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CONTENTS

Agenda item 28:

- Urgent need for suspension of nuclear and thermonuclear tests: report of the Conference of the Eighteen-Nation Committee on Disarmament (continued)*
General debate (continued) 193

Agenda item 27:

- Question of general and complete disarmament: report of the Conference of the Eighteen-Nation Committee on Disarmament (continued)*
Consideration of draft resolutions (continued) 200

Chairman: Mr. Leopoldo BENITES (Ecuador).

AGENDA ITEM 28

Urgent need for suspension of nuclear and thermonuclear tests: report of the Conference of the Eighteen-Nation Committee on Disarmament (continued) (A/6390-DC/228, A/C.1/L.380 and Add.1)

GENERAL DEBATE (continued)

1. Mr. ALHOLM (Finland) said that the fact that two countries which were not parties to the Treaty banning nuclear weapon tests in the atmosphere, in outer space and under water, signed at Moscow on 5 August 1963, had continued testing in the atmosphere and that the major nuclear Powers which had signed the treaty had conducted tests underground proved that those States were improving their nuclear weapons, and some were perhaps developing anti-ballistic-missile systems. The possible consequences of those tests were, in the opinion of the Secretary-General, alarming and could upset the existing uneasy balance of terror and lead to a greatly accelerated arms race. That tendency ran counter to the efforts to prevent the proliferation of nuclear weapons.

2. In that context the urgency of prohibiting all nuclear and thermonuclear tests became evident. As was stated in the joint memorandum of 17 August 1966 of the eight non-aligned members of the Eighteen-Nation Committee,^{1/} an agreement supplementing the prohibitions of the partial test ban treaty would make practically impossible the development of nuclear weapons in non-nuclear-weapon countries, and would inhibit the further sophistication of nuclear weapons. It would also undoubtedly be one of those balancing measures which had been called for, to be coupled with or to follow a treaty on non-proliferation.

^{1/} See Official Records of the Disarmament Commission, Supplement for 1966, document DC/228, annex 1, sect. O.

3. The reasons why a comprehensive test ban treaty had not yet been agreed upon were both technical and political. As to the technical side, the only question of real significance on which opinion remained divided was the issue of whether or not the cessation of subterranean testing should be linked to adequate measures of verification. Some held the view that underground nuclear explosions of military significance could be detected without the need for making on-site inspections. Others claimed that it was necessary to have the possibility of making on-site inspections when a suspicious seismic event, a possible clandestine nuclear explosion, had been detected. The disagreement on that point had been even more striking some years before than it was today because of scientific progress in seismology. No effort should be spared to explore all the possibilities in order to reach agreement on the earliest possible cessation of underground tests.

4. If it should prove impossible at the present time to conclude a comprehensive test ban treaty, such an agreement could be entered into in stages. As had been suggested in previous deliberations on the matter, a further partial treaty could be concluded, for the cessation of underground tests above a certain "threshold". Even such a partial treaty would be a step in the right direction and would contribute to an atmosphere more conducive to the halting of the nuclear arms race.

5. The eight non-aligned members of the Eighteen-Nation Committee had made sincere and constructive efforts, by offering various ideas and suggestions with a view to facilitating an agreement on the banning of underground tests. He referred, in particular, to the Swedish initiative to improve international co-operation in seismic detection.^{2/} The possibilities of detecting underground nuclear explosions in foreign countries were based mainly on seismology. The reorganization and strengthening of international co-operation between seismological institutions would improve the seismic data generally available and thus create a better scientific basis for the evaluation of underground nuclear explosions and of other seismic events. The establishment on a voluntary basis of a "detection club", composed of different countries, would be an important contribution to the advancement of earth sciences. The club suggested by Sweden was intended to be only a clearing-house for improved seismic data, but the fact could not be ignored that it might also yield valuable experience for the organizing of a future arms control system, when such a system could be agreed upon.

^{2/} Ibid., Supplement for January to December 1965, document DC/227, annex 1, sect. B.

6. Finland fully supported the Swedish initiative and, together with the other Nordic countries, had decided in January 1966 to establish a seismological advisory group to study the possibilities of improving detection seismology in those countries. That form of Nordic co-operation was, of course, part of a world-wide system of international seismological co-operation.

7. His Government had consistently expressed its strongest opposition to all nuclear tests. His delegation therefore joined all those which urged the nuclear Powers to make greater efforts to settle their remaining differences. The present atmosphere gave reason to hope that those Powers might be in a position to pave the way for an early agreement on that issue. With that hope in view, his delegation would support draft resolution A/C.1/L.380, submitted by the eight non-aligned members of the Eighteen-Nation Committee.

8. Mr. FOSTER (United States of America) recalled that, at the request of the late President John F. Kennedy, Congress had established the United States Arms Control and Disarmament Agency; it was largely on President Kennedy's initiative that the limited test ban treaty had been negotiated. The quest by the United States for a comprehensive test ban treaty continued.

