1974 - 56th Conf. - New Delhi

# INTERNATIONAL WATER RESOURCES LAW

TUESDAY, DECEMBER 31ST, 1974
at 2.15 p.m.

*Chairman* : H. E. Dr. K. MATSUDAIRA

Judge E. J. MANNER (Finland : Chairman of the Committee) : On behalf of the Committee on International Water Resources Law, I have the honour to present its report prepared for the New Delhi Conference. Before dealing with the material contents of the report, I would like to point out certain questions concerning the work of the Committee.

The Committee on International Water Resources Law has its roots in the recommendation of the 1966 Helsinki Conference which, when adopting the report of the previous Committee on the Uses of Waters of International Rivers containing the well-known Helsinki Rules, considered it necessary to have a new Committee established to work on the numerous legal problems in the field of International Waters still unregulated. The new Committee consists of some forty members and alternates, representing nearly twenty Branches of the I.L.A.

Already at the beginning of its work in 1967 the Committee created the working groups in order to cover the vast area of different legal and practical problems included in its terms of reference. The working groups have been dealing with the following topics :

Navigation ;
Underground Waters ;
Pollution of Coastal Areas and Enclosed Seas ;
Relationship of Waters to other Natural Resources ;
General Uses of Waters ; and
Administration and Management of International Waters.

The results of the work of the Committee have earlier been presented to the three previous Conferences : at Buenos Aires in 1968, at The Hague in 1970 and at the New York Conference in 1972. The first two reports of the Committee described mainly the organization of its work and contained detailed analysis of its terms of reference. The report prepared for the New York Conference dealt already with matters of substance and contained Draft Articles on Flood Control with commentary as well as Draft Articles on Marine Pollution of Continental Origin, also with commentary. When approving these two sets of Articles, the Conference requested in its resolution that the Articles on Flood Control be submitted,





through the Secretary General of the U.N., to the International Law Commission, and the Articles on Marine Pollution also be forwarded, for purposes of information, to the United Nations and other international organisations concerned.

These two requests proposed by the Committee were based upon considerations which concern the need for closer co-operation between international organizations dealing with the development and codification of the international law of waters.

During its work the Committee has become aware of the increasing interest shown by the World community and different governmental and non-governmental organizations in the legal and other problems connected with the exploration and exploitation of water resources. The utmost importance of these resources to mankind and the need to promote their just and equitable sharing has become more and more evident to us. These aspects have led the Committee to follow, as closely as possible, the activities of different international bodies such as U.N., UNESCO, FAO, IMCO, WHO, ECE, ECAFE (now ESCAP), the Asian-African Legal Consultative Committee and other similar regional organs, as well as the work of certain international conferences and meetings of which the 1972 Stockholm Conference on Environment should be particularly mentioned. The ILA Committee on International Water Resources Law has also succeeded in establishing close and continuous connections with FAO, IMCO and UNESCO as well as with some non-governmental organizations, such as the International Association for Water Law. The Headquarters of the ILA has also furnished the Committee with documents and other information concerning the work carried out within this field by other bodies. All these connections and the information received are most important with regard to the work of the Committee not only by increasing its knowledge and expertise but also by making it possible to avoid the overlapping of work and unnecessary controversies between the Committee and other interested bodies. A similar co-ordination of work is, of course, necessary even within the ILA itself, especially between the ILA Committees on International Water Resources Law and on Conservation of the Environment.

Of particular importance for the work of the Committee on International Water Resources Law and, of course, for the Association as a whole, is however the U.N. Resolution 2669 (XXV) adopted by the General Assembly in 1970. In this resolution the General Assembly considered it necessary that the United Nations should take care of the development of the Law of International Waters and recommended that the International Law Commission should, as the first step, take up the study of the law of the non-navigable uses of international watercourses with a view to its progressive development and codification. Furthermore, it was

understood in this connection that also non-governmental studies on this subject should be taken into account by ILC in its consideration of the topic. This means that studies carried out and texts prepared and adopted by this Association on the subject of international watercourses will be used by ILC as a basis for its studies.

After a period of preparation the ILC has this year taken up its work on the Law of International Watercourses and as a first step established a sub-committee for that purpose. Having adopted its report, the ILC appointed Ambassador Kearney (U.S.A.) as Rapporteur for the topic and included a chapter on the Law of Non-navigational Uses of International Watercourses in its report to the U.N. General Assembly. The ILC also approved a suggestion that the Secretary-General of the U.N. should be requested to "advise all international organizations that are engaged in studies of international watercourses of the legal work being carried on by the Commission and to request their co-operation in this work, particularly by designating an officer or officers of those organizations to serve as the channel of information and co-operation". It should be mentioned that some steps have already been taken in order to establish the necessary contacts between the International Law Commission and the ILA Committee on International Water Resources Law.

I will now revert to the report of the Committee, which it has prepared for this Conference. The report falls into three Parts of which Part I contains information about the work of the Committee since the 1972 Conference. Also topics which are studied and considered by the different working-groups but not yet ready for presentation to the Conference are concisely mentioned in Part I.

Part II contains a report, prepared by Dr. Henri Zurbrügg, on "Maintenance and Improvement of Naturally Navigable Waterways Separating or Traversing several States". This report will be presented by its author, Dr. Zurbrügg, after my introduction.

As to Part III of the report, which contains an "Intermediate Report on the Protection of Water Resources and Water Installations in Times of Armed Conflict", we have been informed that the Rapporteur, Professor J. Berber, unfortunately, is not, due to a serious illness, able to attend this Conference. The Committee very much regrets the illness of Professor Berber, which does not allow him to present this interesting and important study. I therefore would like to introduce also this part of our report and say a few words about its contents.

Before doing so, I would like to take notice of the fact that the idea to take up a study of the question of Protection of Water Resources and Water Installations during times of war was also very close to the heart of our late Indian friend and colleague, Dr. Krishna Rao. In 1969 he prepared on behalf of the Indian Government a memorandum and a "Draft Convention for the Protection of Dams, Dykes and other Structural Works for Conservation of Water". This Draft did not, however, lead to an official proposal.



Professor Berber suggested that a similar topic should be included in the Working Programme of the ILA Committee on International Water Resources Law. The Committee agreed, and having discussed the preliminary report of Professor Berber at two meetings, it now presents a new text revised by Professor Berber for discussion at this Conference.

After briefly analysing the report of Professor Berber, Judge Manner said that the Committee had not yet taken a final position on the report but hoped it would lead to a useful discussion at the Conference.

Dr. HENRI ZURBRÜGG (Switzerland ; Rapporteur on Navigation): The report submitted now for your attention deals with a selected problem connected with two main principles of international law governing the navigational use of rivers, whose natural navigable portion separates or traverses the territory of two or more States. These principles are :

Freedom of navigation.

Settlement by common agreement of all questions affecting navigation.

The legal aspects of freedom of navigation have been studied before the adoption of Chapter 4 of the Helsinki Rules, but no article has been drawn up on the second principle. Both principles are interdependent. The second one is of great importance and significance for the first one and vice-versa. Therefore, at the ILA Conference of 1966*) I expressed the hope that further studies would lead later on to the addition of such a principle in Chapter 4 of the Helsinki Rules. In a preliminary study, submitted to the Committee at The Hague in 1970, I tried to draft this principle. But no unanimous agreement could be reached among the Committee members. In this connection Professor Eek proposed that a recommendation should be drafted along the following lines :

(a) if a State wants to improve its section of an international navigable waterway, it should consult the co-riparian States;
(b) in that case there is, on the part of the co-riparian States, a duty to negotiate.

This proposition has been taken into consideration by a revised study, which was distributed to the members of the Committee before the Geneva meeting of April, 1974.

*see Conference Report p. 469.

I would like to underline that the scope of this report is to complete and not to change the Helsinki Rules; particularly it is out of the question to assume any priority for navigation over conflicting non-navigational uses. Free navigation is not an unlimited unrestricted legal right. The technical and economical evolution of the last hundred years made it clear that navigational and non-navigational uses may interfere with each other. The Helsinki Rules have drawn up freedom of navigation as follows :

*Article XIII*

"Subject to any limitations or qualifications referred to in these Chapters, each riparian State is entitled to enjoy rights of free navigation on the entire course of a river or lake".

In his book "The Law of International Waterways", Professor Baxter, a former distinguished member of the I.L.A. Rivers Committee, states that maintenance and improvement of the waterway are matters ancillary to freedom of navigation. The same is applicable to the operation and inspection of navigational facilities, rules and regulations of navigation, pilotage and police, judicial settlement of disputes relative to navigation. Therefore, all these questions demand the collective attention of the riparian States. Everything must be settled on a uniform basis. The riparian States constitute a community of interest.

According to the Permanent Court of International Justice in the *River Oder* Case, this community of interest in a navigable river becomes the basis of a common legal right.

It is the general opinion of the Committee that it is not possible to make a clear distinction as to what should be considered as maintenance and what as improvement. But there was general agreement that a duty for each of the riparian States to maintain its section of an international navigable waterway in good order does exist. This duty was already recognized at the beginning of the 19th century and has been stated in Article 113 of the Final Act of the Congress of Vienna and in Article 7 of Annex 168 of this Act.

Of course, the obligation of maintenance is limited by the financial ability of the riparian State. Therefore, the Helsinki Rules have restated the obligation as follows:

*Article XVIII*

"Each riparian State is, to the extent of the means available, or made available to it, required to maintain in good order that portion of the navigable course of a river or lake within its jurisdiction".



A State not fulfilling entirely its obligations of maintenance is liable for damage suffered by other riparian States. The due execution of the obligation does not entitle the involved State to impose unilaterally charges on co-riparians' shipping using that waterway portion within its territory to pay the costs of maintenance.

When the purpose of hydraulic works is to increase the navigability beyond what is really necessary for maintaining the waterway in good order, it is no longer possible to deny any " features" of improvement. In this respect, the Committee is of the opinion that a duty to undertake improvement works does not exist under international law except by treaty and would, in the opinion of some members, be undesirable.

But, on the other hand, no State is, as a rule, entitled to adopt a passive attitude if the improvement can be attained only by executing works on the territory of two or more riparian States or on one only. Such an attitude would not be consistent with the concept of a community of interest. This community requires all riparians to enter into negotiations and to co-operate. This is particularly true as to the sharing of costs of improvement.

Finally, it must be emphasized that the report submitted for your discussion does not apply to canals or canalized rivers.

Furthermore, I am well aware of the variety of literature at available in this context in many different languages. But it was impossible for me to consult them all. I had to concentrate on those in German, French and English. As a conclusion, the Committee proposed the following articles for approval :

1. A riparian State intending to undertake works to improve the navigability of that portion of a river or lake within its jurisdiction is under a duty to give notice to the co-riparian States.
2. If these works are likely to affect adversely the navigational uses of one or more co-riparian States, any such co-riparian State may, within a reasonable time, request consultation. The concerned co-riparian States are then under a duty to negotiate.
3. If a riparian State proposes that such works be undertaken in whole or in part in the territory of one or more other co-riparian States, it must obtain the consent of the other co-riparian State or States concerned. The co-riparian State or States from whom this consent is required are under a duty to negotiate.

The Committee feels that the Helsinki Rules should be supplemented by this proposition, *e.g.* by adding a new Article XVIII*bis* to the said Rules.

Mr. F. S. NARIMAN (India) : The report of the Committee on International Water Resources Law has been for me most instructive. I have, however, a suggestion to make regarding Part II. As navigational and non-navigational uses of a river are not necessarily separate but often converge, consultation should be imperative not only in respect of adverse effect on navigational uses, but also where a navigational project of one riparian State adversely affects the non-navigational use of the river by a co-riparian State. I would, therefore, propose in clause 2 of the draft articles that the words "or non-navigational" be added after the word "navigational" in the first line and before the word "uses".

Mr. Justice PRAKASH BAHADUR (Nepal) : Before commenting on the report, I should like to stress the importance of river navigation to a geographically handicapped country like Nepal. The Committee seems to have relied mainly on the rivers of Europe and those too from the period of the Final Act of the Congress of Vienna of June 9th, 1815. As a matter of fact, in Europe the problem of river navigation acquired great importance in consequence of the Peace of Westphalia of 1648 which divided central Europe into a large number of States, some of which, by no means the smallest, lacked a sea coast.

The principal and, in any event, the most economical means of communications at the time was offered by the rivers which crossed the territory of several adjacent States and debouched into the sea. Consequently, the practice of States and the evolution of international law in the matter of transit are rooted in the law relating to rivers and the regimes gradually established with a view to the utilization of these waterways on a footing of equality.

The Peace of Paris of May 30th, 1814, conceived a regime applicable to the entire navigable portion of the Rhine, and the final Act of the Congress of Vienna broadened and codified the principles. The Treaty of Paris of 1856, which applied these principles to the Danube, declared these arrangements a part of the "Public Law of Europe" and some non-riparian States were also allowed to sit on the Commission. The regimes of international waterways subordinated the concept of national sovereignty to the interests of the river community and the interest of the community of mankind (see Charles De Visscher, *Le droit international des communications*, pp. 11-12).

The Statute of Barcelona 1921, granted freedom of navigation to the contracting States. But different bilateral and multilateral treaties have also granted freedom of navigation to non-riparian States. Besides the treaties other useful and vital materials can be obtained from a careful study of the practice of States and the decisions of international bodies. The Commission of Enquiry appointed by the League of Nations Communications and Transit



Committee held that Poland was not entitled to deny passage to the timber from U.S.S.R. over the Niemen, although U.S.S.R. was not a party to the Barcelona Convention. (See League of Nations Document C.386, M.170, 1930. VIII, Geneva, Sept. 5th, 1930.)

