to do with responsibilities and obligations of a State in regard to damages of any sort resulting from the utilization of hydraulic forces.

Seventh Pan-American Conference

INDUSTRIAL AND AGRICULTURAL USE OF INTERNATIONAL RIVERS

The Seventh International Conference of American States,

DECLARES:

1. In case that, in order to exploit the hydraulic power of international waters for industrial or agricultural purposes, it may be necessary to make studies with a view to their utilization, the States on whose territories the studies are to be carried on, if not willing to make them directly, shall facilitate by all means the making of such studies on their territories by the other interested State and for its account.
2. The States have the exclusive right to exploit, for industrial or agricultural purposes, the margin which is under their jurisdiction, of the waters of international rivers. This right, however, is conditioned in its exercise upon the necessity of not injuring the equal right due to the neighbouring State over the margin under its jurisdiction.

In consequence, no State may, without the consent of the other riparian State, introduce into water courses of an international character, for the industrial or agricultural exploitation of their waters, any alteration which may prove injurious to the margin of the other interested State.

3. In the cases of damage referred to in the foregoing article an agreement of the parties shall always be necessary. When damages capable of repair are concerned, the works may only be executed after adjustment of the incident regarding indemnity, reparation

or compensation of the damages, in accordance with the procedure indicated below.

4. The same principles shall be applied to successive rivers as those established in Articles 2 and 3, with regard to contiguous rivers.
5. In no case either where successive or where contiguous rivers are concerned, shall the works of industrial or agricultural exploitation performed cause injury to the free navigation thereof.
6. In international rivers having a successive course the works of industrial or agricultural exploitation performed shall not injure free navigation on them but, on the contrary, try to improve it in so far as possible. In this case, the State or States planning the construction of the works shall communicate to the others the result of the studies made with regard to navigation, to the sole end that they may take cognizance thereof.
7. The works which a State plans to perform in international waters shall be previously announced to the other riparian or co-jurisdictional States. The announcement shall be accompanied by the necessary technical documentation in order that the other interested States may judge the scope of such works, and by the name of the technical expert or experts who are to deal, if necessary, with the international side of the matter.
8. The announcement shall be answered within a period of three months, with or without observations. In the former case, the answer shall indicate the name of the technical expert or experts to be charged by the respondent with dealing with the technical experts of

the applicant, and shall propose the date and place for constituting the MIXED TECHNICAL COMMISSION of technical experts from both sides to pass judgment on the case. The Commission shall act within a period of six months, and if within this period no agreement has been reached, the members shall set forth their respective opinions, informing the governments thereof.

9. In such cases, and if it is not possible to reach an agreement through diplomatic channels, recourse shall be had to such procedure of conciliation as may have been adopted by the parties beforehand or, in the absence, thereof, to the procedure of any of the multilateral treaties or conventions in effect in America. The tribunal shall act within a period of three months, which may be extended, and shall take into account, in the award, the proceedings of the Mixed Technical Commission.
10. The parties shall have a month to state whether they accept the conciliatory award or not. In the latter case and at the request of the interested parties the disagreement shall then be submitted to arbitration, the respective tribunal being constituted by the procedure provided in the Second Hague Convention for the peaceful solution of international conflicts.
(Approved December 24, 1933):

R E S E R V A T I O N S

RESERVATIONS OF THE VENEZUELAN DELEGATION

The Delegation of Venezuela desires to record :

(1) That, with respect to the industrial and agricultural use of international rivers, Venezuela subjects the regulation of this matter to existing partial agreements previously entered into with neighbouring States.

(2) In view of the fact that Venezuela is obligated by the provisions of Part XIII of the Treaty of Versailles, it will not be possible for her to associate with the activities of the proposed Inter-American Labor Institute, except in so far as these may not be contrary to such provisions.

(3) Venezuela subscribes to Resolutions VII, XIX, LII and LXX with the reservation that they are subject to further study by the Government as may be required by Venezuelan Legislation or by reasons already stated. Venezuela likewise reserves the corresponding Legislative approval in all matters connected with finance, customs and budgetary laws in force in Venezuela.

RESERVATIONS OF THE MEXICAN DELEGATION

The Delegation of Mexico records expressly that it makes a general reservation on the resolutions of the Conference regarding the following :

First. Industrial and agricultural use of international rivers.

Second. Penal provisions covering aerial navigation.

RESERVATIONS OF THE DELEGATION OF THE UNITED
STATES OF AMERICA

1. The Delegation of the United States of America, believing that the Declaration on the Industrial and Agricultural Use of International Rivers is not sufficiently comprehensive in scope to be properly applicable to the particular problems involved in the adjustments of its rights in the international rivers in which it is interested, refrains from giving approval to such Declaration.
2. Mr. Wright placed on record that, as delegate of the United States of America, he abstained from voting on the first points of Resolution LII concerning Offences committed on board Aircraft.

THE LEGAL REGIME OF CERTAIN RIVERS

Certain rivers have played a leading part in history and in the development of international law. There follows a brief account of their legal régime.

THE RHINE

Until the beginning of the nineteenth century the Rhine was the subject of various highly complicated regulations - resulting for the most part from the application of the principle of territorial sovereignty. Up to that time it was practically impossible to travel on the Rhine without changing ships and paying certain fiscal dues each time. In 1804, however, the Rhine octroi administration was set up.

As we have seen the 1814/1815 treaties proclaimed the freedom of navigation. Special regulations were issued dated 24 March 1815 providing for freedom of transportation for all, freedom of navigation for the riparian States, and, most important of all, for the setting up of a Central Commission composed of the riparian States, which was instructed to draw up uniform rules for the whole river. However, it was not until the Mainz Convention came into force on 31 March 1831 that the legal régime of the Rhine was more clearly defined. The right of through transit was granted to all riparian States. The Commission was duly organized, especially as regards its advisory functions. Its legal functions were confined to acting as a possible court of appeal for reviewing the decisions made by the courts of riparian States which were considered courts of first instance. But it was the Mannheim Convention of 17 October 1868 that laid down

a permanent Statute. The words "as far as the sea" were taken in that Convention to mean "as far as the open sea." The principle of freedom of navigation for all flags was again formally laid down. All regalia were abolished. In practice, however, the operative clauses in articles 15 and 22 restricted the freedom so widely granted in theory. Under those articles navigators were required to produce a certificate attesting experience of navigating the Rhine, to be domiciled alongside the river, and to furnish proof that the ship was seaworthy.

