exercises, hot pursuit, slave trade prohibition and conservation of fisheries, the exercise of these rights is subject to and within the orbit of the paramount principle of the freedom of the high seas and its four corollaries which are the fundamental rules governing all relations between States on the high seas in time of peace. States have, no doubt, the right to conduct naval exercises on the high seas. These exercises, however, usually last only for a short period in a limited area and they cannot be put on the same footing as nuclear tests which are conducted in vast areas of the ocean for long periods. McDougal and Burke have argued from the analogy of naval exercises that thermonuclear experiments are lawful.[30] It is submitted that this analogy is not sufficiently relevant to sustain their conclusions. No 'police power' or 'historic practice' can be found to justify the fencing off from maritime and air traffic of other nations hundreds of thousands of square miles of open sea and air space. Gunnery practice by naval vessels and the explosion of hydrogen bombs are two quite different activities, and the fact that naval exercises in time of peace are permissible does not justify in any way the carrying out of nuclear tests on the high seas. If nuclear tests on the high seas are "in accord with international law", as argued by McDougal and Burke,[31] all the four Powers which at present possess nuclear weapons would have the right to test them on the high seas, and the open sea will have to be apportioned to the nuclear Powers for the carrying out of nuclear tests. International law would then have to allot experimental zones in different parts of the high seas for experimenting with nuclear weapons. As more and more States come to possess nuclear weapons, millions of square miles of oceans will have to be apportioned between the nuclear Powers and freedom of navigation and fishing on the high seas would have to be abandoned. It is submitted that there is no possibility of any legitimate adjustment between the freedom of the open sea and the claims of individual States to use it for the purpose of nuclear tests. The high seas should remain open for the use of all nations and no State should attempt to subject any part of the open sea to its jurisdiction for the purpose of carrying out nuclear tests. The sea must remain common and open to all nations and States are bound to refrain

30. McDougal and Burke, *op. cit*, pp. 768-72.
31. *Ibid.*, p. 769.

from any acts which might adversely affect the use of the high seas by the nationals of other States.

It is clear that such tests should not be carried out in regions of the high seas as the carrying out of thermonuclear experiments on the high seas results in interference with freedom of fishing on the open sea. It is difficult to agree with McDougal and Burke that such interference is "reasonable" and has only "minimal effects."[32] Vast areas of the high seas have to be patrolled by the testing State to ensure that no fishing vessels enter the prohibited zones and if any vessels inadvertently enter such zones, the vessels and the fishermen may suffer radioactive contamination as in the case of the "Fukuryu Maru." The carrying out of such tests contaminate the waters of the high seas and there is no guarantee that such contamination can be confined to the fish and waters within such zones. The immediate fall-out from such explosions makes the waters intensely radioactive, and this radioactivity may be carried far and wide by ocean currents. The radioactivity also contaminates the fish and plankton in such regions and such radioactive fish may migrate to other regions. Even if the tests are "carried out in parts of the sea far removed from populations of any appreciable magnitude" and even if "no international sea routes are located in the danger zone" as claimed by McDougal and Burke,[33] nuclear tests would still constitute a great danger to all neighbouring countries as the radioactivity may be carried far and wide by the ocean currents. In this respect, too, nuclear tests cannot be placed on the same footing as gunnery exercises as the effects of experiments with nuclear weapons cannot be effectively controlled and confined to the prohibited areas. Such contamination of the waters and fish of the ocean would amount to an interference with freedom of fishing on the high seas. The Convention on Fishing, adopted by Geneva Conference of 1958, lays down that all States have the right for their nationals to engage in fishing on the high seas, and therefore no State may be prevented from exercising this right to fish in any part of the high seas. All States are required to cooperate in measures necessary for the conservation of the living resources of the sea and, therefore, no State may carry out any action which might damage or adversely

32. *Ibid.*, pp. 772.
33. *Ibid.*

affect the living resources of the sea. Fisheries in the open sea are open to the vessels of all nations and no State may by unilateral action prevent the nationals of other States from enjoying the living resources of the sea. In the light of these principles, it is clear that the contamination of the waters and fish of the oceans by nuclear tests would amount to an interference with freedom of fishing on the high seas and no "historic practice of States" such as naval exercises can be put forward to justify the carrying out of such experiments which pollute the high seas with radioactivity.

It is submitted by McDougal and Burke that although "nuclear weapons testing necessarily displaces free movement in the air and sea for thousands of square miles in the vicinity, the test areas selected have offered minimal interference with navigation and flight", and therefore, there has been no infringement of the freedom of the open sea.[34] In contradistinction to this view, it is submitted that no State may validly purport to exercise its jurisdiction or dominion over any part of the high seas. When a testing State declares thousands of square miles of the high seas as a "prohibited area", it in effect reserves that vast area of the high seas for its own and exclusive use, it in effect appropriates the area and exercises dominion over it ; in other words, it subjects a part of the high seas to its jurisdiction or sovereignty. The rule of prohibition of exercise of sovereignty or jurisdiction in any part of the open sea is therefore infringed. The fact that "no international sea routes are located in the danger zone" does not affect the question at all. The right to exercise sovereignty or jurisdiction over the high seas is denied to States by law and such dominion cannot be lawfully exercised over *any* part of the open sea. In the words of Oppenheim,

> "The open sea is not, and never can be, under the sovereignty of any State whatever. Since, therefore, the open sea is not the territory of any State, no State has as a rule a right to exercise its legislation, administration, jurisdiction, or police over parts of the open sea. Since, further, the open sea can never be under the sovereignty of any State, no State has a right to acquire parts of the open sea through occupation for, as far as the acquisition of territory is concerned, the open sea is what Roman law calls *res extra commercium*."[35]

34. *Ibid.*, pp. 771-72.

All areas of the high seas must remain common and open to all nations and no State has the right to exercise dominion over any part of the open sea. Even if no injury to ships or fishermen occurs as a result of nuclear tests, the testing State would still have violated a fundamental rule of international law by closing so vast an area of the open sea. The very nature of nuclear experiments is such that, to the extent that adequate safety measures are taken by cordoning off areas of the high seas, universally accepted rules of customary international law are violated. The alleged humanitarian purpose behind the closing of such vast areas of the high seas loses its justification when it is recalled that the hazard is artificially introduced. The establishment of danger zones is no doubt induced by the desire of the testing State to protect the lives of sailors and fishermen who might be sailing in the surrounding waters, but the debarring of such vessels from so vast an area of the high seas aggravates the legal position as the greater the degree of precaution taken, the larger the prohibited area and the greater the interference with the freedom of the open sea.