The Romanian Government refused transit to 3,000 tons of petroleum products from Russia to Czechoslovakia. In the Romanian view the vital interests of the country would be affected by the unfair competition from which Romanian petroleum products would suffer through importation into a third country of similar Russian products produced and sold under uneconomic conditions. The Danube Commission contended that this sort of interpretation of Article 7 of the Barcelona Statute distorts the purpose of the provision and is contrary to the principle of freedom of transit embodied in the Statute. In the face of protest from the other members of the Commission that such action was indefensible, the Romanian Government allowed transhipment of the consignment (*Mance and Wheeler*—"International River and Canal Transport," p.68). Now let us turn to Asia.

Until 1920 the full import duty of 5 per cent was charged by the Sheikh of Bahrain. In 1932, the Bahrain Government levied as usual transit dues on the cargoes of the Saudi Arabian vessel S.S. *Ahmedi* when she passed in transit through the inland waterways part of Bahrain. This time the Saudi Government, though not a contracting party to the Convention, invoked it. The British Government did not challenge Saudi Arabia's right to invoke the provisions and consequently abolished the transit dues completely and for ever (*L.N.T.S.* Vol. 170, p. 92.). Various duties were levied by Transjordan (*Mance*—"International Road Transport, Postal, Electricity, and Miscellaneous Questions", p. 165, 187) on Iraqi goods in transit for the part of Haifa in Palestine before the advent of the Statute, in particular an inspection fee of one half of one per cent, and a tax of one shilling per gallon of petrol other than that in the tanks of vehicles. Mance points out that the principal features of the agreement signed by the Iraq Petroleum company on Jan. 31st, 1931, with Transjordan was that under the influence of Barcelona no transit dues or taxes of any kind were levied on oil pumped through in transit.

The same company on March 31st, 1931, signed similar agreements with Syria and Lebanon. These two countries were administered by France but, though France was one of the parties to the Statute, these countries were expressly excluded from the application of the provisions of the Barcelona Convention and Statute. Here France seems to have recognized the right of Iraq to claim the benefit of Barcelona even against non-contracting parties.

Although many Latin American countries signed the Convention, yet Chile alone ratified it. Notwithstanding their technical exclusion,

the effects of the rules adopted at Barcelona are distinctly visible in inter-American transit relations (*A.J.I.L.*, Vol. 21, p. 123). The Bolivian government complained that the Peruvian government was charging higher rates per mile for Bolivian traffic on Lake Titicaca, and Bolivia invoked the provisions of Barcelona. Though they were both non-contracting parties to the Barcelona Convention, on December 15th, 1937, a Bolivian-Peruvian Mixed Commission signed twenty-four draft agreements, among them a convention removing discriminatory traffic regulations on Lake Titicaca. Article 3 of the Treaty of 19th November, 1937 created a Mixed Commission between Argentina and Bolivia for waterways and to see that discriminatory rates were not levied on one another's goods in transit. The Report of the Indus (Rau) Commission reveals that the Indian sub-continent had accepted freedom of navigation on inter-State rivers. The Commission in fact accepted the doctrine of equitable apportionment of waters of rivers. Arrangements made between India and Afghanistan to facilitate the transit of floated timber from Chitral to India on the Kunar and Assar Rivers through Afghan territory furnish illustrations of freedom of navigation on international rivers.

There are numerous bilateral and several multilateral treaties where the principles of freedom of navigation on international rivers have been mentioned as rights deriving from international law. These rights have been invoked and conceded even among States not parties to treaties. After a watchful scrutiny of the practice of States, Sir Osborne Mance (*op. cit.*, p. 185) comes to the conclusion that "the principle of freedom of transit has been almost universally accepted, notwithstanding that the Barcelona Convention has not been adhered to by any considerable number of States".

The opinion of eminent publicists, the provisions of numerous international compacts, the body of case law and the practice among States indicate that in the case of freedom of navigation on international rivers this vital element is sufficiently present to place it in the category of evidence of customs (Prakash Bahadur, "Free Access to the Sea of Land-locked Countries in International Law and Practice", Cornell Law School, Ithaca, N.Y., 1958).

The Committee concludes that co-riparians are under an obligation to co-operate. But as to how this obligation is to be discharged the Committee is silent. Moreover, what remedies are available if one or other co-riparian State tries to evade its duty? Would it not be more practicable to recommend to the parties to accept the compulsory jurisdiction of the International Court of Justice or to resort to arbitration by regional organizations like the Economic Commission for Asia and the Pacific and the like? In the absence of enforcement machinery the so-called right of free navigation boils down to the category of declaratory rights.



I beg to differ from the view of the Committee that maintenance and improvement are more or less the same thing. To me they are not. One is *lex lata* and the other is *lex ferenda*. One denotes the *status quo*, the other heralds innovation. Improvement or extension of the existing facilities are in proportion to the advancement of technology. The Committee also does not deal with inland and coastal ports: these are inseparable from other aspects of the problem.

On the whole my impression is that we are not moving forward but are sliding back. This is so, particularly, when we come to application of the principle of freedom of navigation to non-riparians and to the provision regarding enforcement. Some advance has already been made in both these fields, but I fear our narrow approach may demolish the foundation hitherto laid.

Before I conclude, I want to bring to the notice of distinguished members that the world is shrinking. Man has already reached the moon and is making strides towards Mars and the planets. State frontiers have become like district boundaries of one World. International law must keep pace with the times and play the role of a centripetal rather than a centrifugal force.

Mr. Justice S. RANGARAJAN (India) : Article XIII of the Helsinki Rules which deals with the right of free navigation on the entire course of a river or a lake makes it subject to any limitations or qualifications referred to in the concerned chapters. As a matter of terminology, it may be wiser to adopt one which will not lead to any misunderstanding of this right itself. The terms in which this principle was explained by the Permanent Court of Internationl Justice in the *River Oder* case make it quite clear that a solution of this problem was sought, "not in the idea of a right of passage in favour of upstream States but in that of a community of all riparian States". The Court also emphasised the perfect equality of all the riparian States and the exclusion of preferential privilege of one riparian State in relation to others. So, although what is meant by the expression "freedom of navigation" is fairly clear, the term may not be quite appropriate in this context.

The second aspect to which I would like to refer is the maintenance/improvement dichotomy. It may be of some importance to indicate, at least broadly, what will be maintenance or what will be improvement though a precise definition of either may be difficult. I am referring to this aspect on account of the difficulty which often arises before municipal courts in the common law jurisdictions as to what is meant by the term "repair".

I would also like to suggest that the question of river/lake pollution in international law is taken up for further studies on account of the growing awareness of the importance of this problem.

I welcome the contribution of Professor F. J. Berber, by way of an intermediate report on the protection of water resources and water installations in times of armed conflict, as perhaps the most significant part of the report of the Committee. The task of reconciling minimum morality with the practical realities of war, which has been described "as necessary as it is difficult", reminds me of Sartre's statement concerning morality: "Impossible, but necessary". As one belonging to the older generation, which studied the law of war prior to the later attempt by the U.N. to outlaw war, I am all for practical efforts to regulate any armed conflict when it arises. Especially with reference to water resources and water installations it should be possible, on the lines of Articles I to IX of the Draft Convention for the Protection of Dams, Dykes and other Structural Works for Conservation of Water to break down the several aspects of this problem into their several minute details so that efforts may be made to secure the agreement of as many States as possible on the need to prevent specific kinds of damage in this area whenever there is armed conflict.

Mr. Justice RAJINDAR SACHAR (India) : I wish to speak on Part III of the report. It seems to me that, though the report is a detailed one and brings out the various points, it suffers from certain weaknesses. It points out how different views are held about when poisoning of water is not forbidden or the circumstances in which dams could be bombed or rivers be diverted. It appears to me that the weakness of the report lies in trying to make a distinction between combatants and non-combatants. It seems to be accepted that, though prohibition of poisoning protects both civilians and combatants, doubt is cast whether the extension of the rule can be applicable to combatants. Again exception is made of water meant for animal consumption by suggesting that it can be contaminated. Diversion of watercourses for strictly military purposes is also envisaged.

In my view such a distinction between combatants and non-combatants, civilian or military, is not only artificial but non-existent. If our Association were to accept such a rule, it would open the way for great prevarication and allow the military to justify its action by taking cover under the exception of "military necessity". That this is no imagination is itself recognised in the report when reference is made to the explanation given by the U.S. Command in order to justify damage caused to the lock system in North Vietnam by U.S. aircraft.

I take it that the report must have been prepared earlier than the now openly accepted position in the U.S. itself that these bombings were made deliberately. I fear that, unless this untenable



distinction between combatants and non-combatants is done away with, violation of the rules suggested in the report will be justified by resort to "military necessities" or even under the pretext that it was a mistake.

In these days I should have thought that to say that a particular target is military or civilian is playing with words. These are the days of total war. I do not see how it makes any difference whether poisoned water is drunk by civilians or by soldiers because in either case it is the human being, an individual, who is the victim of poisoning.

Similarly if recourse is made to flooding does it matter whether it results in washing out battalions of armed forces or in uprooting vast numbers of towns and villages? Are we not opening the door to violation of the rules by permitting the military to continue to indulge in these objectionable acts of poisoning, flooding, etc? I feel very strongly that our Association should say clearly what acts it deems reprehensible so that, if poisoning of water or flooding are objectionable, they will remain so whether done against civilians or combatants. Once we accept the position that international law and rules of conduct have a place, even when there is armed conflict between two countries, there is no justification either in reason or in principle for making any such distinction between combatants and non-combatants.

I would therefore strongly urge that we delete all exceptions which seem to justify illegal action by armed forces. If our Association is to lay down rules for proper international conduct, these rules must apply in all circumstances.

Judge E. J. MANNER (Finland) thanked the members who had participated in the discussion and expressed the hope that Professor Berber's health would recover so that the Committee, with his help, could take up the points raised.

The resolution, the text of which appears at the beginning of Part I of this volume, was adopted unanimously.

# INTERNATIONAL WATER RESOURCES LAW

**Membership of the Committee**

Judge E. J. Manner (Finland, Chairman)

1. Navigation (Rapporteur: Dr. H. Zurbrügg, Switzerland).

2. Underground Waters (Rapporteur: Prof. R. D. Hayton, U.S.A.).

3. Pollution of Coastal Areas and Enclosed Seas (Rapporteur: Prof. C. B. Bourne, Canada).

4. Relationship of Waters to other Natural Resources (Rapporteur: Dr. G. J. Cano, Argentina).

5. General Uses of Waters (Rapporteur: Prof. Dr. F. J. Berber, Germany).

6. Administration and Management of International Waters (Rapporteur: Dr. D. A. Caponera, Italy).

B. M. Abbas (Bangladesh)
Dr. H. E. J: Barberis (*Alternate*: Argentina)
Major L. M. Bloomfield, Q. C. (Canada)
Dr. C. Boasson (Israel)
Dean Maxwell Cohen (Canada)
K. W. Cuperus (Netherlands)
Dr. P. Dimitrijević (Yugoslavia)
Prof. H. Eek (Sweden)
Northcutt Ely (U.S.A.)
Prof. F. Florio (*Alternate*: Italy)
Dr. H. Fortuin (Netherlands)
Prof. A. H. Garretson (U.S.A.)
Prof. L. Hjerner (*Alternate*: Sweden)
Dr. T. Ionascu (Romania)
Prof. H. Külz (Germany)
A. Lester (U.K.)
J. Lipper (U.S.A.)
Dr. C. Martin (U.S.A.)
V-M. Metsälampi (Finland)
Prof. Y. J. Morin (*Alternate*: Canada)
Dr. J. Paunovilć (*Alternate*: Yugoslavia)
M. A. Pesh Imam (Pakistan)
Prof. E. du Pontavice (France)
Dr. I. Ruiz Moreno (Argentine)
N. C. Saxena (India)
M. A. Samad (Pakistan)
Dr. H. E. Scheffer (Netherlands)
Dr. S. M. Sikri (India)
Dr. Nagendra Singh (India)
Prof. L. A. Teclaff (U.S.A.)
M. Virshubski (*Alternate*: Israel)

## REPORT OF THE COMMITTEE

**Part I—Introduction** (by Judge E. J. Manner, Chairman)

1. The 55th Conference of the Association in New York having considered the report of the Committee approved the Articles on Flood Control and the Articles on Marine Pollution of Continental Origin included in the report. The Conference also requested the Committee to continue its study of the remaining topics within its terms of reference.





2. The work of the Committee is carried out by six different Working Groups on the following subjects :

—Navigation ;
—Underground Waters ;
—Pollution of Coastal Areas and Enclosed Seas ;
—The Relationship between Water and other Natural Resources ;
—Working Group on General Uses of International Water Resources ; and
—Administration and Management of International Waters.

Each working group has its own terms of reference as approved by the Committee under the Committee's overall terms of reference. A detailed description of the arrangement of work of the Committee appears in the Buenos Aires Conference Report (see pages 521-530). Two changes in the chairmanship of the working groups have taken place. When Mr. K. W. Cuperus and Dr. H. Fortuin asked to be relieved because of the pressure of other duties, the Committee appointed Prof. C. B. Bourne to chair the working group on Pollution and Dr. H. Zurbrügg the working group on Navigation.

3. The Committee has held three meetings since the Committee's report to the New York Conference of 1972 was prepared. The first meeting took place concurrently with the New York Conference, the second at Bonn in April 1973 and the third at Geneva in April 1974.

4. Among the topics still under consideration, the Committee has in the last two years devoted its efforts chiefly to the following subjects :

—maintenance and improvement of international waterways ;
—protection of water resources and water installations in times of armed conflict ;
—administration and management of international water resources ;
—international underground waters ; and
—relationship between water and other natural resources.