Not until the Versailles Treaty came into force was a regime of equality for all, whether riparians or not, established. This Treaty also provided for the revision of the Mannheim Convention; this was completed on 4 May 1936 and satisfied some of Germany's claims. This agreement was denounced very shortly afterwards by Germany and Italy. France, Belgium and the Netherlands took up the Rhine problem again in an agreement dated 3 April 1939. The 1815 principles were re-affirmed in that agreement, and the legal regime for the Rhine was extended to all waterways passing through Belgium and the Netherlands and flowing into the Rhine. The Rhine Commission resumed its work in 1945, the United States and the United Kingdom being represented on it as the occupying Powers in their occupation zones of Germany.

THE DANUBE

The Danube is undoubtedly of international importance, for it is 2,800 km. long, flows through ten States and through its vast mouths - Sulina, St. Gheorghe and Kilia - connects central and eastern Europe with the Black Sea. Its statute, however, was not discussed at Vienna, but

was examined at the Congress of Paris in 1856. By that time Austria had become aware of the fact that she could use the Danube as an outlet to the Black Sea since it had been realised that the Iron Gates were not an impassable obstacle.

The commercial treaty of 1838 between Austria and Great Britain gave the latter country the right to send ships up the Danube, but the Russians, who were in control of the mouths, let them silt up as they preferred to promote the use of Odessa as a port.

In 1856, the Danube reverted to Turkish sovereignty and in Article 15 to 19 of the Treaty of Paris of 1856 it was laid down that the provisions of the Congress of Vienna applied to the Danube.

"The instrument drawn up by the Congress of Vienna having laid down principles designed to govern navigation on rivers forming the boundary between or flowing through two or more States, the Contracting Powers agree among themselves that in future these principles shall likewise apply to the Danube and its mouths; they declare that this provision is henceforth part of the public law of Europe, and they guarantee it as such."

Article 15 continues, "shipping may not be subjected to any impediment or charge not expressly provided for in the following articles." Thus the principle of freedom of navigation for all flags was recognized.

The Treaty of Paris provided also for the organization of two commissions:

The commission of delegates of riparian States, to whom was assigned the drafting of administrative regulations to facilitate navigation on the fluvial part of the Danube. In point of fact this commission was never constituted. Secondly, a commission known as the European Commission to include the delegates of France, Austria, Great Britain, Prussia, Russia, Sardina, and Turkey. Its functions were mainly technical, and it was instructed to have certain works carried out. It was subsequently instructed to draw up navigation rules, which were adopted in 1866 under the Galatz Act. The legislative and executive as well as the administrative powers of the European Commission were thereby greatly increased. In 1878 Roumania was recognized as an independent State by the Treaty of Berlin and was represented on the Commission. The Treaty stipulated that the Commission should be completely independent of territorial authority. A veritable river State enjoying special powers, was thus created. The London Conference of 1883 renewed the Commission's powers.

When the Versailles Treaty came into force a new regime was established by the Statute of the Danube of 23 July, 1921. The part of the fluvial Danube from Ulm to Braila was declared an international waterway, open to ships of all flags, and a Commission on which the riparian countries, Great Britain, Italy and France were represented was set up. The principles laid down in 1856 were thus reverted to, the permanent participation of non-riparian Powers also being provided for.

As for the maritime part of the Danube from Braila to the sea, the Old European Commission, with its membership confined to Rumania and the three non-riparian Powers, France, Great Britain and Italy, continued to function with the same prerogatives. Rumania soon endeavoured to rid herself of this international tutelage, and under the Sinaia Convention of 18 August 1938 she laid claim to the powers of this Commission on the grounds of her territorial sovereignty.

On 1 March, 1939, Germany was admitted to membership, and the Commission, in spite of the war, continued to function until 1 September, 1940.

Then, since the USSR had become a riparian State of the Danube following the 1940 agreement by which Bessarabia was annexed to Russia, Germany was forced to agree to the amendment of the Statute so as to provide for the participation of the USSR. This question of regulations governing international rivers was taken up again at Potsdam in 1945, but without success. At the London Conference of Foreign Ministers in September, 1945, the United States advocated internationalization. The USSR urged that the regime of these rivers be settled by the riparian States alone. A new convention was signed at Belgrade on 18 August 1948. But only the riparian States signed it; the three big Western powers abstained.

The positions taken up by those three Powers differed considerably. France and the United Kingdom invoked the 1921 agreement urging that the obligations laid down therein be respected. The

United States which was not a party to this Agreement, took up its stand as the champion of internationalization.

The principle of freedom of navigation is also incorporated in the Belgrade Convention, but since there is no clause providing for submission of cases of infringement to a court of law, the matter is left mainly to the discretion of the riparian States.

A single new Danube Commission has likewise been set up, composed of representatives of the riparian States.

Its decisions are taken by a majority vote, but in important cases the consent of the State concerned must be obtained.

Its functions which are somewhat complicated are : to draw up a model set of rules for navigation, to serve as a basis for those of the riparian States; to draw up plans for large-scale works, and to report cases of infringement of the navigation rules to the riparian States, subsequently taking care to see that the penalties imposed are duly carried out.

It therefore acts mainly in the capacity of a guardian. It can only take action if a State is not itself able to undertake the works recommended.

In addition to this Commission two special river administrations have been set up: one for the Iron Gates, entrusted to Roumania and Yugoslavia, and one for the mouths, entrusted to Roumania and the USSR. They have wider powers than the Commission itself, since they may carry out works, organize pilotage, and fix and levy dues.

PACIFIC SETTLEMENT OF INTERNATIONAL DISPUTES

I. CONVENTION FOR THE PACIFIC SETTLEMENT OF INTERNATIONAL DISPUTES

(The Hague, October 18, 1907)

PART IV - CHAPTER II - THE PERMANENT COURT OF ARBITRATION

Art. 41 : With the object of facilitating an immediate recourse to arbitration for international differences, which it has not been possible to settle by diplomacy, the contracting Powers undertake to maintain the Permanent Court of Arbitration, as established by the First Peace Conference.....

Art. 42 : The Permanent Court is competent for all arbitration cases, unless the parties agree to institute a special tribunal.

Art. 43 : The Permanent Court sits at The Hague.
An International Bureau serves as registry for the Court...