In *The Public Order of the Oceans*, McDougal and Burke state that "the most relevant standard prescribed by customary international law is that of reasonableness" and claim that "the exclusive use attendant upon weapons testing fully comports with the reasonableness criterion."[36] It is submitted that although it is necessary in some cases to resort to the criterion of reasonableness in matters where rules of international law do not exist, in the present instance this criterion is inadmissible as the rules of international law are quite clear in this matter. Considerations of common sense, reasonableness and good faith or, in short, equitable considerations have often been resorted to supplement or progressively develop established rules of international law. In the present instance, however, the introduction of the concept of reasonableness is quite inadmissible because it would enable States to violate established principles of international law by claiming that their action is "reasonable". Even if the criterion of reasonableness were ad-

35. Oppenheim, *International Law*, Vol. I (1957), p. 589.
36. McDougal and Bruke, *op. cit.*

missible in this matter, it is difficult to see how McDougal and Burke could have arrived at their present conclusions. A reasonable and *bona fide* exercise of a right is one which is appropriate and necessary for the purpose of the right, *i.e.*, in furtherance of the interests which the right is intended to protect. It should at the same time be fair and equitable exercise of the right and not one which is calculated to procure for the party concerned an unfair advantage. The exercise of a right in such a manner as to prejudice the interests of other parties is unreasonable. It follows, therefore, that a legitimate exercise of a right is compatible with international law, while the exercise of the right contrary to the principles of good faith and reasonableness would be incompatible therewith. McDougal and Burke appear to claim that the carrying out of nuclear tests on the high seas is reasonable exercise of a right and has been exercised by the testing States with reasonable regard to the interests of other States in their exercise of the freedom of the high seas. Every State has, no doubt, the right to use the high seas, but the exercise of the right to use the high seas would be unlawful if it were exercised in such a manner as to cause harm to other users of the high seas. The fall-out from nuclear tests contaminate the fish and waters of the high seas. This harmful effect alone, apart from the other effects, is sufficient to maintain that the right to use the high seas is being misused or abused in such a manner as to cause harm to others. The exercise of a right in such a manner as to harm or prejudice the interests of others is unreasonable and incompatible with international law. If a right is exercised in such a manner that it does harm to the general interests of others and infringes on the rights of other States, it is not a reasonable exercise of a right but an *abus de droit*. It has been established by scientific evidence that the radioactivity which arises out of thermonuclear experiments pollutes both the sea and the air over the sea, leads to the destruction of the living resources of the sea, and creates a danger to all mankind in the nature of long-term radioactive fall-out in the form of strontium 90 and caesium 137. The carrying out of nuclear tests, therefore, cannot be said to be a reasonable exercise of the right to use the high seas as the right is being exercised in such a manner as to cause harm to the general interests of other States who are entitled to a free and full use of the high seas.

A treaty prohibiting certain nuclear tests has now been entered into by the United States, Britain and the Soviet Union. The treaty was signed in Moscow on 5th August, 1963 by the Foreign Ministers of the United States, Britain and the Soviet Union. The object of the treaty appears to be to prevent the carrying out of nuclear tests which result in radioactive fall-out, and only such tests are prohibited. The preamble states that the parties desire "to put an end to the contamination of man's environment by radioactive substances" and Article I lays down that "the parties undertake to prohibit, to prevent and not to carry out any nuclear weapons test explosion" which " causes radioactive debris to be present outside the territorial limits of the State under whose jurisdiction or control such explosion is conducted". All such tests are prohibited "in the atmosphere, beyond its limits, including outer space or under water, including territorial waters or high seas." It is stated that "the provisions of this sub-paragraph are without prejudice to the conclusion of a treaty resulting in the permanent banning of all nuclear test-explosions including all such explosions underground."

The treaty, however, prohibits only atmospheric nuclear tests, *i.e.*, tests which are conducted on or above the earth's surface, on land or at sea, and as such underground nuclear tests are not prohibited. The possible reason behind this distinction lies in the fact that all atmospheric tests, whether they are conducted on land or at sea, result in radioactive fall-out which cannot be confined to "danger zones" or to " the territorial limits of the State under whose jurisdiction or control the explosion is conducted." Every such test results in the radioactive fission products being drawn into the stratosphere and these fission products gradually spread over a large part of the world and return ultimately to the earth in the form of rain or snow. Scientific evidence has now established that such tests have harmful effects and the preamble to the treaty expressly states that the treaty has been concluded with a view "to put an end to the contamination of man's environment by radioactive substances." The harmful effects of such tests therefore appear to be acknowledged by the signatories and the British Foreign Secretary, Lord Home, has stated that "every human family can live from now on free from the fear that their unborn children may be affected by man-made poison in the air.[37]" This

37. *The Statesman, New Delhi*, 6th August, 1963, p. 1.

official recognition of the harmful effects of such tests brings considerable satisfaction to those who have striven for so long to prove that such tests have harmful effects and should therefore be prohibited.

As already stated, the treaty does not prohibit the carrying out of underground nuclear tests for the apparent reason that such tests do not result in radioactive fall-out. Scientists now claim that it can be planned with confidence how far to bury a bomb of a given size so that no radioactivity escapes and it is said that the general features of an underground explosion can now be predicted. It is claimed that such tests result in no fall-out, no movement of the soil surface and only in relatively slight earth tremors. The parties to the treaty, however, state that "they seek to achieve" the prohibition of "all nuclear test explosions, including all such explosions underground." Tests carried out underground may not result in fall-out, but what their other effects will be, have yet to be seen. The explosion of a 50-megaton bomb underground, for instance, may result in more than a relatively slight earth tremor.

Article 3 of the treaty states that any State "may accede to it at any time" and a number of States have already expressed a desire to do so. The Government of France has, however, stated that France will not accede to the treaty. This is particularly unfortunate in view of the fact that France is the only country, apart from the signatories, which is in a position to test nuclear weapons. In 1960, France began a series of nuclear tests in the Sahara desert and has carried out about five tests of atomic bombs up to date. The first three tests were carried out on 13th February, 1st April and 27th December, 1960, the fourth test was conducted on 25th April, 1961 and the fifth test was reported to have been carried out in or about June 1962. All these tests were carried out in the Southern Sahara and have aroused considerable protests from neighbouring African States. France is now expected to carry out further tests in this region as she has reiterated that she will not be bound by the treaty prohibiting such tests. The Foreign Minister of France, Mr. Maurice Couve de Murville, is reported to have told the French Parliament that France would continue with her nuclear programme.[38]

38. *Ibid* 27th July 1963, p. 7.

The treaty signed at Moscow on 5th August, 1963 is somewhat limited in its application. Its limitations lie in the fact that all the nuclear powers are not bound by it and it does not prohibit all types of tests. It is, however, to be welcomed because atmospheric tests, resulting in fall-out, are clearly the most harmful of all tests and the signatories to the treaty are those who possess the most powerful and therefore the most harmful of these weapons. It is to be hoped that all States will accede to the treaty and desist from future programmes to develop such weapons. Unfortunately, one State, the People's Republic of China, which may possess these weapons in the near future, has denounced the treaty and is reported to be proceeding with her programme to develop the nuclear weapon.[39] As long as this situation persists, the dangers of nuclear tests still remain to be obviated as more and more States may come to possess such weapons and are at present still free to test them. Furthermore, as long as the United States, Britain and the Soviet Union continue to test nuclear weapons underground and France continues to test such weapons in any environment she chooses, the fear of nuclear weapons may cause other nations to strive to develop such weapons and mankind may again be faced with the hazards of atomic radiation as a result of a new test series by emergent nuclear powers. It is therefore the duty of international lawyers to continue to attempt to counter this grave threat by formulating a suitable doctrine of international law which contributes towards the bringing about of the cessation of all nuclear tests. It is to be hoped that the dictates of humanity and public conscience, invoked by the test ban treaty, will carry weight also in countries which refuse to accede to the treaty, and that all States will ultimately accede to such a treaty so that the humanitarian codes of international law will comprise the prohibition of all nuclear tests.

ANNEXURES*

A. 1956 Report of the United Nations Scientific Committee on the Effects of Atomic Radiation.

B. 1958 Report of the United Nations Scientific Committee on the Effects of Atomic Radiation.

39. *Ibid.*

*These have not been reproduced here.