5. The topic concerning the maintenance and improvement of international waterways had already been discussed at the Committee meeting at The Hague in 1970, where Dr. H. Zurbrügg presented his preliminary study on "some legal aspects of maintenance and improvement of naturally navigable waterways separating or traversing several States". At that time, the Committee took no position on the matter. At the meeting in New York in 1972 the matter was taken up again and Dr. Zurbrügg was asked to prepare a revised study on the item. After a general discussion at Bonn,

Dr. Zurbrügg revised the study, which was distributed to the members of the Committee before the Geneva meeting. At the Geneva meeting the Committee adopted, with some amendments, his "Report on Maintenance and Improvement of Naturally Navigable Waterways Separating or Traversing Several States" and decided to submit the report for approval at the New Delhi Conference. The report contains a proposed addition to the Navigation Chapter of the Helsinki Rules, with supporting introductory remarks.

6. As for the topic of protection of water resources and water installations in times of armed conflict, Prof. F. J. Berber presented a preliminary report on the subject at the Bonn meeting. This study was preliminarily discussed in Bonn and then sent to the members of the Committee for comments. At the Geneva meeting, Prof. Berber presented a revised version of his study as an "Intermediate Report on the Protection of Water Resources and Water Installations in Times of Armed Conflict". On the basis of the discussion Prof. Berber made some amendments and revisions in his report. The Committee has not yet taken a final position on this report. Nevertheless, in view of the importance of the subject, the complexity of the problems involved and the broad scope of the study prepared by the Rapporteur, the Committee, as part of its report, submits his revised study for discussion to the Conference. The Committee would be pleased to receive, during the working session of the Conference, comments and suggestions by the members of the Association.

7. On the topic of administration and management of international waters, the Committee considered at both the New York and the Bonn meetings the preliminary report prepared by Dr. Dante A. Caponera, the Rapporteur on this item. The report was based on existing principles and included a list of agreements setting up international machinery for the management of the water resources of international basins presently in operation. Discussions took place on the legal principles applicable to the administration of international drainage basins, in particular the principle that States are under an obligation to co-operate in matters of water resources and the fields in which any such principle exists ; and on the need to set up some kind of administrative machinery. On the basis of these discussions Dr. Caponera introduced at the Geneva meeting a second preliminary report, together with a preliminary Draft Chapter on International Water Resources Administration including draft articles with comments and annexed draft guidelines for the establishment of international water resources administration. The Committee discussed these draft articles and invited Dr. Caponera to pursue the work on those lines for further discussion. The Committee expects to present a report on this subject at the 57th Conference.



8. The legal aspects on international underground waters were dealt with by the Committee at New York. The discussion was based on the working paper containing some Draft Rules on Underground Waters presented by Mr. J. Lipper. After discussion the Committee invited the working group on Underground Waters to prepare a revised text on the item.

9. On the relationship between water and other natural resources, a specific proposal on harmful effects upon water of the use of other natural resources, presented jointly by Dr. G. J. Cano, Chairman-Rapporteur, and Dr. J. A. Barberis, was discussed at the Geneva meeting. In this connection the Committee also discussed a working paper prepared by Prof. L. A. Teclaff, which suggested that the Committee consider the impact of the uses of water on the environment. In presenting this proposal on behalf of Prof. Teclaff, Prof. R. D. Hayton pointed out the reciprocal nature of the two proposals. The Committee decided to join the two proposals and to ask Prof. Teclaff, in co-operation with Dr. Cano and Dr. Barberis, to prepare revised terms of reference for the working group of Dr. Cano taking into account the environmental aspects insofar as water is concerned. It is expected that a report on the combined subject matter will be submitted for general discussion at the Committee's next meeting.

## Part II—Report on Maintenance and Improvement of Naturally Navigable Waterways Separating or Traversing several States

(by Dr. Henri Zurbrügg, Rapporteur)

### I. Introduction

The report on the Uses of the Waters of International Rivers submitted to the 52nd I.L.A. Conference in Helsinki 1966 states that "the objective has been to clarify and restate the existing international law as it applies to the rights of States to utilize the waters of an international drainage basin".[1] Nevertheless, the Helsinki Rules on the uses of the waters of international rivers, as adopted by the Conference on the 20th of August, 1966,[2] do not represent an exhaustive set of all existing rules of international law concerning the conduct of nations within an international drainage basin. The articles are a part of them, coupled with certain recommendations. Besides these articles, there are other

[1] ILA Fifty-second Report—Helsinki, p. 478.
[2] ILA Fifty-second Report—Helsinki, p. 484-553.

rules existing in absence of conventional law. The fact that these rules have not been incorporated in the set of the Helsinki Rules cannot have the meaning that they are not binding upon States. This is particularly true when fluvial navigation is concerned. Reservations have been made in this respect during discussions of the working sessions.[3] The I.L.A. Resolution of 1966 itself gives support to this view.

Indeed, it was recommended to instruct the newly constituted Committee on International Water Resources Law to carry out a programme of codification and study of certain selected aspects of water resources law, such as *inter alia* detailed rules on the navigation of rivers.

It is in this spirit that in the terms of reference of the Working Group on Navigation special attention has been given to some legal aspects of the maintenance and improvement of waterways.[4]

In order to avoid misinterpretation, it must be kept in mind that the scope of this report is to complete and not to change the work already carried out in the matter of navigation by the former Committee on the Uses of the Waters of International Rivers. The Helsinki Rules are the framework. This means that the substance of this report remains subject to any limitations or qualifications referred to in the different chapters of these rules. Particularly it is out of the question to assume any priority to navigation over conflicting non-navigational uses.

Moreover, the report is based on an assumption that a consensus has already been established between the involved riparian States concerning the reasonable and equitable utilisation of the navigable portion of the rivers separating or traversing their territories. It is understood that the navigational use continues to be regarded as the common interest fulfilling the needs of the riparians, and that each of them is willing to preserve navigation without facing any absolute exclusion of non-navigational uses.

Furthermore, it must be emphasized that this report refers only to those portions of rivers which are navigable by reason of natural conditions and which separate or traverse the territories of two or more States.

Therefore, this report does not apply to canals and canalized rivers, that is to say to waterways which have become usable for commercial navigation only artificially by engineering water works undertaken for this purpose. Maintenance and/or improvement of such waterways would be a selected question which should be studied

[3]ILA Fifty-second Report—Helsinki, page 447-476.

[4]See International Law Association Buenos Aires Conference (1968) Committee on International Water Resources Law, Progress Report (Adopted by the Committee), page 2.



separately. No reference is made either to navigable tributaries lying wholly in the territory of one State, unless these tributaries have a navigable connection with a main river separating or traversing the territory of another State and the natural physical characteristics including depth and width both of the tributaries and the main river are adequate for the traffic of commercial vessels.

## II. Fundamental rules

It is worth recalling two principles of international law governing the navigational use of rivers, whose naturally navigable portion separates or traverses the territory of two or more States. These principles refer to :

—the freedom of navigation,

—the settlement by common agreement of all questions affecting navigation.

The legal aspects of freedom of navigation have already been thoroughly studied before the adoption of Chapter 4 of the Helsinki Rules. However, no article has been drawn up on the second principle. Attention was drawn to this omission at Brussels Conference in 1962[5] as well as in Helsinki in 1966.[6] Both of these principles are correlated. They do form the starting point for the identification of the existence (or non-existence) and also the extent of rights and obligations regarding maintenance and improvement of navigable rivers..

### 1. *Freedom of navigation*

The Final Act of the Congress of Vienna of June 9th, 1815, includes in Articles 108-116 some principles reflecting the opinion which prevailed at that time in the matter of international fluvial law. The formulation had partly a constitutive and partly a declaratory feature.

The declaratory feature refers to freedom of navigation, which has been considered as a general principle of international law.[7] Subsequent treaties, by which freedom of navigation has been stipulated in a more detailed or extended way in order to create conventional law, have not altered the feature of a general principle of international law binding upon States in the absence of conventional

[5]ILA Fiftieth Report—Brussels, page 413.

[6]ILA Fifty-second Report—Helsinki, Page 468/9.

[7]Prevailing opinion: Baumgartner page 47; Gönnenwein page 45, 49, 0; Zurbrügg, int. Flussschiffahrtsrecht page 7., 11; Müller, Freiheit der Rheinschiffahrt page 2, 6; Müller, Rechtliche Grundlagen page 4; Müller, Rechtsstellung der Schweiz, page 162; Müller, Rheinregime page 185; Scheuner page 9. Contrary opinion: Lederle page 84.

or customary law.[8] The Final Act of the Congress of Vienna has formulated this principle as follows :

ARTICLE 109

"Navigation throughout the whole course of the rivers referred to in the preceding article, from the point where they respectively become navigable to their mouth, shall be entirely free, and shall not in the matter of commerce be prohibited to anybody, provided that they conform to the regulations regarding the police of this navigation, which shall be drawn up in a manner uniform for all and as favourable as possible to the commerce of all nations."[9] [10]

This wording already shows that free navigation is not an unlimited, unrestricted legal right. Without any regulation the exercise would indeed lead very soon to a disorder affecting navigation itself. Furthermore, the technical and economical evolution of the last hundred years made clear that navigational and non-navigational uses may interfere with each other. This makes co-ordination, harmonization, limitations, restrictions and so on, necessary. Therefore, the Helsinki Rules have drawn up freedom of navigation as follows :

[8] According to the prevailing opinion, the principle of freedom of navigation is reserved to the riparian States only: Lederle p. 101; Gönnenwein p. 56; Zurbrügg, int. Flussschiffahrt p. 11; Chiesa p. 150; Müller, Freiheit der Rheinschiffahrt p. 3; Guggenheim p. 406 et seq; Kraus p. 16/24; Scheuner p. 114/122, 140; Baxter p. 111, 113/114, 149/159. Works of ILA: see Fortuin first report 1959 p. 5, 11; second report 1960 p. 5 et seq; ILA Fiftieth Report—Brussels, statements Olmstead, p. 411 and Zurbrügg, p. 413; Report of the Rivers Committee, p. 447/451 making references to the doctrines, international treaties and juridical sentences as well as article II with comments p. 456/459; ILA Fifty-second Report—Helsinki, art. XIII p. 506/507.

The Statute of Barcelona granted freedom of navigation to the contracting States: art. 3 and 4; Mance p. 5. Different treaties have also granted freedom of navigation to non-riparian States; *e.g.* art. 9 of the Treaty of 1839 concluded between Belgium and the Netherlands for the Scheldt; art. 15 of the Treaty of Paris of 1856, art. 1 of the Convention of Paris of 1921, art. 1 of the Convention of Belgrade of 1948 for the Danube; art. 1 of the Revised Convention for Rhine Navigation signed at Mannheim, October 17, 1868. Ferrier draws from it the wrong conclusion, that freedom of navigation in favour of all States is confirmed by the international custom, p. 14 and 29/30.

[9] Translation from the French text; see Fortuin, Two questions . . . p. 260.

[10] As regards the substance of freedom of navigation, see "inter alia": Gönnenwein p. 80 *et seq*; Chiesa p. 152 *et seq*; Ferrier p. 39 *et seq*. ILA works: Fortuin first Report 1959 p. 13/14; second Report 1960 p. 15 *et seq*; ILA Fiftieth Report Brussels, art. III with comments p. 459/460; ILA Fifty-second Report—Helsinki, art. XIV with comments, p. 507/508.



ARTICLE XIII

"Subject to any limitations or qualifications referred to in these Chapters, each riparian State is entitled to enjoy rights of free navigation on the entire course of a river or lake."

2. *Settlement by common agreement of all questions affecting navigation*

Freedom of navigation could lose quickly its meaning if each riparian State of the entire navigable course of a river would be entitled to take, within its territory and only according to its own view and convenience, measures of technical or legal character affecting navigation. The enjoyment of the rights of free navigation, as defined in Articles XIII and XIV of the Helsinki Rules, requests regulations on different matters, e.g. type and characteristics of vessels and boats, composition and qualification of the crew, traffic rules and signals, pilotage, prescriptions of security, specially for the transport of dangerous goods. All this must be settled on a co-operative and uniform basis, so that the regulations are the same or at least harmonized on the entire navigable course.[11] Works for maintenance and for improvement of the waterway also may interfere with the exercise of rights of free navigation and demand the collective attention of the riparians.[12]

Due to circumstances, the riparian States are constituting a community of interest in everything concerning navigation. The adequate legal structure is the joint cooperative administration. However, this does not mean that in absence of conventional law riparian States are under an obligation to institute common international river commissions. "While free navigation, in both a legal and technical sense, can be maintained on an international river without an international commission, such a body is a convenient means of concerting the activities of the riparians. The achievements of the commission in this sphere reflect an undoubted reality of international relations that states can most easily and effectively work through common organs in matters of common interest when conflicting vital interests are not at stake."[13]

[11] Baumgartner, p. 39; Walther, p. 18/19.

ILA works: Fortuin second Report, p. 20; ILA Fiftieth Report—Brussels, comments on article IV ,p. 461; ILA Fifty-second Report—Helsinki, Statements Zurbrügg, p. 469.

Unified regulations are often applied to national tributaries of international waterways, unilaterally or on the basis of agreements, see Wassermeyer p. 1113.

[12] Baxter, p. 110.

[13] Baxter, p. 146.

For such reasons, the Final Act of the Congress of Vienna has set up in Article 108 the following principle :

> "The Powers whose territories are separated or traversed by the same navigable river undertake to settle by common agreement all questions affecting navigation thereon".