Art. 44 : Each contracting Power selects four persons at the most, of known competency in questions of international law, of the highest moral reputation, and disposed to accept the duties of arbitrator.

The persons thus selected are inscribed, as members of the Court, in a list which shall be notified to all the contracting Powers by the Bureau...

The members of the Court are appointed for a term of six years. These appointments are renewable...

Art. 45 : When the contracting Powers wish to have recourse to the Permanent Court for the settlement of

a difference which has arisen between them, the arbitrators called upon to form the tribunal with jurisdiction to decide this difference must be chosen from the general list of members of the Court.

Failing the direct agreement of the parties on the composition of the arbitration tribunal, the following course shall be pursued :

Each party appoints two arbitrators, of whom one only can be its national or chosen from among the persons selected by it as members of the Permanent Court. These arbitrators together choose an umpire.

If the votes are equally divided, the choice of the umpire is entrusted to a third Power, selected by the parties by common accord.

Art. 46 : The tribunal being thus composed, the parties notify to the Bureau their determination to have recourse to the Court, the text of their compromis, and the names of the arbitrators.

CHAPTER III - ARBITRATION PROCEDURE

Art. 51 : With a view to encouraging the development of arbitration, the contracting Powers have agreed on the following rules, which are applicable to arbitration procedure, unless other rules have been agreed on by the parties.

Art. 52 : The Powers which have recourse to arbitration sign a compromis, in which the subject of the dispute is clearly defined, the time allowed for appointing arbitrators, the form, the order, and time in which the communication referred to in Article 63 must be made, and the amount of the sum

which each party must deposit in advance to defray the expenses.

The compromis likewise defines, if there is occasion, the manner of appointing arbitrators, any special powers which may eventually belong to the tribunal, where it shall meet, the language it shall use, and the languages the employment of which shall be authorized before it, and, generally speaking, all the conditions on which the parties are agreed.

Art. 53 : The Permanent Court is competent to settle the compromis, if the parties are agreed to have recourse to it for the purpose...

Art. 55 : The duties of arbitrator may be conferred on one arbitrator alone or on several arbitrators selected by the parties as they please, or chosen by them from the members of the Permanent Court of Arbitration established by the present Convention.

Failing the constitution of the tribunal by direct agreement between the parties, the course referred to in Article 45, paragraphs 3 to 6 is followed...

Art. 57 : The umpire is president of the tribunal ex officio.

When the tribunal does not include an umpire, it appoints its own president...

Art. 63 : As a general rule, arbitration procedure comprises two distinct phases : pleadings and oral discussions...

Art. 81 : The award, duly pronounced and notified to the agents of the parties, settles the dispute definitively and without appeal.

Art. 82 : Any dispute arising between the parties as to the interpretation and execution of the award shall, in the absence of an agreement to the contrary, be submitted to the tribunal which pronounced it.

* * * * *

II. STATUTE OF THE INTERNATIONAL COURT OF JUSTICE
(San Francisco, June 26, 1945)

CHAPTER I - ORGANIZATION OF THE COURT

Art. 2 : The Court shall be composed of a body of independent judges, elected regardless of their nationality from among persons of high moral character, who possess the qualifications required in their respective countries for appointment to the highest judicial offices, or are juriconsults of recognized competence in international law.

Art. 3 : 1) The Court shall consist of fifteen members, no two of whom may be nationals of the same State ...

Art. 4 : 1) The members of the Court shall be elected by the General Assembly and by the Security Council from a list of persons nominated by the national groups in the Permanent Court of Arbitration, in accordance with the following provisions.

2) In the case of Members of the United Nations not represented in the Permanent Court of Arbitration, candidates shall be nominated by national groups appointed for this purpose by their governments under the same conditions as those prescribed for members of the Permanent Court of Arbitration by Article 44 of the Convention of The Hague of 1907 for

the pacific settlement of international disputes...

Art. 13 : 1) The members of the Court shall be elected for nine years and may be re-elected ...

Art. 16 : 1) No member of the Court may exercise any political or administrative function, or engage in any other occupation of a professional nature.

Art. 26 : 1) The Court may from time to time form one or more Chambers, composed of three or more judges as the Court may determine, for dealing with particular categories of cases; for example, labour cases and cases relating to transit and communications.

2) The Court may at any time form a Chamber for dealing with a particular case. The number of judges to constitute such a Chamber shall be determined by the Court with the approval of the parties.

3) Cases shall be heard and determined by the Chambers provided for in this article if the parties so request ...

Art. 29 : With a view to the speedy despatch of business, the Court shall form annually a Chamber composed of five judges which, at the request of the parties, may hear and determine cases by summary procedure. ...

CHAPTER II - COMPETENCE OF THE COURT

Art. 34 : 1) Only States may be parties in cases before the Court.

Art. 35 : 1) The Court shall be open to the States parties to the present Statute.

2) The conditions under which the Court shall be open to other States shall, subject to the special provisions contained in treaties in force, be

laid down by the Security Council, but in no case shall such conditions place the parties in a position of inequality before the Court.

Art. 36: 1) The jurisdiction of the Court comprises all cases which the parties refer to it and all matters specially provided for in the Charter of the United Nations or in treaties and conventions in force.

2) The States parties to the present Statute may at any time declare that they recognize as compulsory ipso facto and without special agreement, in relation to any other State accepting the same obligation, the jurisdiction of the Court in all legal disputes concerning:

- a) the interpretation of a treaty;
- b) any question of international law;
- c) the existence of any fact which, if established, would constitute a breach of an international obligation;
- d) the nature or extent of the reparation to be made for the breach of an international obligation.

3) The declarations referred to above may be made unconditionally or on condition of reciprocity on the part of several or certain States, or for a certain time.

4) Such declarations shall be deposited with the Secretary-General of the United Nations, who shall transmit copies thereof to the parties of the Statute and to the Registrar of the Court.

Art. 37: Whenever a treaty or convention in force provides for reference of a matter to a tribunal to

have been instituted by the League of Nations, or to the Permanent Court of International Justice, the matter shall, as between the parties to the present Statute, be referred to the International Court of Justice.