C. The Conclusions of the United Nations Scientific Committee on the Effects of Atomic Radiation—Extracts from the 1962 Report of the United Nations Scientific Committee on the Effects of Atomic Radiation.

D. The Long Range Fall-Out from Nuclear Test Explosions. The Hazards to Man of Nuclear and Allied Radiations Medical Research Council, 1958, H.M.S.O., London.

E. The Effects of Radiation and An Assessment of the Hazards of Exposure to Radiation. The Hazards to Man of Nuclear and Allied Radiations. Medical Research Council, 1958, H.M.S.O., London.

VI. DRAFT REPORT ON THE LEGALITY OF NUCLEAR TESTS

As Prepared by the Secretary and Presented to the Fifth Session

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This Committee at its Third Session held in Colombo in January 1960 decided to take up for consideration the question of Legality of Nuclear Tests, a subject which had been suggested by the Government of India under article 3(c) of the Statutes of the Committee being a matter of common concern to all the participating states in this Committee. The Committee decided to take up this subject especially in view of the fact that this matter had not been considered by any other Body from the legal point of view nor had it been adequately dealt with by any of the authorities on International Law. The Committee also took note of the fact that several nuclear tests had been carried out in parts of the Asian-African continents or in areas adjacent thereto and as such the problem was of great concern to the Asian-African countries. The Committee directed its Secretariat to collect the factual and scientific data that were available on the effects of the nuclear tests and also to prepare a list of topics for discussion on the legal aspects of the matter.

At its Fourth Session held in Tokyo in February, 1961, the Secretariat of the Committee presented before it the relevant material both from the scientific and legal point of view which formed the basis of discussions at that Session. The Members for Burma, Ceylon, India, Indonesia, Iraq, Japan, Pakistan, Morocco and the United Arab Republic stated their respective viewpoints. The Committee also heard statements from the Observer for Ghana and Mr. F.V. Garcia-Amador, then a Member of the International Law Commission, in his personal capacity as a recognised expert. The Committee after a general discussion decided to study the matter further and to take up the question for fuller consideration at its Fifth Session. The Committee, however, indicated the scope of its study and directed its Secretariat to collect further material on those lines. The Committee decided that it was not concerned with the controversial and debatable question regarding use of nuclear weapons in times of war but that it should confine itself to an examination of the problem of Legality of Nuclear Tests in times of peace. In accordance with the decision taken by the Committee at its Tokyo Session,

the Secretariat prepared a comprehensive brief which has been placed before the present Session on the basis of which the matter has been fully considered. The Committee heard the viewpoints and expressions of opinion on the various topics arising on this subject from the Members from Burma, Ceylon, India, Indonesia, Japan, Pakistan, Thailand and the United Arab Republic (the Members for Iraq and Morocco being unavoidably absent). The Governments of Japan and the United Arab Republic also submitted written memoranda on the subject. The Committee also invited the observers from Ghana, Laos, the Philippines, the representatives of the Secretary-General of the United Nations, the representative of the League of Arab States (an Inter-Governmental Organisation) and Dr. Radhabinod Pal, Member of the International Law Commission in his personal capacity as an expert, to express their views, if they so wished, having regard to the importance of the subject.

The first question which this Committee has to consider is whether or not the effects of the nuclear tests are harmful, because the Committee's opinion on the legal issues must necessarily depend to a large extent on its finding on this issue. The Secretariat has placed before the Committee a good deal of material on this issue which includes the Reports of the United Nations Scientific Committee on the Effects of Atomic Radiation drawn up in 1958 ; the Proceedings of the International Conference on the Peaceful Uses of Atomic Energy 1955, Vol. 13 ; the publications of the British Medical Research Council entitled "Hazards to Man of Nuclear and Allied Radiations" and the Report published by the Physics Department, Faculty of Science, Alexandria University, Cairo. The Committee's attention was drawn both at the Tokyo Session and at the present Session to a Japanese publication entitled "Research on the Effects and Influences of Nuclear Bomb Test Explosions" which gives a factual account of the effects of nuclear explosions over Hiroshima and Nagasaki in 1945 as also the effects of the nuclear tests carried out in the Pacific in 1954. The Secretariat of the Committee has also studied a number of other publications and documents and has placed before the Committee a summary of the facts given therein.

Every nuclear weapon test amounts in effect to explosion of a nuclear weapon, and it would appear that destruction which results

from such tests may be or are capable of being of the same magnitude as that resulting from the use of a nuclear weapon. This is borne out by the factual details given regarding the effects of the nuclear tests carried out in the Marshall Islands in 1954 as set out in the study prepared by the Secretariat on the subject. Although accurate details regarding the effects of nuclear weapon tests carried out by some countries are not available, it would be reasonable to assume, in the absence of evidence to the contrary, that the effects would be the same or are likely to be the same. The study prepared by the Secretariat on the factual and scientific aspects of the matter as well as other scientific material placed before the Committee appear to make out a case that the nuclear weapon tests do result in harmful effects in the present state of scientific development, that is to say : (1) The explosions resulting from such tests cause or are capable of causing indiscriminate destruction of lives and property not only in the place where such explosions take place but over a wide area ; (2) In the present state of scientific development it is not possible to control the effect of such tests nor to confine them to a particular area, and miscalculations may occur as in the case of Marshall Island tests resulting in much indiscriminate destruction ; (3) The test explosions result in fall-out of radioactive fission products which in some cases may be global and which may persist for over a period of ten years after the explosion of a nuclear weapon ; (4) Atomic radiations have harmful effect on human beings from the biological and genetic aspects, and as such not only are detrimental to the present generation but also to future generations ; (5) Nuclear tests, if carried out on the high seas, result in closing of large areas of the seas to navigation and to destruction of the living resources of the seas ; (6) The carrying out of these tests may necessitate mass movement of the population from the area where such tests are to be conducted.

The Delegation of Japan, in the course of discussion at the Tokyo Session of the Committee expressed some doubts as to whether scientific evidence did establish that the nuclear tests have harmful effect on the human beings. The Report of the United Nations Scientific Committee, especially its conclusions (Appendix I) would appear to leave little room for doubt in this matter. The delegation of Thailand has at the present session stated that all nuclear tests may not result in harm to mankind. The Committee does not

dispute this possibility but on such matters the Committee must be guided by scientific material. As at present the Committee is not aware of any material or findings by scientific bodies or has its attention been drawn to any such material which would show that present nuclear weapon tests can be carried out without causing adverse effect to man. It has sometimes been asserted by some of the testing States that no adverse consequences ensued from a particular test or tests. This may be true in so far as direct damage is concerned in the shape of destruction of lives and properties due to the precautions taken, but having regard to scientific evidence the hazards from "fall-out" and "atomic radiation" even in regard to such cases cannot be eliminated. Apart from this the risk or possibility of destruction would appear to be there in all cases since according to the scientific evidence it is impossible to control the effect of such tests in advance. The Committee has not before it any scientific material regarding the effects of underground tests and can express no opinion on the assertion that long range fall-out may be controlled in such tests.

The Committee sees no reason to doubt the findings of the research and medical institutions whose reports have been placed before the Committee by the Secretariat as stated above. In the opinion of some of the Delegates the available scientific and factual material makes out a *prima facie* case whilst in the opinion of others such evidence conclusively proves that nuclear tests cause unaccountable damage and harm to man. In either view of the matter the Committee considers that in the absence of factual and scientific evidence to the contrary it would be reasonable to proceed on the basis that nuclear tests have harmful effect in considering the legal issues. The Committee's conclusions must be understood to have been made on this basis.