This article represents not only conventional law. It includes also a general principle of international navigation river law. Support to this opinion is given for instance by the Permanent Court of International Justice in the River Oder Case. The Court stated :

> "But when consideration is given to the manner in which States have regarded the concrete situations arising out of the fact that a single waterway traverses or separates the territory of more than one State, and the possibility of fulfilling the requirements of justice and the considerations of utility which this fact places in relief, it is at once seen that a solution of the problem has been sought, not in the idea of a right of passage in favour of upstream States, but in that of a community of interest of riparian States. This community of interest in a navigable river becomes the basis of a common legal right, the essential features of which are the perfect equality of all riparian States in the use of the whole course of the river and the exclusion of any preferential privilege of any one riparian State in relation to the others."[14]

It may be added that Article 6 of the exchange of notes of August 17th, 1954 between Canada and the United States of America concerning the St. Lawrence seaway stipulates :

> "It is further agreed that each Government will consult the other before it enacts any new law or promulgates any new regulation, applicable in the respective national parts of the international section of the St. Lawrence River, which might affect Canadian or United States shipping, or shipping of third-country registry proceeding to or from Canada or the United States respectively."[15]

[14]"Permanent Court of International Justice in the River Oder Case", P. C. I. J., Ser. A no. 23, pp. 26-27 (1929); see Schulthess, P. 51 and 80; Baumggartner, p. 39; Zurbrügg, int. Flussschiffahrtsrecht, p. 16/17; Chiesa, p. 75 and 146; Baxter, p. 113; Müller, Rechtliche Grundlagen, p. 2 *et seq.*,—Obligations of the riparian States are more extended in the field of navigation than in that of utilization of international watercourses for other purposes. Concerning utilization in general: "every riparian, in all actions *which could have an effect on the use of water by other riparians must have due regard to the interests of other riparians*". Berber, Rivers in International Law, p. 254, *cf.* also Berber, Rechtsquellen, p. 181/182; Berber, Lehrbuch p. 311,—Helsinki Rules, Article IV.

[15]Schulthess, p. 52; Gönnenwein, p. 106; Ferrier, p. 54.



## III. Maintenance

Deriving from the principle of freedom of navigation the negative requirement to refrain from acts which might adversely affect the existing navigability is not enough to preserve free navigation.[16] In addition, it is necessary that all riparian States are acting positively and in a concerted way.[17] This means that maintenance of the navigable waterway includes not only adequate measures in order to avoid obstructions to the existing navigability by new bridges, constructions, wrecked ships and so on. Furthermore, it also is important to undertake technical measures as dredging and other engineering works, to prevent harmful effects of erosion and siltation.

It does not seem possible, as a rule, to make a clear distinction as to what should be considered as maintenance and what as improvement. An absolute general-abstract criterion binding upon riparian States does not exist under non-conventional law. It is in each particular case a matter of fact and of proportion. A convenient reference for making such a distinction may be given by the so-called equivalent water level, i.e. a matter which should be defined collectively by the involved riparian States.[18] Maintenance may in some cases involve, as a by-product and without any additional expenses, an improvement of the pre-existing navigability. In spite of this, legally it remains a maintenance. On the other hand, when the purpose of works is to increase the navigability, in addition to

[16]Schulthess, p. 51; Chiesa, p. 74, note 53; Ferrier, p. 39; Baxter, p. 114.

[17]For instance, the equivalent water level of the Rhine as fixed by the Central Rhine Commission corresponds to a low-water mark which has not been reached during 20 ice-free days a year in the average of the period between 1951 and 1970. The depth of the navigable channel related to this water level is of 2,50m for the Low Rhine, 2,10m for the Middle Rhine and 1,70m for the Upper Rhine.

[18]Baxter, p. 114: *cf.* also Chiesa, p. 74: Ferrier, p. 39, 56: Chiesa makes a distinction between a waterway development "taking into account the requirements of navigation and implicating a notion of progress" and works of proper improvement. In our opinion every development implicating a notion of progress is an improvement; there is no reason to make a distinction which cannot but cause confusion. Article 28 of the Act of Mannheim relating to maintenance is not in contradiction with this opinion. The expression "put into good order and maintain" means that measures have to be taken for eliminating an unsatisfactory situation which was the result of insufficient maintenance of the navigable channel: in this connection both putting and keeping in good condition are to be considered as maintenance.

Page 54 *et seq.* Ferrier uses the expression "travaux de correction"; which means either maintenance or improvement depending on the particular case.

what is really necessary for maintaining the waterway in good order, it is no longer possible to deny any feature of improvement.

The existence of a duty under international law for each riparian State to maintain in good order that navigable portion within its jurisdiction was already recognized at the beginning of the 19th century and has been stated in article 113[19] of the Final Act of the Congress of Vienna and in article 7 of annexe 16B of this Act.[20] Depending on the circumstances, riparian States may carry out works of maintenance by themselves in their own portion of the river. But they may also entrust someone else (a private enterprise, another riparian State or an international agency).

The obligation of maintenance is limited, necessarily, by the financial ability of the riparian State. Therefore, the Helsinki Rules have restated the obligation as follows :

ARTICLE XVIII

"Each riparian State is, to the extent of the means available or made available to it, required to maintain in good order

[19] *Art.* 113: "Chaque Etat riverain se chargera de l'entretien des chemins de halage qui passent par son territoire, et des travaux nécessaires pour la même étendue dans le lit de la rivière pour ne faire éprouver aucun obstacle à la navigation . . . "

*Art.* 7: "Chaque Etat riverain se charge de l'entretien des chemins de halage qui passent par son territoire et des travaux nécessaires, pour la même étendue, dans le lit de la rivière, pour ne faire éprouver aucun obstacle à la navigation".

*Rhine*
Art. 28 of the Revised Convention for Rhine navigation signed at Mannheim October 17th, 1868 (not modified by the amendment of November 20th 1963).

*Danube*
—Art. 17 of the Treaty of Paris, March 30th, 1856.
—Art. 36 of the Act of Danube, November 7th, 1857.
—Art. 11 para. 2 of the Convention of Paris of July 23rd 1921, establishing the final status of Danube.
—Art. 3 para. 1 of the Convention of Belgrade of August 18th, 1948 regarding navigation on the Danube.

*Statute of Barcelona*
Art. 10 para. 1 and 2.

See also. Schulthess, p. 51; Baumgartner, p. 52 (implicitly); Gönnenwein, p. 106 and 108; Chiesa, p. 73, note 51; Ferrier p. 56. ILA Works: Fortuin, second Report, p. 21; ILA Fiftieth Report—Brussels, art. VII with comment. p. 465.

[20] Baumgartner, p. 54.



that portion of the navigable course of a river or lake within its jurisdiction."

A State not entirely fulfilling its obligations of maintenance is liable, according to public international law, for damage suffered by other riparian States. On the other hand, the due execution of the obligation does not entitle the involved State to impose unilaterally charges on co-riparian shipping using that waterway portion within its territory, to pay the costs of maintenance. The imposing of charges is one of the most important questions of common interest, which requires due attention, consultation, negotiation and collective treatment, keeping in mind that a positive solution should be obtained by common agreement among all riparian States.

## IV. Improvement

The main questions may be formulated as follows :

Are riparian States under an obligation to improve the existing navigability to the extent of meeting the expanding needs of navigation since, according to the general principles of international fluvial law, they have to refrain from acts which adversely affect the exercise of rights of free navigation and, furthermore, to maintain the waterway in good order?

Are co-riparians required to give technical, administrative or financial assistance, if one riparian or a group wants to improve the navigability, *e.g.* by increasing the depth or enlarging the width ?

Is a riparian State entitled to refuse its co-operation, when the waterway, the section of which is situated within its territory, should be improved at the request of other co-riparians?

Are co-riparian States entitled to a veto, for instance, if one State wants to carry out, at its own expense, works to improve the waterway portion over which it has jurisdiction?

The answer seems to be :

It is not reasonable to admit that a State would be obliged to give up the improvement proposed, since the works are beneficial to it, without having harmful effects on the navigational use to which co-

riparians are entitled.[21] On the other hand, if a State is not ready to carry out the improvement proposed at its own charge, the further question is raised whether the co-riparians are entitled to require the maintenance of the *status quo* or whether, taking into account the common interest, they are all under a duty to co-operate jointly for realising the improvement. The first solution also does not seem to be acceptable ; it would be against any evolution and would lead to unreasonable results, contrary to the prosperity of all riparians' shipping. Let us think for instance of waterworks needed for new navigational techniques as towing or pushing of barges. If the improvement can be attained only by executing waterworks on the territory of two or more riparian States or on one only, no State is, as a rule, entitled to adopt a passive attitude ; moreover, all riparians have to enter into negotiations and to co-operate.

Due to changed circumstances, riparian States, in their quality of members of a community of interest and according to the rules of good faith, may be required to reconsider their reciprocal legal rights and duties. The new conventional legal order, which should be established, is a matter of common concern, as was the case originally. Once established, the conventional order does not give any absolute right of being kept unchanged forever.

The costs of improvement works are to be shared equitably. Particularly, it would not be consistent with the concept of a community of interest to give to the riparian State proposing an improvement on the basis of a sharing of costs the choice : either

[21] Baumgartner, p. 53/54; Chiesa, p. 74/75; Ferrier, p. 59/60; Baxter, p.114. See as examples the different sharing of costs concerning partly maintenance, partly improvement of the navigability of the Rhine:
—Regulation of the section Strasbourg/Kehl-Istein: according to the Swiss-German Treaty of 29.3.1929, the expenses of the works have been borne in a proportion of 60% by Switzerland and 40% by Germany.
—Improvement of the section Neuburgweier/Lauterbourg-St. Goar: in accordance with the Swiss-German Treaty of 25.5.1966 (effective date 7.8.1967) Switzerland grants Germany a loan of 30 million Swiss francs (cost of arrangement initially 160 million German marks): this loan would be transformed into a payment to lost funds if the section of the Rhine between Strasbourg and Neuburgweier/Lauterbourg is improved before 1990 in such a way that its navigability would be computed at a level equal to that of the lower section of the river.
—Improvement of the section Strasbourg-Lauterbourg: similar solution by the Swiss-French Treaty of July 20th 1969.
—Canada and the United States of America have agreed upon another solution: The plans of improvements of the navigability of St. Lawrence are not submitted to the International Joint Commission, as far as the works are carried out on the territory of the undertaking State and do not affect either the level or the flow of the river: Baxter, p. 93 and art. III paragraph 2 of the Treaty of January 11th 1909 between the United States and Great Britain Relating to Boundary Waters and Questions Arising Between the United States and Canada.



not to undertake any improvement or to accept that all riparians may use the improved navigability free of charge. As a rule, no riparian may refuse any contribution. The kind, importance and share, are matters which have to be the object of consultation and negotiation and which need collective treatment for settling them by common agreement.[22]

The obligation to consult, negotiate and co-operate for improving the waterway is the logical consequence resulting from the existence of a community of interest of the riparian States regarding navigation. Nevertheless, one cannot go so far as to say that, in the absence of conventional law, riparian States are directly—*hic et nunc*—under an obligation to effect an improvement.[23] *A fortiori* no riparian State is required to tolerate, within its jurisdiction and without its consent, works of improvement which any international agency would consider as feasible by financial means made available.[24] But there has been some tendency in international conventional law to create obligations of that kind.[25]

[22] Baumgartner, p. 53 ; Gönnenwein, p. 108 ; Ferrier, p. 55, 56. Work of ILA : Fiftieth Report-Brussels : art. VIII relating to improvement works is drafted in the form of a recommendation which has not been included in the Helsinki rules ; *cf.* also the comments on art. VIII; ILA Fifty-second Report—Helsinki, p. 469.

[23] See in this respect the suggestions mentioned by Mance, p. 93 and 101.

[24] Baumgartner, p. 53; Gönnenwein, p. 107/108.

*Examples*

*Rhine*

Although the Revised Convention for Rhine Navigation signed at Mannheim, October 17, 1868 does not include any obligation to improve the Rhine channel, the riparian States have improved and are improving the navigability of the waterway from Basle to the sea. The plans of works have been notified to the other riparian States and are the object of resolutions of the Central Commission for the Navigation of the Rhine.

*Danube*

On the Basis of the Convention of Paris of 1921, the International Commission of the Danube established a general programme of large works of improvement on the basis of proposals and plans submitted by the riparian States (art. 11 para. 1).

The decisions were made by a majority of ¾ of the members present (art. 35, para. 4). The works were carried out by the riparian States within their national boundaries (art. 12 para. 1). The sharing of expenses was to be determined in each particular case separately; the last institution of settlement. (Art. 16 and 17) cf art. 33 too).

According to the convention on the Navigation on the Danube of 1948, the Danubian States have engaged themselves to improve the conditions of navigation on their sectors; the Commission of the Danube shall be consulted (art. 3, para. 1). The latter outlines the general plan of large works on the basis of the proposals and projects submitted by the Danubian States and by special riparian administrations (art. 8 para. 2b). Its decisions are made by majority of votes of all members, however not without the consent of the State in which territory the works shall be carried out (art. 12). When the

(*Continued at foot of next page*)

## V. Conclusion

In practice satisfactory handling of the principle of freedom of navigation cannot be attained unless all questions related to navigation are treated collectively by all riparian States.[26] This is particularly important when maintenance and/or improvement are concerned, since it is not possible, as a rule, to make a strong distinction between these two.

As far as maintenance is concerned, article XVIII of the Helsinki Rules applies. On the other hand, an obligation, in a particular case, to improve a natural navigable waterway separating or traversing several States cannot be derived but from conventional law. Nevertheless, the community of interest of the riparian States in such a waterway becomes the legal basis for requiring each riparian State to give notice, consult, negotiate and co-operate in order to enable, by common agreement, a settlement of all relevant questions related to the improvement of the navigability, such as technical and administrative implication of the works needed, financial assistance and sharing of costs.