Art. 38 : 1) The Court, whose function is to decide in accordance with international law such disputes as are submitted to it, shall apply :

- a) international conventions, whether general or particular, establishing rules expressly recognized by the contesting States;
- b) international custom, as evidence of a general practice accepted as law;
- c) the general principles of law recognized by civilized nations;
- d) subject to the provisions of Article 59, judicial decisions and the teachings of the most highly qualified publicists of the various nations, as subsidiary means for the determination of rules of law.

2) This provision shall not prejudice the power of the Court to decide a case ex aequo et bono, if the parties agree thereto.

SUMMARY OF THE WORK OF THE GROUP OF EXPERTS
FOR THE STUDY OF LEGAL QUESTIONS, AND TEXT
OF RECOMMENDATION No.2 OF THE COMMITTEE ON
ELECTRIC POWER

The Group of Experts for the Study of Legal Questions referred to in the prefatory Note by the Secretariat examined inter alia at its various meetings* the problems raised by the foregoing study.

It first of all urged the necessity for making a clear distinction between successive rivers, i.e. rivers which cross the frontier, and contiguous rivers, i.e. which form the frontier between two or more States.

It submitted to the Committee on Electric Power a number of recommendations which the Committee adopted at its sixth, seventh and eighth sessions.

I. In the case of successive rivers, the Committee felt that in present circumstances the preparation of a general convention presented difficulties. The hydro-electric development of a successive river raised specific issues which could only be solved by means of agreements between the interested countries. At the same time, the conclusion of such agreements was liable to give rise to certain difficulties. Hence the Committee asked the Secretariat to place itself at the disposal of governments to facilitate negotiations of that kind.

Since this decision was taken, the Secretariat has already intervened at the request of governments in several specific cases, and the Committee was gratified to note the fact, and hoped that such action would be continued.

II. On the other hand, the hydro-electric development of contiguous rivers raises a number of difficulties which are common to all countries. The Committee therefore put forward a

* Dates of meetings: 5 and 6 December 1950; 14 and 15 March 1951; 25 June 1951.

recommendation to governments on various points. The text of the recommendation is reproduced below. The Committee's idea in making a recommendation of this kind was that its clauses might be reproduced in conventions concluded between the governments of countries interested in the development of rivers forming their frontiers.

It may be useful to give a few particulars regarding the preparatory work on which the text was based.

1. The frontier is generally determined by the thalweg in the case of navigable rivers and by the median line of the waters in the case of non-navigable rivers. The frontier divides the waters of the river into two parts, each of the riparian States usually owning one part. The power produced is generally shared out between the two countries.

The harnessing works necessary before the waters can be utilized may be installed on both banks; but more often than not, part of the plant, especially the intake galleries and the power station, must for technical and geological reasons be situated either on one bank or on the other. The siting of the plant must be primarily dictated by these technical considerations irrespective of the contour of the frontier, the choice of the most suitable site being made by a joint commission.

2. The riparian States as a general rule contribute to the construction and operation of such works in proportion to the amount of power they receive.

This contribution means that at the construction stage in the first instance, materials, equipment and manpower must be exported to the country on whose territory the installations are set up. The various supplies, and more generally the services required in order to carry out the project, are subject to taxation and customs duties, and to the normal quota regulations.

As the object of these supplies and services is to set up on the territory of a neighbouring State part of a plant which will turn the

water belonging to the other State into electric power for the latter's use, the Committee considered that it would be only reasonable to grant exemption from taxation, and to waive the ordinary quota regulations, in the case of imports and exports of equipment required for construction, at any rate to the extent, say, of the percentage of power allotted to each of the States concerned.

3. But in practice, the contribution of each of the States to the construction of the plant can not be made in exactly the theoretical proportions mentioned above. In fact it is often more efficient and economical for a given country to furnish more than its theoretical share. One country, for example, may find it convenient to supply all the labour. Another may furnish all the electrical equipment, where its domestic production enables it to produce such equipment on a large scale and more cheaply than the neighbouring country.

The party authorized to allot such orders for equipment is of course the common concessionnaire. Where the latter is unable to apportion supplies and services exactly in accordance with the theoretical formula laid down, or where it considers that the state of the markets in the two countries indicates a different allocation policy, the common concessionnaire should be authorized to change the arrangements.

The Committee felt therefore that exemption from import duties, export charges, and the waiving of the ordinary quota regulations should be extended to cover all supplies and services which go into the construction of joint works.

4. But there must be some supervision of the allocation of supplies and services by the concessionnaire, to ensure that the method of sharing out between the two countries is fair and efficient, and is based on the principle of the best use of the available facilities. The Committee felt that this supervision should be in the hands of the joint commission referred to above.

5. With regard to operation, since the power produced belongs partly to the one riparian State and partly to the other, even though the power station and transformer unit are situated in the territory of one and the same State, part of the power will be used by the other riparian State. Hence, the Committee was of the opinion that certain facilities should be granted in regard to the transmission and even the export of such power.

6. Works construction and operation may involve the use of labour from both countries. The Committee would like to see certain facilities granted for that purpose.

7. But the construction, and still more, the operation of such plants give rise to further difficulties yet.

As a general rule, the two countries grant the concession to a common concessionnaire with the status of a company under municipal law. Provisions governing the right of concession are generally included in the concession agreement for the benefit of each of the riparian States.

Land taxes on the other hand, are payable to the country on whose territory the works are installed; and it was felt that there was no occasion to recommend any change in the arrangements for levying such taxes.

But side by side with the land taxes there are various miscellaneous dues and charges levied on companies, payable exclusively in the country where the company's head office is situated, the liability for assessment being determined by the whereabouts of the office. In the head case in point, however, the company would be a joint concern whose head office might equally well be in the neighbouring country, and the power produced is intended for both countries.

In such circumstances, the Committee felt that a simpler procedure would be desirable. The same would apply to the transfer of currency, which in the ordinary way involves lengthy formalities.

8. The difficulties mentioned above are not the only ones. The legal status of such companies, and in another connexion the question of loans for example, also raise a host of problems.

The Committee wondered therefore, whether it would not be simpler to keep public international establishments of this kind free of all connexion with any particular national legal system. But the question whether the efficient functioning of undertakings for the construction and operation of hydro-electric plants situated on contiguous rivers might not be better catered for if they were given a purely international legal status, or national legal status with the necessary derogations, cannot be profitably discussed until a study has been carried out on the substance of the problem, so as to bring out clearly the scope of such derogations.