It has been pointed out in the course of discussions by various Delegates, particularly those of Japan, Pakistan and Thailand, that the question of nuclear tests and their cessation was essentially a political one and any expression of views on the legal aspects of the problem may not affect the decision of the testing States in one way or another. It was stated that cessation of these tests could be brought about only by means of an agreement among the great powers which were the testing States. The Delegate of Pakistan

also observed that an effective ban on nuclear tests is not feasible without inspection and control. It has been emphasised by the Delegate for Japan that stress should be laid on the moral and humanitarian aspects of the matter to call for cessation of the tests rather than rely on principles of international law. The Delegate of Pakistan also stressed the moral and ethical aspects of the matter. The Committee is not unaware of these considerations but the task before it is to examine the legal aspects of the problem. The Committee proceeds to do so with the view that the Committee's findings may help the participating countries in the Committee in formulating the viewpoint on this aspect of the problem especially as no other Body of Legal Experts have had occasion to examine this problem. The Committee also hopes that nations of the world which have progressively been adhering to the principles of international law would be prepared to do so even in this field and political considerations may well be influenced by the legal aspects of the matter. A further point was raised by the Delegate for Thailand, that is, that the Committee should consider the question of international control of nuclear tests rather than discuss the question of their legality or otherwise. In his opinion, all nuclear tests were not *per se* illegal because if such tests caused no damage they could not be declared illegal. He, however, suggested that the tests should be internationally controlled, and wished that matter to be discussed. The Committee finds some difficulty in considering this question as at present in view of the fact that it is doubtful whether such questions which are essentially political would fall within the competence of this Committee, which is an Advisory Body of Legal Experts and in any event this question would not appear to be covered by the Committee's present terms of reference on the subject. It has already been stated that the Committee's examination of the legal aspects of the problem and its conclusions are made on the basis that nuclear weapon tests have harmful effect which appears to be made out by the available scientific and factual material. It is clarified that should evidence to the contrary be available different considerations may prevail on which the Committee expresses no opinion at present.

The Committee in proceeding to discuss the legal issues involved in the problem would first consider the case of a nuclear test carried out by a State in its own territory. There can be little doubt that

a State enjoys and is entitled to enjoy full and complete sovereignty over its own territory and it may well be asserted relying on the doctrine of State sovereignty that in international law a State can use its territory in any manner it likes and no other State may question the activities that a State may wish to carry on in its own territory. This principle, if applicable, would perhaps cover the case of nuclear tests. The Committee, however, finds that international law has never regarded the doctrine of State sovereignty to be absolute in as much as international law regards that in certain circumstances a State may be held responsible to another or other States for its acts even though that act has been committed in the exercise of its sovereignty. For example, it has been well recognised in international law that no State can allow its territory to be used for carrying on of acts prejudicial to other States, and if it does, that State is held to incur responsibility under the law of nations. Again, a State is held to be responsible for an internationally wrongful conduct if it treats a citizen of another State living within its territory in a manner contrary to the principles of the law of nations even though such act is done by a State within its territory and in the exercise of its territorial sovereignty. It is, therefore, clear that a State is not always immune under international law for every one of its acts done in the exercise of its territorial sovereignty and that in certain circumstances a State may incur responsibility for its sovereign acts on the basis that the act amounts to an internationally wrongful conduct.

The basis of the doctrine of State Responsibility is that the members of the community of nations have, in practice, agreeed to respect certain principles for their mutual guidance, and in doing so, it has been understood that they were thereby accepting obligations to observe the conduct prescribed. The failure to meet these obligations imposes upon the guilty State the further obligation to make reparation for the injury caused.[1] In the traditional international law a State incurs responsibility in cases where it commits acts detrimental to another State or its nationals and actual damage or injury is caused by such acts. Reparation has to be made, the quantum of which is determined according to the nature of the damage or injury suffered. It, therefore, seems that actual

1. Eagleton, *The Responsibility of States in International Law*, 1928, p. 3

damage or injury would need to be proved before reparation can be claimed on the basis of State responsibility. Apply the test of State responsibility to the present situation, it would appear that a State conducting nuclear tests even in its own territory would be responsible for its acts if the tests result in causing harm or injury to another State or its nationals. It is perhaps not open to doubt that if the nuclear test explosions caused destruction of life and property in another State or that of an alien in its own territory, the doctrine of State responsibility in international law would be attracted. But the question is whether this is the only class of case where a State would incur responsibility. International law nowhere defines as to what would be regarded as damage or injury to another State or its nationals. Hitherto lawyers have come to regard loss of life, bodily injury, loss or destruction and damage to property as cases where reparation becomes payable if such result ensues to the citizens of a State or their property due to the wrongful acts of another State because these were the only types of harm or damage that could be contemplated and were known to us. These instances would appear to be by no means exhaustive and in the view of this Committee, there is no reason why other forms of harm or damage should not form the basis of State responsibility. International law is not and cannot be static and it must keep pace with the rapid development of science. Indeed, nations have always agreed to observe new code of conduct to meet a new situation, for instance, with the development and growth of air travel there has come into recognition a set of rules for regulating the conduct of the States in that sphere. The testing of nuclear weapons have raised problems of a new kind because scientific evidence shows that such tests result in local and global radioactive fall-out and that biological and genetic effects of atomic radiation constitute a great hazard to man. This type of damage, which according to scientific material, not only is injurious to the present generation but to future generations and which certainly appears to be much more serious than the loss of life or property of a person, could never have been contemplated in the traditional international law. Scientific evidence also shows that nuclear tests result in the pollution of the atmosphere and alter the global environment in a manner clearly harmful to mankind. Should such categories of harm be disregarded in the application of the doctrine

of State responsibility? The Committee considers that this question ought to be answered in the negative.

The Committee takes note of the observation in Oppenheim's *International Law* that "the increasing complexities of modern international relations, in particular having regard to the unlimited potentialities of scientific weapons of destruction, may call for far reaching extensions of responsibility expressly declared by International Law."[2] The Committee further notes that even in the municipal law of tort under various systems of law the doctrine of liability has been extended from time to time to meet new situations arising out of modern scientific developments. The Committee is , therefore, of the opinion that a State ought to incur responsibility for damage or harm caused by the nuclear test explosions even though such harm or damage is of a kind other than direct loss of life or bodily injury and damage to or destruction of property.

It has already been observed that under the traditional doctrine of State responsibility proof of damage is essential to establish a claim. This principle appears to be based on the fact that the types of damage or injury known to international or municipal law were capable of being proved by direct evidence. Even so in the municipal law of tort courts have been known to have awarded damages for injuries like "the loss of expectation of life"[3] which could only be calculated on the medical or scientific data regarding the normal span of a human life. The Committee considers that it would be reasonable to proceed on the basis of scientific data regarding the effects of nuclear explosions in determining the question as to whether damage has been caused or not. The Committee is of the opinion that it would be safe to proceed on such data since the harmful effects of a nuclear explosion according to scientific evidence may not become apparent for years to come.

The Committee is of the opinion that in the present state of scientific evidence it is reasonable to assume without further proof that every nuclear test causes harmful effect, the degree of such harm varying according to the size of the weapon, and that such effects cannot be confined to the territories of the testing State.