Therefore, the following DRAFT ARTICLES are proposed for approval :

1. **A riparian State intending to undertake works to improve the navigability of that portion of a river or lake within its jurisdiction is under a duty to give notice to the co-riparian States.**
2. **If these works are likely to affect adversely the navigational uses of one or more co-riparian States, any such co-riparian State may, within a reasonable time, request consultation. The concerned co-riparian States are then under a duty to negotiate.**
3. **If a riparian State proposes that such works be undertaken in whole or in part in the territory of one or more other co-riparian States, it must obtain the consent of the other co-riparian State or States concerned. The co-riparian State or States from whom this consent is required are under a duty to negotiate.**

**This proposition should be added to the Helsinki Rules as Article XVIII[bis].**

*(Continued from previous page)*

works affect a section entirely within the territory of one State, they shall be carried out by this State (they may possibly be carried out by the Commission of the Danube) and pay its expenses (art. 4 and 34). When the section concerned constitutes the boundary between two States, these States shall agree upon the execution of works and the sharing of the costs (art. 39).

*Statute of Barcelona of* 1921

Art. 10 para. 3: "Except by a legitimate motive of opposition—a riparian State cannot refuse to execute upon request of another riparian State the works necessary for improvement of the navigabiliy if the latter offers to pay the expenses thereof as well as an equitable part of the surplus of maint enance cost. . .".

[26]See Fortuin, comment to art. VIII of the Draft-Articles Concerning Navigation, adopted at the Hague Meeting of the Committee 1-5 September 1961, ILA Fiftieth Report—Brussels, p. 466.



## Part III—Intermediate Report on the Protection of Water Resources and Water Installations in Times of Armed Conflict

(by Professor Dr. F. J. Berber)

### I. Insufficiency of rules protecting water and water installations in times of armed conflict and urgency of establishing such rules

Interest in international water rights is of comparatively recent growth, and international water law still contains many uncertainties and unsolved questions which require systematic study and research.[1] One of those unsolved questions is the problem of the legal protection of water and water installations in times of international conflict. Whilst for instance an international convention of 1954 undertakes to protect against damage or destruction in times of international conflict, *inter alia*, "monuments of architecture", works of art, manuscripts, books and other objects of artistic, historical or archaeological interest", no such protection exists for water and water installations, although this may be of vital importance for the health and even the survival of large groups of people. Nor has a systematic research into the problems involved ever been undertaken, notwithstanding the immense progress made in the last few decades in all sorts of water uses, in the development of water installations and their sensibility to destruction and, last but not least, in the destructive power of new weapons. This is the reason why I have proposed making the problem of the protection of water and water installations in times of international conflict an object of systematic study by our Committee. When mention is made of the destructive power of new weapons, one is inclined to think in the first line of nuclear weapons. But the range of destructive new weapons is much wider. It must suffice to mention, as not exhaustive examples, the use of herbicides and defoliation,[2] craterization,[3] the use of Rome ploughs to achieve deforestation, weather modification techniques,[4] the use of adamsite (Delt).[5]

After the Second World War and its immense sufferings, one would have expected renewed combined efforts for the progressive development of the law of war in the light of the sad experience through which so many nations had to go. Unfortunately, apart from the praiseworthy achievements of the International Red Cross, the opposite development took place. Under the illusion that the prohibition of force by the U.N. Charter would render impossible the use of force in international conflicts and therefore make unnecessary the progressive development of the law of war, this field of an urgently necessary research and reform has been unpardonably neglected. The International Law Commission, at the outset of its work in 1949, refused to include the law of war in its programme of codification, asserting : "It was suggested that, war having been

outlawed, the regulation of its conduct had ceased to be relevant. The majority of the Commission declared itself opposed to the study of the problem at the present stage . . . It was considered that . . . public opinion might interpret its action as showing lack of confidence in the efficiency of the means at the disposal of the U.N. for maintaining peace." Textbooks of international law omitted the traditional chapters on the laws of war. The American scholar Joseph Kunz, an eminent critic of this negligence, stated[6]: "This neglect was part and parcel of an officially created illusion of wishful thinking fostered by statesmen and utopian writers."

It soon turned out that this "wishful thinking" was an illusion, and that war followed war, in the Near East, in Yemen, on the Indian Sub-Continent, in Korea, in Vietnam, in Laos, in Cambodia, in Africa. The illusion broke down, but a widespread result was not a realization of the urgent necessity of the progressive development of the laws of war, but an attitude of resignation. Fenwick, in his well-known textbook of 1948 (p. 551) stated : "It is to be expected that the only restraints upon the conduct of the belligerents will be the humanitarian instincts of the respective governments and the commanders of their armies in the field". The practice of warfare has shown, to the dismay of world opinion, what it means to leave the conduct of hostilities to the instincts of military commanders in the field, instead of following the path of law initiated by Hugo Grotius in the middle of the horrors of the Thirty Years War. Under the influence of these facts the U.N. have revised their indifferent attitude and have declared in an unanimous resolution of 5.12.1966 "that the strict observance of the rules of international law on the conduct of warfare is in the interest of maintaining these standards of civilization". No sensible person denies the priority of the efforts for war prevention. But as long as war is still possible factually and to some extent even legally (defensive war, civil war), it is a humanitarian necessity to work for the adaptation of the laws of war to changed conditions. The turn made in this U.N. declaration to a more realistic attitude is therefore to be highly welcomed. Following this resolution, further efforts have been made by the U.N. in this field, *e.g.* at the Geneva Disarmament Conference, by the Resolution of the General Assembly No. 2603 A (XXIV) on the application of the Geneva Protocol of 1925, by the request of the 1968 Teheran Conference of Human Rights to the Secretary-General to study "steps which could be taken to secure the better application of existing humanitarian conventions and rules in all armed conflicts" and the need for additional new measures, the reports submitted by the Secretary-General on this topic (*e.g.* Doc. A/8781 of 20.9.1972), etc. It is also to be noted that the Institut de Droit International (Rapporteur : Baron von der Heydte) adopted, at its 1969 session at Edinburgh, a resolution on the laws of



war. It is, therefore, a legitimate, even an imperative task of our Committee to undertake, on the limited field of water protection, this study.

Our study has a double aspect. We will have :

(a) to find out whether there are already existing rules of international law for the protection of Water and Water Installations (*lex lata*) ;
(b) to find out whether it is desirable or even necessary that the existing rules, if any, should be progressively developed by new rules (*lex ferenda*).

Our conscience concerning these problems has been sharpened through World War II and Vietnam. If some practice is morally repugnant to our sharpened conscience, although at present not legally forbidden, it should become the object of a prohibitive rule *de lege ferenda*. It is undeniable that in war, the laws of war are violated in many instances. But it is also an undeniable fact that they are observed in many instances, to some extent no doubt not from ideal moral motives, but from sheer self-interest, because of the principle of reciprocity, that most powerful sanction of international law. To conclude from the violation of a rule of law that it lacks validity is erroneous ; it would mean that the penal law of all nations is, because frequently violated, no longer valid. Falk states rightly : "The law of war attempts to reconcile minimum morality with the practical realities of war". This task is as necessary as it is difficult.

There do not exist express *special* rules concerning the protection of water. The general rules of the law of war fall into two categories : 1. Express rules contained in international conventions : these are, for our subject, mainly : the Hague Convention No. IV, 1907 ; the Geneva Protocol of 1925 ; the Geneva Convention No. IV relating to the Protection of Civilian Persons of 1949. 2. Customary rules and general principles, expressly reserved by the Preamble to the Fourth Hague Convention of 1907 where as "principles of international law" binding on belligerents are mentioned : "Usages established among civilized nations, the laws of humanity and the dictates of public conscience."

Amongst the conventional rules which may be relevant to the protection of water are to be mentioned :

1. Art. 22, Fourth Hague Convention : "The right of belligerents to adopt means of injuring the enemy is not unlimited".
2. Art. 23 lit. a, Fourth Hague Convention : "It is prohibited to employ poisoned arms".
3. Art. 23 lit. g, Fourth Hague Convention : it is prohibited

"to destroy or seize the enemy's property, unless such destruction of seizure be imperatively demanded by the necessities of war".

4. The Geneva Protocol of 1925, ratified by many but not all nations,[7] prohibits the use in war of asphyxiating, poisonous or other gases, and all analogous liquids, materials or devices, as well as the use of bacteriological methods of warfare.

5. Art. 53 of the Fourth Geneva Convention of 1949 provides : "Any destruction by the Occupying Powers of real or personal property belonging individually or collectively to private persons, or to the State, or to other public authorities, or to social or co-operative organizations, is prohibited, except where such destruction is ordered absolutely necessary by military operation".

Apart from conventional rules, there may be applicable customary rules and general principles. General principles are expressly recognized as included in the laws of war in the Preamble to the Fourth Hague Convention of 1907 (see above). Customary rules are rules that are accepted as law in the practice of States in armed conflict. There is no full agreement about the existence or extent of these rules.

The resolution 2444 (XXIII), dated 13.1.1969, of the U.N. General Assembly contains the following rules :

(a) That the right of the parties to a conflict to adopt means of injuring the enemy is not unlimited.
(b) That it is prohibited to launch attacks against the civilian population as such ; and
(c) That a distinction must be made at all times between persons taking part in the hostilities and members of the civilian population to the effect that the civilians be spared as much as possible.

The Institut de Droit International, at its session at Edinburgh, 1969, adopted a resolution (Rapporteur : Prof. von der Heydte, Würzburg) containing principles to be observed in armed conflicts[8] which culminate in the statement No. 7 that international law prohibits "the use of all weapons which, by their nature, affect indiscriminately both military objectives and non-military objects, or both armed forces and civilian populations".

The U.S. Department of Defence, in a letter to Senator Edward Kennedy dated 22.9.1972[9]), did not accept this resolution of the Institut as an accurate statement of international law relating to armed conflict. In accordance with this attitude of the U.S. Department of Defence, both the U.S. Army Field Manual of 1964 and the British Manual of Military Law of 1958 restrict the rule No. 7 of the Institut in the following traditional way : "Civilians must not be made the object of attack directed exclusively against them".



This divergence of views includes of course the thorny problem of aerial bombardment of military objectives in civilian surroundings, the problem of what constitutes a military objective, the problem of indiscriminate bombing, etc.[10] It touches also the problem whether the prohibition of the use in war of asphyxiating, poisonous or other gases, and all analogous liquids, materials or devices, as well as the use of bacteriological methods of warfare, expressly stated in the Geneva Protocol of 1925, is binding not only for States which have ratified this Protocol, but is also part of general customary law,[11] as well as the problem whether this prohibition covers also the use of atomic weapons.[12]

The statement of the U.S. Department of Defence that, in contrast to No. 7 of the 1969 Edinburgh resolution of the Institut de Droit International, the existing laws of armed conflict do not prohibit the use of weapons whose destructive force cannot be limited to a specific military objective, seems unfortunately correct. Neither the 1923 Hague Rules of Air Warfare, proposed by an International Commission of Jurists, nor the "Draft Rules for the Limitation of the Dangers Incurred by the Civilian Population in Time of War" proposed in 1956 by the International Committee of the Red Cross for the Delhi Conference of 1957 which include such limitations, have been accepted by Governments. The efforts of both the International Red Cross and the Institut de Droit International are, however, evidence that such a rule would be real humanitarian progress. It is therefore appropriate to propose that two rules corresponding to nos. 7 and 8 of the 1969 Resolution of the Institut should be considered as desirable rules in the progressive development of international law, as rules *de lege ferenda*. To propose these rules as rules *de lege ferenda* is more realistic than to assume them as already existing rules *de lege lata*—which they are not—because in the latter case, one would be satisfied with the existing legal situation which would soon turn out to be an illusion. I have already pointed out in my report on Flood Control to the New York Conference 1972 that the weight of the designation as a rule *de lege ferenda* must not be under-rated : "It does not express merely a inefficient wish, but points to the urgent necessity of the creation of such a legal rule and to its existence already now as a rule of international morality."

In the light of this situation the following more modest 5 rules can be considered as part of existing international customary rules or general principles :

1. The prohibition of arms, materials, measures, etc., likely to cause "unnecessary suffering" is contained for land warfare in Article 23c of the Fourth Hague Convention of 1907, but must be considered as generally (esp. also for naval and air warfare) forbidden by customary law.

2. Military acts of warfare may not be directed against non-combatants and civil objects as such, but only against combatants and military objects.

3. The application of prohibited acts is justified as legitimate reprisal only if the proportion is appropriate, if it is not directed against specially protected persons or objects and if it is not absolutely forbidden.

4. Military necessity justifies the application of prohibited acts only in cases in which this exception has been expressly reserved (*e.g.* Art. 23 para I g, Fourth Hague Convention of 1907).

5. It is forbidden to use poisonous means of combat.

One final remark as to the meaning of the words "armed conflict" appears appropriate. As the purpose of our study is the alleviation of human suffering, it cannot make any difference whether the opening of hostilities by one or several parties is contrary to international law. For the same reason, the rule of Art. 2 of the four Geneva Conventions of 1949 must be considered as applicable : ". . . shall apply to all cases of declared war or any other armed conflict . . ., even if the state of war is not recognized by one of them . . . shall also apply to all cases of partial or total occupation . . .". The same is true of Article 3 of the said conventions which envisages "the case of armed conflict not of an international character", *i.e.* civil war, esp. as under modern conditions, the distinction between an international conflict and a civil war cannot easily be traced, as is demonstrated by the Indochina situation. Our study does, however, not include a mere state of international tension,[13] nor does it intend to examine the problems of the protection of water and water installations in cases of natural catastrophe which might well be the object of a special study (partly covered by my study on flood control presented to the New York Conference in 1972). Our study does also not include problems raised by so-called terrorist activities although, according to a list of acts deemed to be terrorism established by the Third to Sixth International Conferences for the Unification of Penal Law, 1930/1935,[14] these acts including flooding, damaging of public utilities, pollution, fouling, or deliberate poisoning of drinking water, because acts of governments do not fall under the term "terrorism", whilst terrorists acts fall under municipal or international penal laws, not under the laws of armed conflict.