TEXT OF RECOMMENDATION No.2

submitted to Governments by the Committee on Electric Power with a view to facilitating the hydro-electric development of contiguous rivers and lakes. (Adopted by the Committee on 3 October, 1951)⁽¹⁾

The Committee on Electric Power,

CONSIDERING that the hydro-electric development of rivers or lakes serving as a frontier between two or more States - so-called contiguous rivers and lakes - is of increasingly great importance for the development of European electrical resources and for the satisfaction of the requirements of the European economy,

but that this development raises a certain number of political, legal and administrative difficulties concerning both the construction and the operation of plants,

DRAWS THE ATTENTION of governments to the importance of introducing into conventions regarding such development, clauses which might be drafted as follows:

(1) This text was distributed under the symbol E/ECE/EP/117

Where two or more neighbouring States participate in the construction of works, such works shall be treated by the States concerned in the same way as if construction were taking place on their own territory, irrespective of the site chosen.

The two States agree that supplies of equipment and materials and the various services required for carrying out the harnessing shall not be charged import duties (customs duty etc.) irrespective of the site on which any of such supplies and services are actually used.

Similarly any taxes levied on exports in either of the two States shall not be levied by that State, irrespective of the site on which any of such supplies and services are actually used.

Should special taxation be imposed in either of the two States, for instance in the form of a capital levy, the necessary measures shall be taken to grant adequate compensation to the other State for any damage sustained by it or by the natural or juridical persons under its jurisdiction.

The two States, each insofar as it is concerned, shall grant residence, working, entry, exit and any other similar permits required by persons needed by the concessionnaire for the construction of the works.

RECOMMENDS

1. With regard to construction:

(a) that the best site should be selected after an examination of the locality by a joint commission composed of representatives of the two countries concerned, on the basis of technical considerations irrespective of the position of the frontier; this commission might also be entrusted with supervision of the fair and rational apportionment of supplies and services between the two countries;

(b) that in the event of a country setting up several joint commissions with another country, that country's representatives on these various commissions should consist, in part, of the same individuals;

2. With regard to operation:

(a) that power allocated to one of the two States and produced on the territory of the other should be exempted by the latter from all taxation, dues and legal restrictions of any kind, so that it may be freely transmitted to the former State, and be subject to the same conditions, in every respect, as power produced on its own territory;

(b) that the power allocated to each of the two States should be exportable to the other State in accordance with the legal provisions governing the export of electric power in force in the State entitled to that power;

(c) that if either State is unable to utilize the power allocated to it on its own territory, it should do nothing to prevent the power thus available from being exported to the territory of the other State:

(d) that the same facilities should be accorded to personnel operating the works as were laid down for the construction period;

3. More generally, with regard to the legal position of the common concessionnaire:

(a) that taxes and dues on companies should be levied in accordance with the fiscal agreements and conventions on double taxation concluded between the countries concerned, but that taxes and dues on dividends should not include charges which would result in differentiation between the sums finally received by the shareholders;

(b) that fiscal agreements or conventions on double taxation, where these do not already exist, should be concluded between the countries concerned;

(c) that each of the two States should undertake to provide the joint concessionary undertaking, upon request, with the necessary currency transfer facilities, both during the construction period, and for the operating requirements of the works;

(d) that the above provisions regarding currency exchange regulations should be included in an agreement to be concluded between the two States for the payment of wages; such agreement should also make provision for the transfer by workers belonging to the other riparian State of their wages and allowances to their country of origin.

ALPHABETICAL AND CHRONOLOGICAL LIST OF TREATIES
AND CONVENTIONS REFERRED TO IN THIS STUDY.

A. Bilateral conventions concerning the hydro-electric development
of waterways of common interest.

<u>AUSTRIA</u>			para:
10 March 1921	Czechoslovakia	Treaty of Prague (regarding the Thaya)	78
1926	Bavaria	Agreement between the Tiroler Wasserkraft- Werke and Bayernwerk	81
1947	Germany (Allied Military Governments)	Agreement of Vienna	38
1948	Bavaria	Agreement regarding the Inn and the Salzach	87
June 1948	Bavaria	Agreement regarding the Rissbach, Dürbach, Kesselbach, Blaserbach and Dollmannsbach	88

<u>BAVARIA</u>			
4 June 1917	Württemberg	Treaty of Ulm (regarding the Ill)	77
1926	Austria	Agreement between the Tiroler Wasserkraft- Werke and Bayernwerk	81
1948	Austria	Agreement regarding the Inn and the Salzach	87
June 1948	Austria	Agreement regarding the Rissbach, Dürbach, Kesselbach, Blaserbach and Dollmannsbach	88

<u>BELGIUM</u>			
20 July 1927	Portugal	Convention of St. Paul of Loanda (regarding the M'Pazo)	82,181

CANADA

para:

(14,31 October 1940 (7 November 1940	United States	Agreement regarding the basin of the Great Lakes and the St. Lawrence	85,187
20 May 1941	United States	Agreement regarding Niagara River	85
10 November 1941	United States	Agreement regarding Lake St. Francis	85

CZECHOSLOVAKIA

10 March 1921	Austria	Treaty of Prague (Thaya)	78,168
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FRANCE

4 October 1913	Switzerland	Berne Convention (Rhône)	75
17 December 1914	Italy	Convention regarding the Roya	76,174
27 August 1926	Switzerland	Berne Convention (regarding the Kembs power-station)	80
19 November 1930	Switzerland	Berne Convention (regarding the Châtelot Falls)	84, 173,180
10 February 1947	Italy	Treaty of Peace (provisions regarding the Roya)	76

GERMANY

1947	Austria	Agreement of Vienna	38,168
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HUNGARY

14 August 1947	Czechoslovakia	Convention regarding the Danube and the Tisza	175
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ITALY

17 December 1914	France	Convention regarding the Roya	76,174
10 February 1947	France	Treaty of Peace (provisions regarding the Roya)	76
18 June 1949	Switzerland	Convention regarding the Reno di Lei	89,173, 181

PORTUGAL

1 July 1926	Union of South Africa	Cape Agreement (Kunene River)	para: 79, 173,181
20 July 1927	Belgium	Convention of St. Paul of Loanda (M'Pozo)	82,181
11 August 1927	Spain	Lisbon Convention (Douro)	83,174, 182

SPAIN

11 August 1927	Portugal	Lisbon Convention (Douro)	83,174, 182
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SWITZERLAND