2. Oppenheim—*International Law*, 8th Ed., p. 342.
3. *Rose* v. *Ford* (Decision of the Court of Appeal in England).

The harm caused, even though not apparent, may manifest itself at a later date. The Committee, therefore, considers that a State testing a nuclear weapon should incur responsibility by reason of conducting that test without the fresh requirement of proof of actual damage in view of the available scientific data regarding the harm that the explosion of nuclear weapon causes or is capable of causing. It is, of course, open to a testing State to prove by means of scientific evidence that the test had no harmful effect. The Committee is conscious of the fact that its recommendations in this regard may result in a shift of onus of proof, but having regard to the fact that the available scientific data on the general result of nuclear explosions makes out a *prima facie* case regarding the harmful effects of such tests, it would not be unreasonable to shift the onus. The same result will follow if the doctrine of "Strict or Absolute Liability" known and recognised in all civilised legal systems is adopted in the sphere of State responsibility. This aspect of the matter will be discussed later more fully.

State responsibility may also arise as a result of an abuse of a right enjoyed by virtue of international law. This occurs when a State avails itself of its right in an arbitrary manner in such a way as to inflict upon another State an injury which cannot be justified by a legitimate consideration of its own advantage.[4] The International Court has expressed the view that "in certain circumstances, a State, while technically acting within the law, may actually incur liability by abusing its rights"[5] and individual judges of the court, such as Judge Azevedo, Judge Alvarez and Judge Anzilotti, have referred to this principle in their judgments.[6] Oppenheim observes that the maxim, *sic utere tuo ut alienum non laedas*, is applicable to relations of States no less than to those of individuals ; it underlines a substantial part of the law of tort in English law and the corresponding branches of other systems of law, it is one of the general principles of law recognised by civilized States which the Permanent Court is bound to apply by virtue of Article 38 of its

4. Oppenheim, *International Law*, Vol. I (1957), p. 345.
5. *Free Zones of Upper Savoy & the District of Gex*, Series A, No. 24, p. 12 and Series A/B, No. 46, p. 107.
6. Refer particularly Judge Alvarez in *Admission (General Assembly) Case*. I. C. J. Reports, 1950, p. 15.
7. Oppenheim, *International Law*, Vol. I, (1957), pp. 346-347.

Statute.[7] The doctrine of the prohibition of abuse of rights appears, however, to be of recent origin in international law and the precise extent of its application is still controversial.

Very few writers on international law have examined the question of the applicability of the doctrine of abuse of rights in international relations. The question was first considered officially at the Proceedings of the Advisory Committee of Jurists in 1920 when that august body was drafting the Statute of the Permanent Court of Justice. When Article 38 regarding the sources of international law was being discussed, Ricci-Busatti, the Italian member of the Committee, expressed the view that the principle 'which forbids the abuse of rights' was one of the 'general principles of law recognised by civilised nations' and was of the opinion that the Permanent Court should apply this principle when deciding cases referred to it.[8]

In his lectures at the Hague Academy of International Law in 1925, Politis expressed the view that the doctrine of abuse of rights was of great importance for the development of international law relating to State responsibility and advocated its progressive application as one of the 'general principles of law' referred to in Article 38 of the Statutes of the Permanent Court.[9] In 1933, in his treatise on *The Function of Law in the International Community*,[10] Lauterpacht was of the opinion that the doctrine of the abuse of rights was 'one of the basic elements of the international law of torts', and in a recent treatise on *The Abuse of Rights in International Law* published in 1953, Kiss has expressed the view that the prohibition of the abuse of rights is a general principle of international law.[11] Schwarzenberger, on the other hand, is of the opinion that 'in the cases and situations usually mentioned in support of the recognition and applicability of the doctrine of international law, there have been no real abuse of rights but breaches of a prohibitory rule of international law.'[12] Cheng considers the theory of abuse

8. Ricci-Busatti, Proceedings of the Advisory Committee of Jurists, 1920, pp. 315-316.
9. Recueil des Cours de L' Academie de Droit International, 1925, Vol. 6, p. 108.
10. *The Function of Law in the International Community*, 1933, p. 298.
11. L' Abus de Droit en Droit International, 1953, pp. 193-1956.
12. Recueil des Cours de L'Academie de Droit International, 1955, Vol. 87, p. 309.

of rights as 'recognised in principle both by the Permanent Court of International Justice and the International Court of Justice' and is of the opinion that the doctrine is merely an application of the principle of good faith to the exercise of rights. In his treatise on *The General Principles of Law* this author gives a comprehensive analysis of the various applications of this doctrine in practice.[13]

A survey of the jurisprudence of the International Court of Justice and the Permanent Court of International Justice clearly shows that the basic principles of the prohibition of abuse of rights have been applied in cases. In the *German Interests Case* (1926) the Permanent Court of International Justice applied this doctrine.[14] In the *Free Zones Case* (1932) the Permanent Court applied the same principle in a case where France was under treaty obligations to maintain certain frontier zones with Switzerland free from customs barriers.[15] The principle of good faith requires every right to be exercised honestly and loyally. Any fictitious exercise of a right for the purpose of evading either a rule of law or a contractual obligation constitutes an abuse of the right, prohibited by law. In 1951 the International Court of Justice, when considering the right to draw straight line bases for the purpose of delimiting the territorial sea, mentioned the 'case of manifest abuse' of this right in the *Anglo-Norwegian Fisheries Case* (1951).[16]

The doctrine of the abuse of rights has also been applied by municipal courts, arbitral tribunals and claims commissions. The Mexican-United States General Claims Commission, for example, expressed the following opinion on the matter in the *North American Dredging Co. of Texas Case* (1926) :

> "If it were necessary to demonstrate how legitimate are the fears of certain nations with respect to abuses of the rights of protection and how seriously the sovereignty of those nations within their own boundaries would be impaired if some extreme conception of this right were recognised and

13. *General Principles of Law as applied by International Courts & Tribunals*, 1953, pp. 121-136.
14. Permanent Court of International Justice, Series A, No. 7, pp. 30-37.
15. Permanent Court of International Justice, Series A/B, No. 46, p. 167.
16. International Court of Justice Reports, 1951, p. 142.

enforced the present case would furnish an illuminating example."..

The principles underlying the doctrine of the abuse of rights may also be illustrated by the decision in the *Trail Smelter Arbitration*. The question in issue was that of State responsibility for nuisance to adjacent territory as the claim related to damage done in the United States to crops, pasture lands, trees and agriculture generally as well as to livestock as the result of sulphur dioxide fumes emitted from a smelting plant in British Columbia in Canada. In this case, therefore, there was, on the one hand, the right of a State to make use of its own territory, and, on the other hand, the duty of a State at all times to protect other States against injurious acts by individuals within its jurisdiction. Taking into account the conflicting interests at stake and the analogous cases in municipal law, the Tribunal arrived at the following conclusion:

> "Under the principles of international law, as well as of the law of the United States, no State has the right to use or permit the use of its territory in such a manner as to cause injury by fumes in or to the territory of another or the properties or persons therein, when the case is of serious consequence and the injury is established by clear and convincing evidence."[17]

The Tribunal held Canada liable on the ground that there was a violation of the obligation to protect other States from injuries emanating from its territory and this violation constituted an abuse of right, an unlawful act. While acknowledging that it knew of no previous international decision concerning air or water pollution, the Tribunal cited the decision of the Federal Court of Switzerland in *Solothurn* v. *Aargan* relating to target practice[18] and the decision of the United States relating to pollution in *State of Missouri* v. *State of Illinois*. The Tribunal clearly regarded the general principle of the duty of a State to protect other States from injurious acts within its

17. Annual Digest & Reports of Public International Law Cases, 1938-1940, Case No. 104, pp. 315-333.

18. Refer Schindler, "The Administration of Justice in the Swiss Federal Court in International Disputes", 15 *American Journal of International Law*, 1921, pp. 121-174.

jurisdiction, which it traced back to the *Alabama Claims Arbitration*, as of wider application. It is for consideration, therefore, that if a State uses its own territory for conducting nuclear tests whether in such a case injury due to atomic radiation is as much a ground of liability as injury due to noxious fumes on the principles laid down in the *Trail Smelter Arbitration*. It appears that having regard to the scientific data available on the extent of the damage or injury that nuclear weapon tests cause or are capable of causing, the principle of the decision in this case ought to be applied in the present situation.