## II. Attempts to restrict war measures dangerous for water and water installations in times of armed conflict

As stated above, there do not exist special rules of the law of war expressly concerning the protection of water. The study of the applicability of the general rules of the law of war, be they conventional or customary, to the problems of water, has been slow and mostly merely incidental. Vattel, in § 157 Book III, of his celebrated Treatise on the Law of Nations, first published in 1758, states : "a still more general unanimity prevails in condemning the practice of poisoning waters, wells and springs, because (say some authors) we may thereby destroy innocent persons—we may destroy other people as well as our enemies . . . But though poison is not to be used it is very allowable to divert the water—to cut off the springs—or by any other means to render them useless, that the enemy may be reduced to surrender. This is a milder way than that of arms". Vattel follows in this almost verbally the statement of Grotius in "De jure belli ac pacis libri tres", Lib. III Cap. IV § XVII (1625) : "Caeterum non idem statuendum, de aquis sine veneno ita corrumpendis ut bibi nequeant . . . Id enim perinde habetur quasi avertatur flumen aut fontis venae intercipiantur, quod et natura et consencu licitum est". This has been the position of international law until very lately. Fauchille (Traité de Droit International Public, tome II, § 1084, published in 1921) states : "L'emploi du poison que ce soit, qu'il ait pour but de contaminer les puits, les aliments, les armes, est absolument proscrit dans les guerres modernes . . . Mais il est permis de percer les digues, de détruire les écluses. On peut également détourner le cours d'une rivière, tarir les sources qui alimentent l'ennemi. Privé de cet élément, indispensable à la vie des hommes et des animaux, celui-ci ne serait-il pas obligé d'abandonner ses positions?" Mérignac (Le Droit des Gens et la Guerre de 1914-1918, 1921, I p. 164 f.) says : "Le poison, sous toutes ses formes, de quelque façon qu'on le dissimule, spécialement dans les eaux des sources, puits et rivières et dans les boissons destinées aux soldats, est absolument prohibé. On peut donc tarir des sources, détourner les cours d'eau, percer les digues, détruire les écluses; mais il n'est pas permis d'empoisonner et de corrompre les eaux". Hackworth (Digest Vol. VI p. 260, 1943) quotes § 28 of the then valid "Rules of Land Warfare" of the U.S. War Department : ". . . does not prohibit measures being taken to dry up springs, to divert rivers and aqueducts from their courses, or to contaminate sources of water by placing dead animals therein or otherwise, provided such contamination is evident or the enemy is informed thereof". The U.S. Army Field Manual, FM-27-10 (July 1956) para. 37 concerning the prohibition of poison, contains the following "discussion of the rule": "The foregoing rule does not prohibit measures taken to dry up springs, to divert rivers and aquaeducts from their courses, or to destroy, through chemical or bacterial agents harmless to man, crops intended solely for consumption by the armed forces (if that fact can be determined)".

It is obvious from the foregoing examples that one author is copying an earlier author, one generation is repeating what a

previous generation has stated or practised, without much effort towards convincing arguments, much less for a systematic study of the problem.

It is only in the last decade that the new awareness of the world-wide threat to human environment has meant a turning point also in the considerations concerning the protection of water and water installations in times of armed conflict although these considerations are still far from being materially comprehensive or methodically systematic.

At the Conference of Government Experts on the Re-affirmation and Development of International Humanitarian Law Applicable in Armed Conflicts, Second Session 3 May-3 June, 1972, government experts from some Eastern European countries proposed that the contemplated protocol relating to international conflicts should contain express clauses on the protection of the environment in war. Thus, the government experts of Bulgaria, Czechoslovakia, the G.D.R., Hungary and Poland proposed the following formulation :

"It is forbidden to use means and methods which destroy the natural human environmental conditions". (Report on the Work of the Conference, vol. II Geneva 1972, p. 63).

In another proposal by the government experts of Czechoslovakia, the G.D.R. and Hungary at the same conference, the formulation was as follows :

"Attacks which, by their nature, are liable to disturb the cleanliness and balance of the natural environment are prohibited." (*Ibid.* p. 71).

In the United States, Senator Pell proposed that the U.S. Government should take the initiative in framing a broad treaty imposing a ban on all forms of geophysical and environmental warfare. He submitted a resolution setting forth a draft treaty to prohibit and prevent any environmental or geophysical modification activity as a weapon of war. (Congressional Record-Senate, March 17, 1972, s. 4107-4108).[15] The outcome of the Diplomatic Red Cross Conference in Geneva in spring 1974 was not yet available when this paper was terminated, but will be of special importance to our study.

The dangers menacing dams and consequently the civil population living in the potential flood area of such dams have been visualized by a number of Governments and have led to municipal legislation providing for special protection, notably in Switzerland, Sweden and Germany.[16]

## III. Tentative Application of the Rules mentioned above to the problem of the protection of water and water installations in times of armed conflict

This is a very tentative and provisional survey which still requires a good deal of study and discussion before black letter formulations can be submitted; it is more a stock-taking of problems than an introduction to solutions.



### (1) *Poisoning of water*

The prohibition to poison wells and springs has received general recognition only during the last few centuries. As late as the sixteenth century, Michel d'Amboise, in his book "Le Guidon des gens de guerre" (1543), states that one could "gaster, infester, intoxiquer et empoisonner les eaues des ennemys". But only half a century later, Alberico Gentili, in Book II of his "De jure belli" (1588/89), claims the prohibition already as a well established rule of international law, and it has been recognized as a customary rule for centuries before it was codified at The Hague in 1899 and 1907. But there are a number of uncertainties about its interpretation. There exists a certain usage to regard as not falling under "poisoning" the contamination of water "by placing dead animals therein or otherwise",[17] esp. if the enemy was informed of such contamination. This was a consequence of the old conviction that poison was prohibited because of its clandestine and insidious character. Another problem is raised by the invention of the atomic weapon ; it is inevitable that by its use water is contaminated, is poisoned, is made useless for human consumption. It is suggested that the prohibition of poisoning is too narrow and that this prohibition should be extended to all measures which render water unusable for human consumption by whatever means. But as soon as one makes this extension, the problem arises whether it is applicable only in cases in which it is directed against the civil population as such. There can be no doubt that the prohibition of poisoning protects both civilians and combatants. But it must appear very doubtful whether the extension of the rule to all means of making water unusable for human consumption can be applicable to measures directed against combatants only. This deprivation of the enemy forces of the vital resource of water, though not by poisoning, may be an efficient means—not easily to be given up by the military to force the enemy to surrender. Though it be an efficient means, it is no doubt a cruel means ; but war in itself is a cruel and mean thing. To force the enemy to surrender by depriving him of water supply is not more cruel than to force him into surrender by killing and maiming his soldiers. If, however, by the undistinguishable intermixture of civilians and combatants, such a measure would hurt also not only a few individual civilians but the civil population as well as the soldiers, the application of this measure should be regarded as illegal, at least *de lege ferenda*, in conformity with the rule no. 7 of the 1969 Edinburgh resolution of the Institut de Droit International which, as mentioned above, is however contradicted by the U.S. Department of Defence as by many military men of other countries.

Because of the inter-relation of all water, the prohibition of poisoning or making drinking water useless for human consumption by other means would also apply to rivers, lakes and canals, esp. irrigation canals, as well as to bottled water destined for human consumption in the latter case at least if the contamination is not indicated.

It is an open question whether water meant only for animal consumption may be contaminated. This would have to be decided in the same way as the problem of the legality or the illegality of crop destruction. The U.S. Army Field Manual, F-27-10 (July 1956) in its para-37 regards as legal "to destroy, through chemical or bacterial agents harmless to man, crops intended solely for consumption by the armed forces (if that fact can be determined)".

(2) *Cutting-off of aqueducts and reservoirs*

The same rules as to the making of water supplies useless for human consumption would apply to the cutting-off of aqueducts or reservoirs. Would such cutting-off from a beleagured fortress, as a means to enforce surrender, be legal although it would hurt also the civil population living in the fortress?[18] It would, in analogy to art. 25 of the 4th Hague Convention of 1907, appear illegal if directed against an undefended town, village or building. However, the destruction of the water distribution system inside a town cannot be considered as absolutely illegal.

(3) *Diversion of water-courses*

Text-books and Army Field manuals seem all agreed that it is in conformity with existing rules of warfare to divert rivers from their courses. In its unqualified form, this statement does not stand closer scrutiny.

The diversion of a river is a very old military measure. Herodotus (Book I, 191) reports how (in 539 B.C.) the Persian king Cyrus conquered Babylon by this stratagem: ". . . he brought the river by a Channel into the lake, which was then a marsh, and made the old stream fordable by the sinking down of the river. And when this happened, the Persians who were appointed for that same purpose did enter into Babylon by the channel of the river Euphrates which was sunken down to about the middle of a man's thigh".

Such a diversion for strictly military, tactical or strategical purposes can be justly considered as not prohibited by the laws of war. But if a river—and the same would apply to a canal—should be diverted in order to damage or destroy the minimum conditions of subsistence for the civil population or the ecology of the enemy country, or to terrorize its population, or if such a diversion, although justified as such for military reasons, would cause unproportional suffering or damage to the civil population or permanently damage the ecology of the country, it could not be considered as a legitimate measure of warfare.



(4) *Dams and other water structures*

The above mentioned draft submitted by some Governments to the International Red Cross Conference in 1973 provides for the special protection of "works and installations containing dangerous forces"; it mentions, amongst others, dams and dykes. It proposes a prohibition to attack such works or installations, or to make them the object of reprisals; it proposes the marking of such works with a special sign. The draft of Dr. Rao proposes to prohibit "the destruction of, damage to and other harmful activities" against such works.

There will be agreement that, as the civil population and civil objects as such are not rightful targets for military attacks, the attack on such works, as involving "dangers for grave losses among the civilian population or grave damage to civilian objects", is illegal.[19] The protection of such works can, however, not be absolute. When military installations are established in the immediate neighbourhood of such works, without being destined exclusively for the protection of such works against illegal attacks, these works, although not losing their legal immunity and although not directly attacked, may be unintentionally destroyed or damaged by legal attacks on such neighbouring military installations. This appears to be the explanation given by the U.S. command in order to justify damage caused to the Lan lock system in North Vietnam by U.S. air attacks.

Another justification for the destruction of such works may be assumed if for military reasons, esp. for defensive purposes, *e.g.* of a retiring army, such destruction may bring tactical or strategical advantages when at the same time it is assured that no grave danger to the civil population and no permanent damage to the ecology of the country is caused.

The aforesaid considerations are certainly correct as far as storages for irrigation purposes are concerned. The situation is more complex for hydro-electric installations. As electricity is vital for the efficient continuation of war industry and indeed the whole war machinery, the temptation to make such hydro-electric installations useless by bombarding them from the air may be overwhelming, and it may even be difficult to demonstrate the illegality of such action. As, very often, modern constructions are of a multi-purpose character, the situation becomes still more complicated. In any case, the absolute protection of dams demanded by some Governments and authors—see above chapter II—is certainly not part of existing international law and cannot legitimately be proposed as *lex ferenda* without substantial qualifications.

(5) *Flooding*

A defensive military purpose is most effectively achieved by causing floods, thus making it difficult for an army to pursue a retiring enemy. The causing of floods does not necessarily include the destruction of dams or dykes, but may be effected by other means, *e.g.* by opening spillway gates, sluices, locks, etc. The same rules would apply as in the case of destruction of works ; it is part of the problem of how far devastation is permissible. We have historic instances of what devastation can do to water resources and the ecology of a once fertile country. The Hilal invasion of Arabs into the Berber countries of North-West Africa in the 11th Century A.D. systematically destroyed water resources to such an extent that up to the present day formerly fertile areas of intensive agriculture can now only be extensively used as pastures. The same is true of the destruction of water resources and water installations by the Mongols under Dschinghis Khan in once fertile Central Asia in the 13th century. We do not yet know whether a similar situation has been created in parts of Vietnam. It is clear that, in modern times, devastation has been deemed permissible, if at all, only in cases of extreme military necessity. Examples of such devastations for military reasons, all doubtful as to their legality, are, amongst others, the devastation of the Shenandoah valley by General Sheridan and of part of Georgia by General Sherman during the American Civil War, Kitchener's "concentration policy" in the Boer War in 1901, laying waste the country and deporting the whole of the non-combatant inhabitants of the two Boer republics into concentration camps, the devastation of a strip of a depth of 15 km at the Somme in Northern France in 1917 by the Germans when retiring on a shorter line, the systematic defoliation and deforestation of certain areas in Vietnam by the U.S.

In ancient times, devastation appears to have been a recognized means of warfare. But when, in 1674 and again in 1689, the French ravaged and burnt the German Palatinate, Vattel says : "All Europe resounded with invectives against such a mode of waging war". As for modern views on the legality of devastation, Moore (Digest, 1906, vol. VII, p. 182) quotes approvingly Hall's International Law : "Finally, all devastation is permissible when really necessary for the preservation of the force committing it from destruction or surrender ; it would even be impossible to deny to an invader the right to cut the dykes of Holland to save himself from such a fate ; but when, as in the case supposed, the devastation is extensive in scale and lasting in effect, modern opinion would demand that the necessity should be extreme and patent". Greenspan, in: "The Modern Law of Land Warfare" (1957), says: "The accepted opinion appears to be that general devastation of enemy territory is, as a rule, absolutely prohibited, and only permitted



very exceptionally when it is imperatively demanded by the necessities of war (Hague Art. 23 g). The question in what circumstances a necessity arises cannot be decided by any hard and fast rule". Oppenheim (II 415) says : "But the fact that general devastation can be lawful must be admitted".

Public opinion today might be inclined to restrict the permissibility of devastation still much further in the interest of civil population, humanity, ecology ; but such wider restriction would probably have to be regarded as *lex ferenda*, not yet *lex lata*.