4 October 1913	France	Berne Convention (Rhône)	75
27 August 1926	France	Berne Convention (Kembs power-station)	80,182
19 November 1930	France	Berne Convention (Châtelot Falls)	84,123,180
18 June 1949	Italy	Convention regarding the Reno di Lei	89,173, 181

UNION OF SOUTH AFRICA

1 July 1926	Portugal	Cape Agreement (Kunene River)	79,173, 181
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UNITED STATES OF AMERICA

(14,31 October 1940 (7 November 1940	Canada	Agreement regarding the basin of the Great Lakes and the St. Lawrence	85,187
20 May 1941	Canada	Agreement regarding the Niagara River	85
10 November 1941	Canada	Agreement regarding Lake St. Francis	85

WURTEMBERG

para:

4 June 1917	Bavaria	Treaty of Ulm (regarding the Ill)	77
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B. Bilateral conventions concerning the general use of waterways of common interest

AFGHANISTAN

3 February 1934	India	Kabul Exchange of Notes	137
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AUSTRIA

1616	Turkey	Convention of Vienna	24
13 May 1779	Electoral Palatine	Convention of Teschen	6
10 September 1919	Allies	Treaty of St. Germain	102,181
1923	Bavaria	Agreement regarding the Lower Lech	109
28 April 1923	Italy		9
22 October 1923	Yugoslavia		9
9 November 1924	Switzerland	Treaty for the regulation of the Rhine	176,181
11 March 1927	Hungary	Legal Protocol	123
12 December 1928	Czechoslovakia	Treaty of Prague	127

BADEN

10 May 1879	Switzerland	Agreement regarding the Rhine	95
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BAVARIA

1923	Austria	Agreement regarding the Lower Lech	109
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BELGIUM

26 June 1816	Prussia		92
7 August 1843	Luxembourg	Maestricht Convention	92
8 August 1843	Netherlands		92
27 September 1843)	Netherlands	Treaties of The Hague (regarding the Meuse)	93
12 May 1863			
11 June 1892	Netherlands		92
25 October 1929	Germany	Agreement signed at Aix-La-Chapelle	131
22 November 1934	United Kingdom	Agreement signed at London	138,181

BRAZIL

para:

1 November 1932	United Kingdom	Exchange of Notes	136
20 December 1933	Uruguay	Montevideo Convention	137
15 March 1940	United Kingdom	Exchange of Notes	141

BRANDENBURG

29 January 1618	Poland	Treaty of Trzebieiszow (regarding the Oder and the Warta)	65
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BULGARIA

27 November 1919	Allies	Treaty of Neuilly	102
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CANADA

11 January 1909	United States	Treaty of Washington	9,27) 79,176,) 182)
24 February 1925	United States	Treaty of Washington (Lake of the Woods)	114,176

CHILE

3 June 1929	Peru	Treaty regarding Tacna and Arica	181
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CONGO

9 May 1906	United Kingdom	Treaty of London (Semliki or Isango River)	98
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CZECHOSLOVAKIA

3 February 1927	Germany	Treaty of Berlin	121,181,187
18 February 1928	Poland	Katowice Convention	125,176
22 May 1928	Germany	Treaty of Prague	125
14 November 1928	Hungary	Prague Convention	27,126,181
12 December 1928	Austria	Treaty of Prague	127
15 July 1930	Rumania	Prague Convention	132,173,181
24 August 1937	Hungary	Budapest Convention	139

DENMARK

para:

10 April 1922	Germany	Copenhagen Agreement	27,106, 176,182
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DOMINICAN REPUBLIC

20 February 1929	Haiti	Treaty of San Domingo	128
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EGYPT

7 May 1929	United Kingdom	Cairo Exchange of Notes	129,181
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ESTONIA

2 February 1920	U.S.S.R.	Treaty of Tartu	102
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ETHIOPIA

15 May 1902	United Kingdom	Agreement of Addis-Ababa (regarding the Blue Nile)	96
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FINLAND

14 October 1920	U.S.S.R.	Treaty of Dorpat	102
28 October 1922	U.S.S.R.	Treaty of Helsingfors	107
28 April 1924	Norway	Convention of Christiania	180
14 February 1925	Norway		113

FRANCE

30 May 1804	Germany	Treaty of Paris	24
26 May 1866	Spain	Additional Act to the Treaty of Bayonne of 2 Dec. 1856	94,176
30 September 195	Netherlands	Agreement regarding the frontier between Guiana and Surinam	100,179
28 June 1919	Germany	Treaty of Versailles	15,44,64,80
7 March 1923	United Kingdom	Exchange of Notes and Agreement regarding the Syrian-Palestine frontier	182
14 August 1925	Germany	Treaty of Paris	117,181
13 November 1926	Germany, Sarre	Protocol of Saarbrücken	119,175

GERMANY

para:

8 November 1785	Netherlands	Treaty of Fontainebleau	90,175
30 May 1804	France	Treaty of Paris	24
27 August 1918	U.S.S.R.	Treaty of Berlin	101
28 June 1919	Allies	Treaty of Versailles	102,180,186
10 April 1922	Denmark	Copenhagen Agreement	27,106,176, 182
14 June 1923	Poland	Agreement regarding frontier waterways	181
14 March 1925	Poland	Agreement regarding the Noteć and the Gdā	115
16 July 1925	Lithuania	Additional Act to the Treaty of Berlin of 1 June 1923	116
14 August 1925	France	Treaty of Paris	117,181
27 January 1926	Poland	Treaty of Poznań	118,175
19 August 1926	Poland	Treaty of Koźle	118
13 November 1926	France, Sarre	Protocol of Saarbrücken	119,175
3 February 1927	Czechoslovakia	Treaty of Berlin	121
16 February 1927	Poland	Treaty of Poznań	118,122
11 April 1927	Poland	Agreement regarding the Drewenz	176
29 January 1928	Lithuania	Berlin Convention	124,181
22 May 1928	Czechoslovakia	Treaty of Prague	125
25 October 1929	Belgium	Agreement signed at Aix-la-Chapelle	131

HAITI

20 February 1929	Dominican Republic	Treaty of San Domingo	128
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HUNGARY

4 June 1920	Allies	Treaty of Trianon	102,276
14 April 1924	Rumania	Bucharest Convention	112
11 March 1927	Austria	Legal Protocol	123
14 November 1928	Czechoslovakia	Prague Convention	27,126,181
24 August 1937	Czechoslovakia	Budapest Convention	139