In considering the question as to whether a State carrying out nuclear tests on its own territory can be said to abuse its rights of State sovereignty, it is necessary to deal with the point raised in the course of discussions in this Committee regarding "Justification". It has been pointed out that a State testing nulcear weapons may sincerely believe that possession of nuclear weapons and testing thereof to perfect such weapons is not only necessary for its own self-preservation but also for the preservation of other nations and as such it could not be said that testing of nuclear weapons in its own territory was an abuse of a State's rights because it was done for a legitimate purpose. On the other hand, it is stated that there could be no justification for these tests since testing of nuclear weapons by a State or group of States result in similar activities by the other group of States. It has also been said that nuclear or thermo-nuclear tests result in world tension and increase the possibility of war. The Committee does not doubt that there may be two possible views about the necessity or justification of these tests for self-preservation or preservation of a group of nations. But what it has to consider is whether it is permissible according to the legal concepts that a State should be allowed to indulge in activities, however necessary it may be for the purpose of its self-defence, which result in polluting the atmosphere of the world and which cause untold harm to man as established by scientific evidence. Even in the traditional doctrine of State responsibility, a state is liable to make reparation for injuries caused to other states or its nationals by its acts. The Committee also is of the opinion that considerations of self-defence may not be a very vital factor on this question. The justification of an action in self-defence is generally valid when one considers the activity of a

particular state in reference to a particular act. But here what the situation provides is not a single act by a State but a type of activity carried on by a number of States each trying to justify it on the ground of self-defence because another State is also carrying on the same kind of activity. In such situation it appears to be extremely doubtful whether justification on the ground of self-preservation is at all a relevant consideration. The scientific data shows that each nuclear test adds its quota of radioactive material which pollutes the air and causes harm to man. The Committee is of the opinion that States whose nationals suffer from the ill effects of these tests are entitled to maintain that the testing State is responsible under the doctrine of State responsibility even though the testing State may legitimately believe that it is carrying out such tests for its own preservation or preservation of other nations. Another factor to be taken note of is whether doctrine of self-preservation would extend to authorising of such preservation by adopting of means which result in indiscriminate destruction of life and property and cause harm not only to the present generation but also to succeeding generations. It is also to be noted that even in a war use of poisonous gas by a State which is fighting for its own preservation is forbidden by international law on the ground that such means cause indiscriminate and unnecessary harm and as going beyond the legitimate means of warfare. It therefore appears to be all the more reason why in times of peace nuclear tests, which result in the pollution of the air and atomic radiation, should not be permitted by international law even though such testing of nuclear weapons may be done with the legitimate belief of self-preservation.

The matter may now be considered from another angle, that is whether a State can be said to commit an international tort by reason of its resorting to nuclear weapon tests. The terms "international tort" and "international illegal act" appear to be synonyms for 'the breach of international obligations'. Thus the breach of any international obligation whether it rests on *lex inter partes* of a treaty, a rule of international customary law or a general principle of law recognised by civilised nations, constitutes an international tort'.[19] In international law, however, the law of torts is confined to very general principles and is still in a process of development. The

19. Schwarzenberger, *International Law*, 1957, Vol. I.

absence of any clearly settled authorities on questions of tortious liability in international law, however, need not necessarily dispose off the matter. International law, like other branches of law and perhaps more so, is constantly developing and is influenced by new principles arising out of international relations. As already observed, the general theory of tortious liability in municipal law has been adapted in modern times to the needs of an industrialised society. In English law, for instance, it was in the first quarter of the twentieth century that the great English jurist, Sir Frederick Pollock, formulated the new principles of tortious liability which were necessary to adapt the law of torts to the needs of an industrialised society[20]. Sir Frederick Pollock has observed that 'all members of a civilised commonwealth are under a general duty towards their neighbours to do them no hurt without lawful cause or excuse'. Is the international community of sovereign States a 'civilised commonwealth' in this respect? Is there a place in contemporary international law for these general principles that one must not do unlawful harm to one's neighbours, and, if so, is there an international tort involving the legal liability of a State for damage caused by nuclear tests? It has been suggested that there is nothing inherently unreasonable in the conception of such an international tort as there may well be an analogy with the liability for breach of absolute duties attached to the ownership and custody of dangerous things in municipal law. The definition of the sources of international law embodied in Article 38 of the Statute of the International Court has now won world-wide acceptance and 'the general principles of law recognised by civilised nations' are universally accepted as a third source of international law. Contemporary international law may accordingly be fertilized and progressively developed by recourse to the general principles of law of the major legal systems of the world. It is, therefore, reasonable to hold that in cases where neither international convention nor custom furnish a satisfactory rule of law, a rule of international law may be deduced from the general principles of law recognised by civilised nations and these principles include the general principles of law of all the major legal systems of the world.

The Western law of liability of harmful acts, in civil law and common law countries alike, recognises general obligation not to

20. Refer Pollock, *The Law of Torts* (1929), Chapter I.

inflict unlawful harm on one's neighbour. The obligation is based partly on liability for fault, including negligence, and partly on an absolute liability for dangerous things. Sir Frederick Pollock, in his treatise on *The Law of Torts*, observes that the principle accepted by Anglo-American common law is that it is a wrong to do wilful harm to one's neighbour without lawful justification or excuse.[21] This position was reached in the common law after a long process of development which is analysed by Winfield in his jurisprudential study, *The Province of the Law of Tort*.[22] The principle of general responsibility for unlawful harm to one's neighbour is also recognised by France in Article 1382 of the *Code Napolean* and by Italy in Article 2043 of the *Italian Civil Code*. The same principle is adopted in Germany in Sections 823 and 826 of the *German Civil Code*,[23] and the *Swiss Code des Obligations* incorporates the same principle in Article 41[24]. This principle also appears to be fully accepted in the Soviet Union in Article 403 of the *Soviet Civil Code*.[25] It may be said, therefore, that the major legal systems of Europe recognise a general obligation not to inflict unlawful harm on one's neighbour. In general, the law of liability for unlawful harm, in the countries of Europe, is based on the principle of fault, which is inherited from the conception of *dolus* and *culpa* in Roman law, but the principle of fault has in recent times been qualified in some form by giving the principle of absolute liability in respect of dangers created by the respondent a substantially wider application than was known to Roman law.[26] Thus in English law there is the rule in *Rylands v. Fletcher* which lays down that:

> "The person who for his own purposes brings on his land and collects and keeps there anything likely to do mischief, if it escapes, must keep it in at his peril, and, if he does not do so, is *prima facie* answerable for all the damage which is the natural consequence of its escape.[27]

21. F. Pollock, *The Law of Torts* (1920), Page 20.
22. P. H. Winfield, *The Province of the Law of Tort* (1931).
23. Refer *Manual of German Law* (1950), United Kindgom Foreign Office; Vol. I, pp. 100-108.
24. Refer 'Recucil Systematique des Lois et Ordonnances', 1847-1947, page 41.
25. Refer Gsovski, *Soviet Civil Code* (1948), Vol. I, pp. 488-490.
26. For an analysis of the development of thoory of absolute liability in the common law, refer: Buckland & Mc Nair, *Roman Law & Common Law* (1936), particularly pp. 313-3 4; with regard to the civil law refer : F. H. Lawson, *Negligence in the Civil Law* (1950).