(6) *Rules for armistices and occupied territories*

The prohibitions of nos. 1-5 above would also apply to armistices which, although still part of war, interrupt and forbid active hostilities. As a consequence of this, restrictive rules as to the protection of water and water installations would have to be even more rigidly applied than during actual fighting.

It does almost appear unnecessary to emphasize that the prohibitions are to be strictly applied in occupied territories. These territories must always present to the occupying power the temptation to exploit them in an excessive way for the benefit of its army or its country. The limits of the authority of the occupying power are described in Article 55 of the 4th Hague Convention of 1907 : "The occupying State shall only be regarded as administrator and usufructuary of the public buildings, real property, forests and agricultural works belonging to the hostile State, and situated in the occupied country. It must protect the capital of these properties, and administer it according to the rules of usufruct". A deforestation which would cause excessive or permanent ecological damage to the water resources of the occupied country or increase the danger of floods would not be permissible under the already existing rule, but it might be useful to add expressly a restriction for ecological reasons of which science has convinced us only recently. It is also symptomatic that Article 56 para. 2 of the 4th Hague Convention ("All seizure of, and destruction, or intentional damage done to such (sc. religious, charitable, and educational) institutions, to historical monuments, works of arts or science, is prohibited, and should be made the subject of proceedings") does not mention water constructions, although their integral maintenance and effectiveness may be vital to the health and the survival of the civil population. The list of protected objects contained in Article 56 would therefore have to be extended expressly by the inclusion of such water constructions.

(7) *Rules for peace-treaties and similar arrangements*

An international conflict is usually terminated by a peace treaty or another regulation, even one-sided like a dictate, establish-

ing the relationship of the former enemies on a new basis. International law has not yet systematically developed rules restricting, prohibiting the victor in the imposition of arbitrary regulations on the defeated. A beginning of such restrictive rules may be seen in Article 53 of the Vienna Convention on the Law of Treaties, 1969, which states : "A treaty is void if, at the time of its conclusion, it conflicts with a peremptory norm of general international law". Such a peremptory norm might be seen in a prohibition to deprive a people of its water resources to such an extent that a threat to health, economic or physical survival is created. There was a clause in the Treaty of Versailles of 1919 (Article 358) which gave to France the one-sided right "to take water from the Rhine to feed navigation and irrigation canals (constructed or to be constructed) or for any other purpose, and to execute on the German bank all work necessary for the exercise of this right", whilst Germany was bound "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".

The Peace treaties of St. Germain with Austria of 10.9.1919 (Art. 309), of Trianon with Hungary of 4.5.1920 (Art. 292), of Sèvres with Turkey 10.8.1920 (Art. 363), of Lausanne with Turkey of 24.7.1923 (Art. 109) provided for the safeguarding of water supplies and electric power "when as the result of the fixing of a new frontier the hydraulic system (canalisation, inundations, irrigations, drainage, or similar matters) in a State is dependent on works executed within the territory of another State". Similar regulations are contained in Art. 9 (with Annex III) and Art. 13 (with Annex V) of the Peace Treaty of 10.2.1947 between the Allied and Associated Powers and Italy. An illustration for a situation created by the fixing of frontiers after a situation nearing a civil war, though not by a peace treaty, without regard to economic, ecological and esp. water needs, is offered by the division of the Punjab between India and Pakistan in 1947 which led to 13 years of dangerous controversy ended only in 1960 by the Indus Waters Treaty.[20]

The disagreement between Israel, Jordan, Syria and Lebanon about the utilization of the waters of the Jordan and its tributaries may well be a thorny problem in the hoped-for peace negotiations in the Near East.

## IV. The problem of the continued validity of water treaties in times of international conflict

We still have to examine what is the effect of the outbreak of war on the validity, the execution or the suspension of water treaties.

The steadily growing number of water treaties all over the world ought to give rise to a consideration of the effects of emergency



situations on the existence and performance of such agreements. Yet the general indifference shown since 1945 to the legal containment and the humanisation of war, *jus in bello*, is clearly reflected here also : though it may seem to be hardly conceivable, it is true, however, that there is no special study at all dealing with this problem. The general efforts of the U.N. International Law Commission (I.L.C.) to codify the law of treaties, which have been finished after more than a decade, reveal the existing uncertainty. There were some modest approaches to our problem by Fitzmaurice in his second report, who stated that : "The existence of a state of war may, but only in certain cases and in certain circumstances, cause termination or suspension of treaties between the belligerents, or between them and nonbelligerents", and of Sir. H. Waldock who wrote in a note to the item of "dissolution of a treaty in consequence of a supervening impossibility or illegality of performance" that the obvious case resulting from the outbreak of hostilities was covered neither by this submitted relevant article nor by his whole report. The final Drafts even left aside the whole question of the effects of war on treaties. We should note that the matter was at least treated by scientific associations in the first half of this century, *i.e.* by the Institute of International Law (IIL) (1912) and the Harvard Research Group on the Law of Treaties (1935). Though both proposals transgressed the limits of existing customary law, they constitute valuable proposals.[21] The old doctrine that war ends all treaties between belligerents has been abandoned already during the 19th century. It appears that today general agreement exists as to the continuance of some categories of treaties even in war-time (treaties concluded expressly for the eventuality of war, like the Geneva Red Cross Conventions, or treaties intended to set up a permanent state of things, like cession of territory or delimitation of frontiers) and to the termination (by the outbreak of war) of some categories of treaties incompatible with a state of war (so-called "political" treaties between opposed belligerents, like treaties of alliance or neutrality). There seems also to exist agreement that multilateral treaties, continuing in validity between co-belligerents of the same side or between belligerents and neutrals, should not be terminated, but only suspended during war-time between opposed belligerents. But beyond this, there do not seem to exist recognized rules as to the continuation of bilateral treaties between opposing belligerents. The statement of the resolution of the Institut in 1912 that, apart from exceptions, the outbreak of war does not affect the continued existence of treaties between opposing belligerents, is too sweeping even as a proposal *de lege ferenda*.

But there seems to exist a tendency to exempt certain categories of treaties, those of a social or humanitarian character, from the rule of the automatic termination of bilateral treaties by the

outbreak of war. In 1833, an Anglo-French Convention provided for continuation of the Calais-Dover postal service in case of war between them.[22] After the Second World War, a courageous French court tried to make such an exception for a Franco-Italian pre-war treaty concerning social rights but was refuted by the highest court. There are instances in U.S. court decisions which apply the more liberal rule,[23] and Judge Cardozo, in a decision in 1920 of the New York Court of Appeals, has enunciated the principle "that provisions compatible with a state of hostilities, unless expressly terminated, will be enforced, and those incompatible rejected". This might well serve as a rule *de lege ferenda*.

Water treaties no doubt belong, at least in part, to those categories of treaties the social, economic, ecological, humanitarian content of which should safeguard them against arbitrary unilateral termination. It is interesting to note that Article 25 of the 1921 Barcelona Statute on the Regime of Navigable Waterways of International Concern states: "This statute does not prescribe the rights and duties of belligerents and neutrals in time of war. The statute shall, however, continue in force in time of war so far as such rights and duties permit".

Perhaps one might venture a rule (*de lege ferenda*) that the effect of war on water treaties should be only suspension, not termination, and that water treaties should only be suspended if the purpose of the war or military necessity imperatively demand such suspension, and if the requirements of minimum subsistence for the civil population are respected. We are moving here in a field of *lex ferenda*, and more thought must be given to this complicated problem. A sort of guideline might be given by an emergency clause which is added not infrequently to recent, specially humanitarian, treaties. I give as an example Article 15 para. 1 of the European Convention on Human Rights of 1950 : "In time of war or other public emergency threatening the life of the nation, any High Contracting Party may take measures derogating from the obligations under this Convention to the extent strictly required by the exigencies of the situation, provided that such measures are not inconsistent with its other obligations under international law". This latter proviso for other obligations would notably mean that as a minimum of continuance of the treaty during war, no measure derogating from the obligations under a water treaty could be taken unless it was compatible with the rules and prohibitions of the laws of war indicated in Chapter I and III above. An analogous provision, though for navigation only, is already contained in Article XX of the Helsinki Rules adopted in 1966 by the International Law Association, with the significant addition : "The riparian State shall in any case facilitate navigation for humanitarian purposes".

A very detailed study of a great number of water treaties



would have to be made in order to find out and formulate the various implications of the above mentioned very general rule on the multiple various classes of water treaties.

## V. Concluding Remarks

This is, as shown by the title of this paper, not a final, but an intermediate report. In view of the novelty, the complication and the controversial nature of many of the problems raised, a final report, culminating in black-letter statements, would only be possible after a discussion and agreement by the full Conference. Besides, the results of the Diplomatic Conference on the Laws of War convened at Geneva in the spring of 1974 by the Swiss Government are not yet available and may make eventually necessary some changes the extent of which is not yet clear. Last not least, the chapter on the problem of the continued validity of water treaties during war requires, after its general propositions may have been approved by the Committee and the Conference, a much more detailed and extended study. The scope of the present study can therefore only be to get the approval of the Conference for its main propositions and their encouragement for the indispensable further study. This paper has been terminated in April 1974.

## ANNEX

(1) Berber, Rivers in International Law, Stevens, London 1959.

(2) Professor Richard A. Falk, of Princeton University. Environmental Warfare and Ecoside : Facts, Appraisal and Proposal, Idoc Survey No. 50, 1973.

(3) Falk l.c.: "Craters that penetrate the water table become breeding grounds for mosquitoes, increasing the incidence of malaria and dengue fever. Craters displace soil, and esp. in hilly areas accentuate soil run off and erosion causing laterization of the land in and around craters."

(4) See the publications of Seymour Hersh—U.S.A., of Samuels—Canada, of Ray J. Davis of the Arizona Law School.

(5) Raymund G. Decker and Mary C. Dunlap, War, Genetics and the Law (Ecology Law Quarterly, Vol. 1, No. 4, 1971, pp. 797 ff.).

(6) AJIL 1951 pp. 37 ff.; see also his review, in AJIL 1963, pp. 450 ff., of Berber, Kriegsrecht, 1962.

(7) For instance not the U.S.A.

(8) See AJIL 1972 p. 470 f.

(9) See AJIL 1973 p. 124.

(10) Professor Falk, in his above-mentioned essay, considers the following four principles as part of customary international law.

"I. Principle of necessity".
"II. Principle of humanity".
"III. Principle of proportionality".
"IV. Principle of discrimination".

(11) This is expressly stated in Article 171, Treaty of Versailles, 1919.

(12) An overwhelming majority of international lawyers are of the opinion that the prohibition of the Protocol includes the use of nuclear weapons.

Section 1 of the Resolution 1953 (XVI), 1961 of the General Assembly of the U.N. comes to a similar conclusion.



(13) Although a state of tension may not only adversely affect the co-operative development for water resources, but also create concrete dangers for water and water installations, see the destruction of a water work by Israeli reprisals in Lebanon in April 1974 after the massacre of Kirjat Schmonah.

(14) See Franck-Lockwood in AJIL 1974, pp. 69 ff.

(15) A number of further efforts have been made in this field. Professor Richard A. Falk has published "A proposed International Convention on the Crime of Ecocide" (Bulletin of Peace Proposals, vol. 4, 1973, Oslo).

The International Committee of the Red Cross has, for the preparation of the Conference of Government Experts on the Reaffirmation and Development of International Humanitarian Law applicable in armed conflicts, submitted in 1972 a comprehensive draft :

"Article 55.—Works and installations containing dangerous forces.

1. Without prejudice to other provisions of the present Protocol and so as to spare the civilian population and objects of a civilian character from dangers which may result from the destruction of, or damage to, works and installations—such as dykes, hydroelectric dams and sources of power—through the release of natural or artificial forces, the High Contracting Parties concerned are invited :

(a) to agree, in peace time, on a procedure which would allow in all circumstances, special protection to be given to those works which are designed for essentially peaceful purposes ;

(b) to agree, in time of armed conflicts, to special protection being given to certain works or installations, provided they are not directly or mainly used for a military purpose. To this end, they may implement the provisions of the Model Agreement annexed to the present Protocol.

2. When these works or installations are used directly or mainly for a military purpose and their destruction or damage would entail the annihilation of the civilian population, the Parties to the conflict shall take, exercising particular care, the precautionary measures required by Articles 49 to 51 of the present Protocol".

On 15th March, 1973, the Experts of Egypt, Sweden and Switzerland have submitted a revised draft of which I quote the passages most important for our context :

"The parties to an armed conflict shall confine their operations to. the destruction or weakening of the military resources of the enemy. The civilian population, individual civilians and objects of a

civilian character shall be protected. This general rule is given detailed expression in the following provisions . . .

. . . Chapter III
Protected objects

"4.7. **General rule.**

1. Attacks shall be strictly limited to military objectives, that is to say those objectives which are, in view of their function or use, generally recognized to be of military importance and whose total or partial destruction, in the circumstances ruling at the time, offers a distinct and substantial military advantage.

2. In the application of the general rule contained in sub-paragraph 1, objects designed for civilian use, such as houses, dwellings, installations or means of transport, must not be the object to attacks directly launched against them, unless they are, in fact, used mainly in support of the military effort".

On the same subject Dr. Krishna Rao, for many years an active member of our Committee, prepared a memorandum on behalf of the Government of India but this was not made an official proposal. Although it does not visualize a general protection of water in times of armed conflict but only of dams and other structural water works, the memorandum is important enough to be quoted verbally in its explanatory introduction :

" In the absence of a convention to safeguard dams and other structural works for conservation, regulation and development of water resources designed to serve humanity, a belligerent State is free to undertake adventurous action, prompted by the temptation to inflict maximum damage, thereby spelling disaster and disrupting the normal life in a big way in the other State. The Government of India has, therefore, been persuaded to propose for adoption an international Convention concerning protection of dams and other structural works during peace time and during an armed conflict, on the following considerations :—

" First, human existence is dependent on water ; conservation, regulation and development of this vital natural resource determines the economic prosperity of a nation.