INDIA

para:

3 February 1934	Afghanistan	Kabul Exchange of Notes	137
1 June 1934	Siam	Bangkok Exchange of Notes	137

ITALY

15 April 1891	United Kingdom	Protocol signed at Rome (regarding the Nile)	96
27 January 1924	Yugoslavia	Agreement regarding the Fiume aqueduct and the River Recina	111
20 July 1925	Yugoslavia	Treaty of Nettuno	116, 175
11 February 1929	Vatican	Lateran Treaty	116

LATVIA

11 August 1920	U.S.S.R.	Treaty of Riga	102
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LITHUANIA

12 July 1920	U.S.S.R.	Treaty of Moscow	102
15 July 1925	Germany	Additional Act to the Treaty of Berlin of 1 June 1923	116
29 January 1928	Germany	Berlin Convention	124, 181
14 May 1938	Poland	Kaunas Convention	140

LUXEMBOURG

7 August 1843	Belgium	Maestricht Convention	92
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MADRAS

18 February 1924	Mysore		110
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MEXICO

21 May 1906	United States	Treaty of Washington (regarding the Rio Grande)	99
3 February 1944	United States	Treaty of Washington	22, 27, 142, 174, 176

MYSORE

para:

18 February 1924 Madras 110

NETHERLANDS

8 November 1785	Germany	Treaty of Fontainebleau	20,175
7 October 1816	Prussia	Treaty of Cleves	14,91,175
8 August 1843	Belgium		92
27 September 1848	Belgium	Treaty of The Hague	93
12 May 1863	Belgium	Treaty of The Hague	93
11 June 1892	Belgium		93
30 September 1915	France	Agreement regarding the frontier between Guiana and Surinam	100,173

NORWAY

26 October 1905	Sweden	Convention annexed to the Treaty of Karlstad	6,97,181
28 April 1924	Finland	Convention of Christiana	180
14 February 1925	Finland		113
11 May 1921	Sweden	Stockholm Convention	130,169,175

PALATINATE

13 May 1779	Austria	Convention of Teschen	6
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PERU

3 June 1929	Chile	Treaty regarding Tacna and Arica	181
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POLAND

29 January 1618	Elector of Brandenburg	Treaty of Trzebieiszow (regarding the Oder and the Warta)	65
18 September 1705	Sweden	Agreement regarding the Warta	65
18 May 1921	Ukraine	Protocol to the Peace Treaty	103

POLAND

page:

14 June 1923	Germany	Agreement regarding frontier waterways	181
14 March 1925	Germany	Agreement regarding the Noteć and the Głda	115
27 January 1926	Germany	Treaty of Poznań	118,175
19 August 1926	Germany	Treaty of Kozle	118
16 February 1927	Germany	Treaty of Poznań	118,122
11 April 1927	Germany	Agreement regarding the Drewenz	176
18 February 1928	Czechoslovakia	Katowice Convention	125,176
10 April 1932	U.S.S.R.	Moscow Convention	134
14 May 1938	Lithuania	Kaunas Convention	140

PORTUGAL

11 August 1927	Spain	Lisbon Convention	27
11 May 1936 and 28 December 1937	United Kingdom	Exchange of Notes regarding the Tanganyika-Mozambique frontier	180

PRUSSIA

26 June 1816	Belgium		92
7 October 1816	Netherlands	Treaty of Cleves	14,91,175

RUMANIA

14 April 1924	Hungary	Bucharest Convention	112
15 July 1930	Czechoslovakia	Prague Convention	132,173,181
14 December 1931	Yugoslavia	Belgrade Convention	133,182
28 June 1932	Yugoslavia and the International Commission of the Danube	Agreement signed at Semmering (regarding the Iron Gates)	135

SIAM

1 June 1934	India	Bangkok Exchange of Notes	137
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SPAIN

para:

26 May 1866	France	Additional Act to the Treaty of Bayonne of 2 December 1856	24,176
11 August 1927	Portugal	Lisbon Convention	27

SWEDEN

18 September 1705	Poland	Agreement regarding the Warta	65
26 October 1905	Norway	Convention annexed to the Treaty of Karlstad	6,97,181
11 May 1929	Norway	Stockholm Convention	130,169,175

SWITZERLAND

10 May 1879	Baden	Agreement regarding the Rhine	95
9 November 1924	Austria	Treaty for the regulation of the Rhine	176,181

TURKEY

10 August 1920	Allies	Treaty of Sèvres	102
24 July 1923	Allies	Treaty of Lausanne	102
8 January 1927	U.S.S.R.		120

UKRAINE

18 May 1921	Poland	Protocol to the Peace Treaty	103
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UNITED KINGDOM

15 April 1891	Italy	Protocol signed at Rome (regarding the Nile)	96
15 May 1902	Ethiopia	Agreement of Addis-Ababa regarding the Blue Nile	96
9 May 1906	Congo	Treaty of London	98
7 March 1923	France	Exchange of Notes and agreement regarding the Syrian-Palestine frontier	182
7 May 1929	Egypt	Cairo Exchange of Notes	129,181

UNITED KINGDOM

para:

22 November 1934	Belgium	London Agreement (regarding the frontier between Tanganyika and Ruanda-Urundi)	138
11 May 1936 and 28 December 1937	Portugal	Exchange of Notes regarding the Frontier between Tanganyika and Mozambique	180

UNITED STATES

21 May 1906	Mexico	Treaty of Washington (regarding the Rio Grande)	99
11 January 1909	Canada	Treaty of Washington	9,27,99, 176,182
15 December 1922	Between the States of California, Arizona, Colorado, Nevada, New Mexico, Utah, Wyoming	Agreement regarding the Colorado River	108
24 February 1925	Canada	Treaty of Washington (regarding the Lake of the Woods)	114,176
3 February 1944	Mexico	Treaty of Washington	22,27, 142,174, 176

URUGUAY

20 December 1933	Brazil	Montevideo Convention	137
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U.S.S.R.

27 August 1918	Germany	Treaty of Berlin	101
2 February 1920	Estonia	Treaty of Tartu	102
12 July 1920	Lithuania	Treaty of Moscow	102
11 August 1920	Latvia	Treaty of Riga	102
14 October 1920	Finland	Treaty of Dorpat	102
28 October 1922	Finland	Treaty of Helsingfors	107
8 January 1927	Turkey		120
10 April 1932	Poland	Moscow Convention	134