In American law, there is the principle of liability for ultra-hazardous activities, which has been stated thus :

> "One who carries on an ultra-hazardous activity is liable to another whose person, land or chattels the actor should recognise as likely to be harmed by the unpreventable miscarriage of the activity, for harm resulting thereto from that which makes the activity ultra-hazardous, although the utmost care is exercised to prevent the harm."[28]

In French law, there is the *theorie du risque cree*[29] and in German law there is the principle of responsibility for risks.[30] The principle of absolute liability for dangerous things has therefore been accepted by the major legal systems of Europe and America. This principle is also recognised by the legal systems of Asia and Africa which have been profoundly influenced in matters of tort by the common law and the civil law. The principle that one must not do unlawful harm to one's neighbours is also recognised by Islamic law as codified in the *Majalla*. The principle of absolute liability for dangerous things also forms part of the civil law of India and Japan. It may be said, therefore, that the major legal systems of the world recognise a general obligation not to inflict unlawful harm on one's neighbour and base this obligation partly on liability for fault and partly on absolute liability for dangerous things. These principles of law recognised by all civilised nations may therefore be regarded as a source of international law and has an important bearing on the development of international law in the field of international torts and tortious liability. The general principle of law recognised by all nations that 'one must not do unlawful harm to one's neighbours' should in the opinion of this Committee be applicable in international law if a universal system of international law is to continue to develop

27. L. R. 3. H. L. 330; refer Winfield, *Law of Tort* (1954)—pp. 584-614.
28. American Law Institute, *Restatement of the Law of Torts*, (1938), Vol. 3, pp. 41-53.
29. For an analysis of the *theorie du risque cree* refer: Planiol, Traite elementaire due droit civil, 3rd ed. 1949, Vol. 2, pp. 315-317.
30. Refer U. K. Foreign Office, *Manual of German Law*, (1950), Vol. I. pp. 108-110.

in accordance with modern scientific developments. All systems of municipal law prevent an owner of property from doing acts on his property and dealing with it in a manner dangerous to neighbouring owners. A similar doctrine, based on this universally accepted principle of absolute liability for dangerous things, should be applicable in international law and a State harbouring dangerous things on its territory or carrying out dangerous experiments within its territory should be liable for damage caused to neighbouring States. A State has no doubt sovereign authority over its own territory but it is under an obligation not to perform any acts on its territory which will have harmful effects on neighbouring States. A State which harbours dangerous things on its territory or carries out dangerous experiments on its territory, which causes damage to neighbouring States, should therefore incur legal responsibility to the other States. It appears to be reasonable to hold that this responsibility should extend to every kind of damage including—biological, meteorological, economic and otherwise—which can be traced to the acts of the State on its territory—such acts would be international torts. The legality of the carrying on of nuclear tests in one's own territory if such tests cause harm outside the territory will, therefore, depend on the application of this general principle of law recognised by all nations that "one must not do unlawful harm to one's neighbours." If the rule applies and damage is caused, as is shown by scientific evidence, the testing State would have committed an international tort and will be responsible to the neighbouring States for the consequences of its illegal action.

The next question to be considered is whether these tests can be said to be violative of the United Nations Charter or the principles contained in the Declaration of Human Rights.

The preamble to the United Nations Charter reaffirms the faith of the peoples of the United Nations in fundamental human rights and the dignity and worth of the human person. The Statement of Purposes of the United Nations includes international co-operation in promoting and encouraging respect for human rights and fundamental freedoms. Lauterpacht in his treatise, *International Law and Human Rights*, expresses the view that it would be wholly inaccurate to conclude that the provisions in the Charter relating to human rights are mere declarations of principles devoid of any

element of legal obligation. Any such conclusion is, in the opinion of the learned author, no more than a facile generalisation. The provisions of the Charter on the subject figure prominently in the Statement of the Purposes of the United Nations and Members of the United Nations are, in the opinion of the author, under a legal obligation to act in accordance with these purposes. It is their legal duty to respect and observe fundamental human rights and freedom.

Nuclear tests appear to constitute a hazard to the human race. Even if the tests are carried out within the territory of the testing State, and even if such tests may endanger immediately only the lives and health of the people of the testing State, the carrying out of such tests may still amount to a violation of fundamental human rights, as in the context of the U.N. Charter the welfare of the people of all States, including the testing State, is the common concern of the United Nations and the peoples of the world. Eventually the whole of human life on the globe may be affected by nuclear tests such as the recent 50 megaton bomb explosion. The carrying out of such tests amounts to a wanton disregard for the welfare and safety of the human race. It may perhaps be said that the holding of such tests in gross disregard of the consequences to human life is in violation of the principles of the Universal Declaration of Human Rights and the provisions of the United Nations Charter with regard to fundamental human rights and freedom.

This Committee is of the opinion that no State can act in complete disregard of the elementary dictates of humanity. This position has been accepted as declaratory of the existing law by the International Military Tribunal of Nuremberg as long back as 1946 and the position is also established by rules of international customary treaty law as regards deeds of outrage. The Preamble to the Charter of the United Nations, the Universal Declaration of Human Rights and the adoption of the Genocide Convention clearly establish this humanitarian aspect in international law. In the international law of the war this aspect has long been recognised. The Committee is of the opinion that any testing of nuclear weapons in disregard of the consequences on human lives would be in violation of the recognised principles of international law. The Committee is further of the opinion that international law being regulatory of the conduct of nations *inter se* cannot be said to be devoid of mora-

lity or ethics and this position should not be disregarded by the testing States.

It is also for consideration, whether the conduct of nuclear tests in trust territory is a violation of the United Nations Charter and the Trusteeship Agreement. The provisions of the United Nations Charter dealing with Non-Self Governing Territories and the International Trusteeship System are not easily reconciled with conducting hazardous nuclear experiments in such areas. Article 73 of the Charter of the United Nations states that :—

> "Members of the United Nations which have or assume responsibilities for the administration of territories whose peoples have not yet attained a full measure of self-government, recognise the principle that the interests of the inhabitants of these territories are paramount, and *accept as a sacred trust the obligation to promote to the utmost*, within the system of international peace and security established by this Charter, *the well-being of the inhabitants of these territories*."

Article 74 states that :

> "Members of the United Nations also agree that their policy in respect of the territories to which the Charter applies, no less than in respect of their metropolitan areas, must be based on the *general principle of good-neighbourliness*, due account being taken of the interests and well-being of the rest of the world, in social, economic and commercial matters."