" Second, water resources constitute an important element in the world food programme and are harnessed for accelerating food production necessary for the rapidly increasing world population, which is expected to be doubled at the end of the century.

" Third, the safety and protection of dams and other structural works designed for water reservoirs for the benefit of mankind is in the overall interest of all nations. It has assumed importance



because of the multipurpose development functions of such works, *e.g.* flood control, power generation, irrigation etc.

" Fourth, dams and other structural works for conservation and utilisation of water resources take many years to plan and these are built at exorbitant cost, involving huge resources and manpower, and are of lasting value representing achievements in civilisation and technology.

" Fifth, planned attacks on dams and other structural works cause devastating effects in the neighbouring States unconnected with the conflict, thereby enlarging the arena of conflict, as water does not respect political frontiers. Thus their destruction could constitute a cause of friction resulting in a vicious circle of retaliation and starting a chain reaction. Meanwhile millions may perish due to the destruction of these modern edifices resulting in greater destruction and suffering to mankind.

" Sixth, development in modern armaments has exposed dams and other structural works to easy destruction and therefore it is all the more necessary to protect these modern edifices during peace and armed conflict.

" Finally, humanitarian considerations demand preservation and efficient functioning of the development works designed to serve humanity even in times of hostilities and armed conflicts.

" In bringing up this matter, the Government of India proceeds upon the premise that any regulation which seems to limit the unilateral exercise of force is consistent with the broad principles and purposes of the United Nations, enshrined in Articles 1 and 2 of the Charter.

" Historically, there are precedents to support the item that is being proposed. Examples are The Hague Convention No. IV respecting Laws and Customs of War on Land, 1907 ; The Hague Convention No. IX concerning Bombardment by Naval Forces in time of war, 1907; The Hague Rules of Warfare, 1923; The Convention for the Protection of Cultural Property in the Event of Armed Conflict, 1954; and other humanitarian international conventions all of which seek to mitigate the horrors of war and armed conflict by limiting targets of " Warfare " and ensuring protection to specified objects.

" To refer in detail to some of these international conventions under Article 27 of the 1907 Hague Convention No. IV respecting the Laws and Customs of War on Land, " buildings dedicated to religion, art, science, or charitable purposes, historical monuments, hospitals and places where the sick and wounded are collected, provided they are not being used at the time for military purposes" are to be spared as far as possible by all necessary steps in the event of siege and bombardments. Similar provision is contained in Article 5 of the 1907 Hague Convention No. IX concerning Bom-

bardment by naval Forces in Time of War. In an analogous manner, Article 4, paragraph 1 of the 1954 Convention for the Protection of Cultural Property in the Event of War and armed conflict stipulates that " The parties to the convention undertake to respect cultural property situated within their territory as well as within the territory of other High Contracting Parties by refraining from any use of the property and its immediate surroundings or of the appliances in use for its protection for purposes which are likely to expose it to destruction or damage in the event of armed conflict and by refraining from any act of hostility directed against such property." The term " Cultural Property " in the 1954 Convention includes among others ' monuments of architecture, art or history, whether religious or secular archeological sites; groups of buildings which as a whole, are of historical or artistic interest '.

" If protection in the event of hostilities and armed conflict is deemed necessary for " buildings dedicated to public worship," " Historical Monuments," " Archeological sites," etc. the same considerations would seem to apply for safeguarding dams and reservoirs. As it has been aptly said by the late Pandit Jawaharlal Nehru the multipurpose dams of the twentieth century are like " modern temples."

" In the considered opinion of the Government of India, time has come when it is necessary to move forward in the direction of concluding an international convention for protecting dams and reservoirs in the event of armed conflicts. It is the firm conviction of the Government of India that the subject is ripe for regulation through an international convention".

(16) See the Message of the Swiss Federal Council of 9th April 1952.

(17) See § 28 of the Rules of Land Warfare of the US War Department (1940), Hackworth. Digest, vol. VI, p. 260.

(18) In February 1942 the surrender of the British fortress Singapore to the Japanese was hastened by the cutting-off of the municipal water-supply.

(19) For the bombardment of dams by the British R.A.F. in the Second World War, esp. the destruction of the Eder and the Mohnetal Barrage, with the subsequent drowning of 1200 civilians, see: P. Brickhill, The Dam Busters, 1951; for the USAF attacks on dams in North Korea during the Korean War see an article on " The Attack on the Irrigation Dams in North Korea," in Air University Quarterly Review, vol. IV, pp. 40 ff. .



(20) A dispute of more than 12 years, which was only ended in 1960 by the conclusion of the Indus Waters Treaty, was the dangerous consequence of a frontier delimitation unaware of the priority of a reasonable regulation of water supplies. Although this case did not arise as a result of a peace regulation after an armed conflict, it is an instructive illustration of a problem which might arise when a delimitation of boundaries is made at the end of an armed conflict.

(21) The main provisions of the IIL's Christiania Resolution of 1912 read as follows :

Chapitre Ier: Des traités entre les Etats belligérants.

" *Art.* 1. L'ouverture et la poursuite des hostilités ne portent pas atteinte à l'existence des traités, conventions et accords, quels qu'en soient les titre et objet, conclus entre eux par les Etats belligérants. Il en est de même des obligations spéciales nées des dits traités, conventions et accords.

" *Art.* 2. Toutefois la guerre met de plein droit fin: 1° aux pactes d'associations internationales, aux traités de protectorat, de contrôle, d'alliance, de garantie, de subsides, aux traités établissant un droit de gage ou une sphère d'influence, et généralement aux traités de nature politique; 2° à tout traité dont l'application ou l'interprétation aura été la cause directe de la guerre, suivant les actes officiels émanés de l'un des gouvernements avant l'ouverture des hostilités.

" *Art.* 3. Pour l'application de la règle établie dans l'article 2, il doit être tenu compte du contenu du traité. Si, dans le même acte il se rencontre des clauses de nature diverse, on ne considérera comme annulées que celles qui entrent dans les catégories énumérées en l'art. 2. Toutefois le traité tombe pour le tout quand il présente le caractère d'un acte indivisible.

" *Art.* 4. Les traités, restés en vigueur et dont l'exécution demeure, malgré les hostilités, pratiquement possible, doivent être observés comme par le passé. Les Etats belligérants ne peuvent s'en dispenser que dans la mesure et pour le temps commandés par les nécessités de la guerre.

(22) Already in the beginning of modern times, the outbreak of war did not terminate commercial relations: " l'on parle de trêve marchande ou communicative". Entre France et Angleterre une trêve ' pécheresse ' accompagne d'ordinaire la trêve marchande ; la pêche est une autre activité économique dont on envisage ma-

laisement la suspension " ; Zeller, Histoire des relations internationales, t. II, Paris 1958.

(23) See Hackworth, Digest, vol. V, pp. 377 ff.



Bibliography

*Baumgartner, R.*, Die Freiheit der Rheinschiffahrt, thèse, Berne, 1926.

*Baxter, R. R.*, The Law of International Waterways, with Particular Regard to Intertoceanic Canals, Cambridge (Massachusetts), 1964.

*Berber, F. J.*, Die Rechtsquellen des internationalen Wassernutzungsrechtes, München, 1955, cité "Rechtsquellen".

—Rivers in International Law, London/New York, 1959.

—Lehrbuch des Völkerrechts, I. Band, Allgemeines Friedensrecht, München/Berlin, 1960, cité "Lehrbuch".

*Bourne, C. B.*, Mediation, Conciliation and Adjudication in the Settlement of International Drainage Basin Disputes, 9 Canadian Yearbook of International Law, p. 114-158 (1971).

Procedure in the Development of International Drainage Basins: The Duty to Consult and to Negotiate, 10 Canadian Yearbook of International Law, p. 212-234 (1972).

Procedure in the Development of International Drainage Basins, University of Toronto, Law Journal, P. 172.

The Suspension of Disputed Works or Utilizations of the Waters of International Drainage Basins, Festschrift für Friedrich Berber, p. 109.

*Chiesa, P. A.*, Le régime international du Rhin et la participation de la Suisse, thèse, Fribourg, 1952.

*Ferrier, Ch.-A.*, La liberté de navigation sur le Rhin de Bâle à la mer, thèse, Berne, 1955.

*Fortuin, H.*, Le régime international du Rhin, Transport—Le journal international de transport et d'économie, Bâle, 1946, p. 4801 s.

*Fortuin, H.*, Two Questions concerning Freedom of Navigation on International Rivers, Netherlands International Law Review, vol. XVI, 1959, p. 257.

*Gonnenwein, O.*, Die Freiheit der Flussschiffahrt, Stuttgart/Berlin, 1940.

*Guggenheim, P.*, Traité de droit international public, Tome I, Genève, 1953.

*International Law Association*:

—Committee on Law of Waters of International River Basins and Canals, Navigation, Introductory Remarks Concerning the Regime of Navigable Waterways of International Concern, Rapporteur: Dr. Hugo Fortuin, August 31, 1959.

—Committee on Law of Waters of International River Basins and Canals, River Navigation as a Use, Second Report by the Rapporteur, Dr. H. Fortuin, April 15, 1960.

—Report of the Fiftieth Conference, Brussels, 1962.

—Report of the Fifty-second Conference, Helsinki, 1966.

*Jaenicke, Günther*, Die neue Grossschiffahrtsstrasse Rhein-Main-Donau: Eine völkerrechtliche Untersuchung über den rechtlichen Status der künftigen Rhein-Main-Donau-Grosschiffahrts-strasse, 1973, Athenäum Verlag GmbH Frankfurt am Main.

*Kraus, H.*, Questions juridiques relatives à la navigation du Rhin, Frankfurt am Main, 1956, p. 10 ss.

*Lederle*, Das Recht der internationalen Gewässer unter besonderer Berücksichtigung Europas, Mannheim/Berlin/Leipzig, 1920.

*Mance, O.*, International River and Canal Transport, London/New York/ Troronto, 1944.

*Manner, E. J.*, The Present State of International Water Resources Law. Off-print of International Law Association 1873-1973, p. 131.

Some Legal Problems Relating to the Sharing of Boundary Waters, Festschrift für Friedrich Berber, P. 321.

*Meissner, F.*, Das Recht der Europäischen Wirtschaftsgemeinschaft im Verhältnis zur Rheinschiffahrtsakte von Mannheim, Schrift zum Völkerrecht Bd. 27, Duncker and Humblot, Berlin, 1973.

*Muller*, W., Die Freiheit der Rheinschiffahrt in Gefahr, Bâle, 1953 cité "Freiheit der Rheinschiffahrt"

—Rechtliche Grundlagen und Voraussetzungen der Schiffbarmachung des Hochrheins von Basel bis zum Bodensee, Bâle, 1957, cité "rechtliche Grundlagen".

—Die Rechtsstellung der Schweiz in bezug auf die revidierte Rheinschiffahrts-Akte vom 17. Oktober 1868, Schweiz. Jahrbuch für internationales Recht, 1958, p. 153 ss, cité "Rechtsstellung der Schweiz

—Das Rheinregime im Wandel der Zeit, Strom und See Nr. 7/8, Bâle, 1968, p. 184 ss, cité "Rheinregime".

*Scheuner, U.*, Questions juridiques relatives à la navigation du Rhin, Frankfurt am Main, 1956, p. 72, ss.

*Schulthess, K.*, Das internationale Wasserrecht, Zurich, 1915.

*Walther, H.*, Le statut international de la navigation du Rhin, Tirage à part de l'Annuaire européen II, 1956.

*Wassermeyer, H.*, Glanz und Elend der Rheinschiffahrtspolizeiverordnung (RPVO), Eine Bemerkung zur Rechtsvereinheitlichung, Zeitschrift für Versicherungsrecht, 1967, p. 1113 ss.

*Zurbrügg, H.*, Das internationale Flussschiffahrtsrecht und die Schweiz, Bâle, 1945, cité "int. Flussschiffahrtsrecht".



# INTERNATIONAL TERRORISM

TUESDAY, DECEMBER 31ST, 1974
at 2.15 p.m.

*Chairman* : Dr. S. M. SIKRI

Professor R. C. HINGORANI (India—deputising for the Chairman of the Committee) : International terrorism has been the most topical problem which has been engaging the attention of world élites and jurists in recent days. Some time back, the U.N. Secretary-General included this problem as one of the items of the Agenda for the General Assembly. It has been discussed by its Legal Committee as well as by an *ad hoc* Committee. Nothing concrete has resulted. Indeed, it is a very explosive issue.

This Committee of the I.L.A. has been appointed in view of the increased incidence of acts of international terrorism. The Committee has not met so far. The Chairman has been corresponding with various members of the Committee for clarifying the issue. The present interim report may perhaps be called not so much a report as a questionnaire posing 13 questions which have been put by the Chairman to the members of the Committee (see page 177).

We would like to have the enlightened opinion of the members of the Association present at this session on these questions.

Sir VINCENT EVANS (United Kingdom) : A question similar to question 7 had been in the minds of members of the Sixth (Legal) Committee of the United Nations General Assembly, when the Convention on the Prevention and Punishment of Crimes against Internationally Protected Persons was under discussion in 1973. The Assembly had considered whether the Convention should include any provision concerning the right of self-determination. It had been decided that the provisions of the Convention should not be subject to any exception or qualification in this regard, but the resolution adopting the Convention recorded the General Assembly's opinion that the provisions of a Convention "cannot in any way prejudice the exercise of the legitimate right of self-determination and independence . . .".

The key word in this statement was the word "legitimate". By this statement the General Assembly recognised (i) that the crimes covered by the Convention could not constitute the legitimate exercise of the right of self-determination and (ii) that the Convention could equally not be used as a pretext for suppressing the