VATICAN

11 February 1929	Italy	Lateran Treaty	para: 116
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YUGOSLAVIA

22 October 1923	Austria		9
27 January 1924	Italy	Agreement regarding the Fiuma aqueduct and the River Recina	111
20 July 1925	Italy	Treaty of Nettuno	116,175
14 December 1931	Rumania	Belgrade Convention	133,182
28 June 1932	Rumania and International Commission of the Danube	Agreement signed at Semmering (regarding the Iron Gates)	135

C. Multilateral conventions concerning the hydro-electric development of waterways of common interest

9 December 1923	Geneva Convention		27,143-155
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D. Multilateral conventions concerning the general use of waterways of common interest

1804	Convention on Rhine dues	24
1815	Final Act of the Congress of Vienna (Articles 108-117)	156
1856	Congress of Paris	157
19-20 April 1911	Declaration of Madrid (Institute of International Law)	36
24 April 1921	Barcelona Convention	158
23 July 1921	Convention of Paris establishing the Statute of the Danube	182,187
22 February 1922	Elbe Navigation Statute	182
24 December 1933	Declaration of the Pan-American Conference at Montevideo	159
1948	Belgrade Convention establishing new Statute of the Danube	160

ALPHABETICAL LIST OF RIVERS, LAKES AND CANALS
REFERRED TO IN THIS STUDY.

I. RIVERS

A. EUROPE

Ache	para.38, A/3/4 ⁽¹⁾	Elbe	para.19,27,105, 176,182.
Ain	para.9	Eneo	para.175
Asch		Etsch	A/3/7
Averserrhein	para.89	Gammelaa	note (109)
Bela	A/3/14	Glda	para.115, 181
Bidassoa	para.19	Horyn	note (148)
Blaserbach	para.88	Ilja	note (148)
Boja	para.133	Ill	para.77, 86
Bolwaniec	note (148)	Iller	A/3/8
Breitach	A/3/9 et 12	Inn	para.6,38,87, A/3/11 et 13
Bystrzyca	note (148)	Isar	para.81,88, A/3/11
Czernica	note (148)	Isère	para. 9
Danube	para. 6, 19, 24, 27, 38, 60, 104, 127, 135, 157, 175, 176, 182,187	Jakobselv (Vuoramajoki)	para.113
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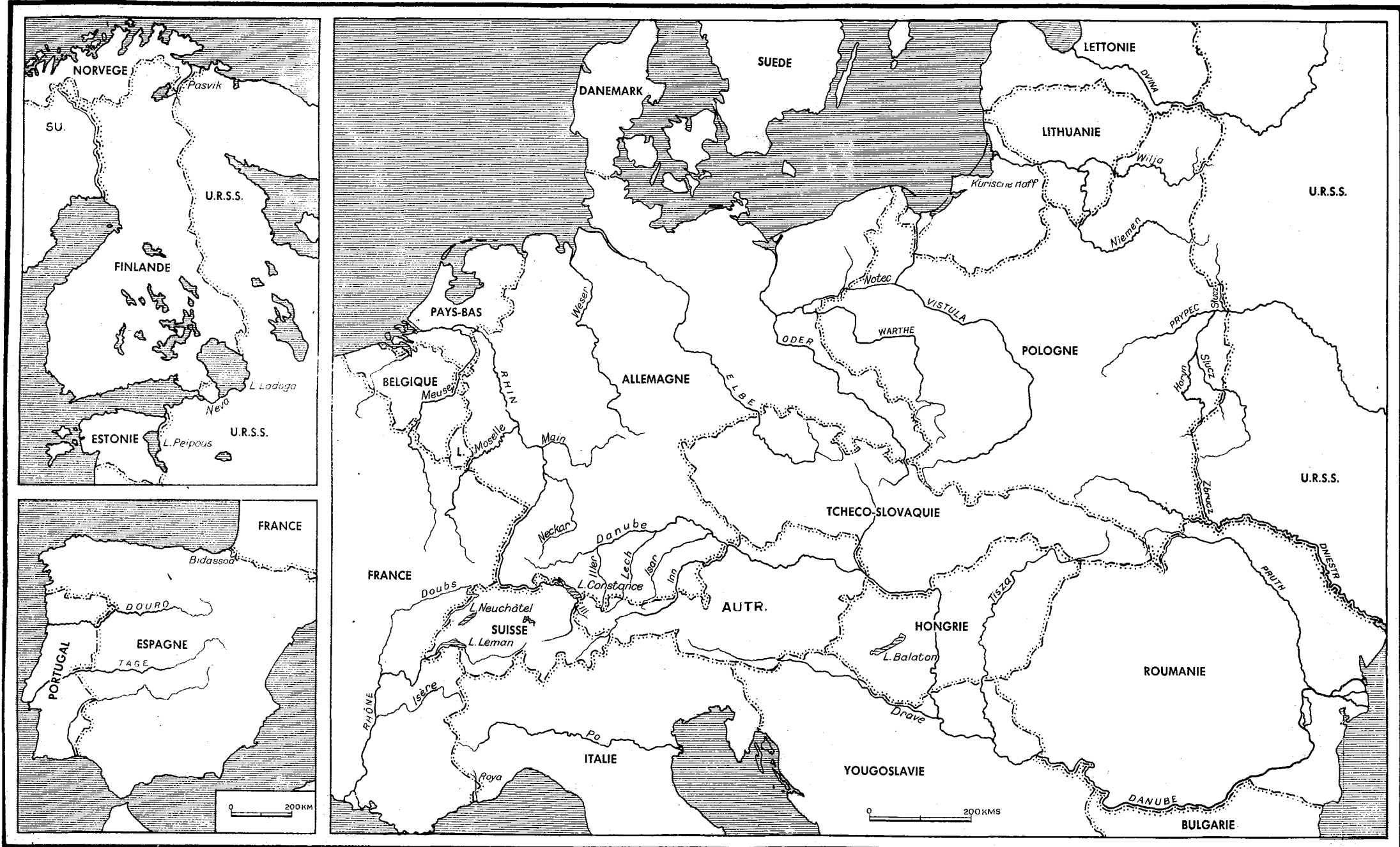
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