Article 6 of the model Trusteeship Agreement describes even more specifically the responsibilities of the trustee as the administering authority. Article 6(2) states that the administering authority must promote the "economic advancement and self-sufficiency of the inhabitants" by encouraging "the development of fisheries, agriculture and industries" and by protecting the inhabitants against the "loss of their lands and resources." Article 6(3) requires the administering authority to "protect the health of the inhabitants." The removal of the inhabitants of the area in the so-called "danger zones" amounts to removing them from their land and homes and this would amount to violation of Article 73 of the Charter

and Article 6 of the Trusteeship Agreement. Article 73 of the United Nations Charter requires that in administering trust territories the trustee authority must ensure the just treatment of the people of the trust territory and protect them against abuses. It may well be said that it is very unjust and a manifest abuse to explode hydrogen bombs in a trust territory and subject the people there to the hazards of atomic radiation. Under Article 73 of the Charter the administering State has accepted as a sacred trust the obligation to promote to the utmost the well being of the inhabitants of these territories. The explosion of hydrogen bombs on the territory can hardly be said to be promoting the well being of the inhabitants of the territory. It may further be said that although a State may be said to have a certain measure of sovereignty over a colonial territory, the administering authority of a trust territory does not have sovereignty over such territory as it is merely looking after the territory as a trustee under the supervision of the United Nations. It is therefore not entitled to exercise any sovereign rights over the territory and does not have the right to carry out nuclear tests which harm the people of the territory. It follows that the carrying out of dangerous nuclear tests in a trust territory is contrary to the basic principles of trusteeship and constitutes an arrogation of sovereign rights which the administering authority does not possess.

It is also a matter for consideration whether nuclear tests may be carried out in colonial or non-self governing territories. Article 73 of the United Nations Charter defines non-self-governing territories as territories whose people have not yet attained a full measure of self-government. Such territories are not part of the metropolitan area of a State and a State does not possess the same measure of absolute sovereignty over such non-self-governing territories as it has over its metropolitan territory. This is so because the administering State has the responsibility to guide such territories to full self-government and independence and therefore the form of sovereignty exercised over such territories may be called 'conditional sovereignty' *i.e.* a sovereignty exercised under certain conditions for the time being until the territory achieves full independence and develops into a sovereign State of its own. The sovereignty exercised over such territories is therefore merely transitory and is not absolute sovereignty. Articles 73 and 74 of the United Nations Charter would

appear to give specific rights to non-self-governing territories and that these territories are not under the complete and absolute sovereignty of the metropolitan States. As the members of the United Nations have committed themselves to the observance of certain international standards in their relations with their colonies, it is considered that they do not have the right to expose the peoples of these dependent territories, as well as the peoples of the neighbouring territories, to a harmful radioactive fall-out by carrying out nuclear tests in such territories.

The next question for consideration is whether the nuclear tests, if carried out in the areas of the high seas, can be said to interefere with the right of navigation and fishing on the high seas and thus violate a fundamental rule of customary international law.

For the purposes of safety it appears that nuclear tests cannot be conducted without the establishment of a danger zone on the high seas. This may amount to a serious interference with freedom of navigation on the high seas. The vast area has to be patrolled by the testing State to ensure that no ships enter the zone and if any ships inadvertently enter that zone the vessels and the crew may suffer radioactive contamination. The closing of vast areas of the high seas to shipping and aircraft cannot be reconciled with the freedom of navigation on the high seas and in the air space above the seas. The alleged humanitarian purpose behind the closing of such vast areas of the high seas loses its justification when it is recalled that the hazard is artificially introduced. A warning area of 400,000 square miles was created in April, 1954, no doubt induced by the desire of the United States authorities to protect the lives of sailors and fishermen who might be sailing in the surrounding waters, but the debarring of such vessels from a vast area of the high seas aggravate the legal position as the greater the degree of precaution taken, the larger the warning area, and the greater the interference with freedom of navigation on the high seas. The more the area is increased, the more difficult it is to cordon it off effectively. The very nature of nuclear experiments is such that, to the extent that adequate safety measures are taken by cordoning off areas of the high seas, universally accepted customary rules of international law are violated as the ships of all nations have the right to sail on the high seas and no state may interfere with freedom of navigation on the high seas.

Every State has the right to sail ships under its flags on the high seas as the open sea is the common highway for the ships of all nations. Freedom of navigation on the high seas is open to the ships of all States and therefore no State is permitted to commit any acts on the high seas which might adversely affect the use of the high seas as a highway by the ships of any other state. It is in the interest of free intercourse and communication between States that the principle of the freedom of the open sea has become universally recognised and must be upheld. The doctrine of the freedom of the open sea is recognised by all authorities on international law as a fundamental principle of the law of nations. This Committee is of the opinion that insofar as the tests necessitate creation of danger zones, they interfere with the freedom of navigation. This may also amount to exercise of sovereignty by the State creating danger zones over the open seas which clearly is not permissible. The investigations of Japanese scientists have proved beyond doubt that the nuclear tests cause destruction and contamination of fish and other living resources of the sea. It is a fundamental principle of international law that all States have the right for their nationals to engage in fishing on the high seas and no State may be prevented from exercising this right to fish on the high seas in time of peace. Fisheries on the open sea are open to the vessels of all nations and no State may by unilateral action prevent the nationals of other States from enjoying the living resources of the high seas. In 1953, a few months before the Bikini tests, the International Law Commission expressed the opinion that "it may be contrary to the very principle of freedom of the seas to encourage or permit action which amounts to an abuse of a right and which is apt to destroy the natural resources whose preservation and common use have been one of the main objects of the doctrine of the freedom of the seas. The interference with the interests of other nations in fishing on the open sea is a clear violation of one of the fundamental principles of the law of the sea, namely, the right of all nations to fish on the high seas which, in the words of Fauchille, is "eternally open to all the nations."

In the light of the foregoing discussion, the conclusions reached by this Committee are as follows :—

(1) Conducting of nuclear tests, as such, may not offend any principle of international law if they do not result in harm or damage.

(2) Scientific evidence as available, however, shows that every nuclear explosion caused by testing of nuclear weapons results in widespread damage and is capable of doing such damage ; that in the present state of scientific development it is impossible to eliminate the possibility of harmful effects of such tests ; such harmful effects not only cause direct damage and destruction but pollute the atmosphere and cause fall-out of radioactive material and also increase atomic radiation which is detrimental to the well being of man and affects also future generations.

(3) Having regard to the harmful effects, as shown by scientific data, a State which carries out the nuclear tests must be held to be carrying on a dangerous activity. Even if such activities are carried on within the territory of the 'testing State' they amount to an abuse of the State's right in regard to the use of its own territory. The plea of justification on the ground of self-preservation ought not to be accepted.

(4) The principle of absolute liability well recognised in all civilised legal systems for harbouring dangerous chattels or carrying on of dangerous activities ought to be applied in international law as a part of its progressive development, and a State carrying on nuclear tests ought to be made liable for the damage caused by such tests on the basis of general scientific evidence without the necessity of further proof of actual damage.

(5) Since scientific evidence shows that everynuclear weapon test causes damage, a State carrying on such activities should be held to be guilty of internationally wrongful conduct for the wrongs or injuries caused thereby to other States and its nationals without further proof of damage.

(6) Having regard to the scientific evidence a testing State must be said to violate the principles contained in the United Nations Charter and the Declaration of Human Rights, and at any rate the spirit behind them.

(7) Nuclear tests carried on on the high seas violate the principle of the freedom of the seas in as much as the carrying on of such tests interfere with the freedom of navigation and they result in pollution of the water and destruction of the living resources of the sea.

(8) A State carrying on such tests in Trust Territories must be held to be acting contrary to Articles 73 and 74 of the United Nations Charter.