9. The statements made and the resolutions adopted in the Committee demonstrated that all were keenly aware of the urgent need for a comprehensive test ban treaty. Such an agreement would help to put an end to the nuclear arms race and to prevent the spread of nuclear weapons. As the representative of Sweden had pointed out in her statement at the 1451st meeting, non-nuclear States which signed a treaty on non-proliferation would thereby, in effect, also have subscribed to a comprehensive test ban. Considerations of equity and balance required the States with nuclear weapons to take the same step as soon as possible. A comprehensive test ban would be the most effective means of bringing to a halt the further development of their nuclear weapons. Having done so, they would then be in a position to consider additional steps looking towards actual reductions in existing nuclear arsenals.

10. All were aware of the fact that the primary obstacles to a comprehensive test ban agreement was the inability to agree on what constituted an effective system for verifying compliance. While there was agreement that the partial test ban could be verified without requiring visits to the sites of events, there was disagreement on the adequacy of external means of verifying any treaty banning underground nuclear explosions. In those circumstances, natural events not identified as such would become a source of contention and place in jeopardy the continued validity of a comprehensive agreement.

11. The United States Government believed that a comprehensive treaty should include provisions designed to minimize such a source of contention. It wanted only such provisions that would constitute an effective deterrent to any attempt to evade the agreement, which meant only such provisions as would give the necessary assurance that all parties were complying with their obligations.

12. The United States believed that, in the present state of technology, the possibility for some on-site inspections should be provided in order to obtain adequate verification. It had invited those who believed otherwise to supply any scientific data which might point to a contrary conclusion, but they had so far confined themselves to unsupported claims that existing means of detecting nuclear explosions were adequate for verifying a comprehensive test ban. The scientific basis for the United States position was the fact that, with existing technology, it was impossible to gather, at long distances, all available and essential seismic data. It was impossible at such distances to detect or locate accurately all seismic events or to identify positively whether certain seismic signals came from earthquakes or man-made explosions. Because of those limitations, the United States continued to devote considerable resources to seismic research in order to improve its capability of detecting and identifying underground seismic events. Representatives of Member States who had attended the inauguration of the large-aperture seismic array in Montana in October 1965 had been able to judge for themselves one direction in which seismic research was progressing. The United States had reported on the findings of that research from time to time and had long urged the exchange of seismic data, as well as technical discussions relating to the identification of seismic events. As the President of the United States had said in his message of 27 January 1966 to the Eighteen-Nation Committee,^{3/} the United States invited those nations truly interested in a comprehensive test ban to provide information on any improvements in means for the detection and identification of seismic events which their research efforts might have developed. In that connexion, the United States particularly welcomed the research efforts of the United Kingdom, as well as the Swedish initiative for the formation of a seismic "detection club".

13. A more complete description of the technical aspects of the detection of underground nuclear tests had been given by the United States representative at the 254th meeting of the Eighteen-Nation Committee, on 4 April 1966. However, he wished to elaborate on one or two points. United States research had determined that the use of arrays of seismometers, such as the Montana array, would decidedly improve the capability of filtering out the background noise, caused by continuous vibrations of the earth, from the true signal emitted by a seismic event. His delegation could now confirm that such arrays led to notable improvements over existing seismic detection systems. However, after an event had been detected, it was still necessary to identify its cause accurately. Such identification required the recording of a clearer signal than was needed for detection purposes alone. Seismic arrays would assist in that identification by reducing the background noise, thereby making the actual signal more precise. Unfortunately, the signals presented to remote seismometers by some earthquakes were indistinguishable from those of man-made explosions. At present, therefore, even after taking into account the most advanced seismic detection and identification techniques, there was no alternative to

^{3/} *Ibid.*, Supplement for 1966, document DC/228, annex 1, sect. D.

some on-site inspections to fill the gaps in the information provided by seismometers.

14. At the same time that it sought to perfect its detection and identification systems, the United States had done extensive research aimed at lessening the intrusiveness and complexity of any on-site inspections that might prove necessary. Its research indicated that inspections could be undertaken with only a small number of inspectors and readily transportable equipment. An inspection party would, first of all, look for normal signs of human activity, such as debris resulting from excavation. A more conclusive type of evidence, however, would be various kinds of disturbances in the surface of the earth, such as fissures and cracks in rock formations. Although such phenomena were often produced by earthquakes, they tended to be more symmetrical and localized when they resulted from a nuclear explosion conducted relatively close to the surface of the earth. Surface evidence of that kind could, of course, be hidden as a result of natural events, such as snow, or deliberate attempts at concealment. However, there was one kind of evidence which could not be concealed, namely the gases produced by fission. Such gases leaked slowly towards the surface and could probably be detected by inspectors with appropriate equipment. Samples could be collected by simple drilling and then analysed.

15. With regard to the charge that on-site inspection could serve espionage purposes, he recalled that his delegation had already suggested procedures for preventing such activities. The inspected country could request that sensitive defence installations situated in the inspection area should not be inspected. His delegation had made it clear that an inspection would be conducted with the assistance of the host country, which meant that personnel of that country would accompany the inspectors in every phase of their activity. It had also stated that it was not taking an inflexible position with regard to the number and type of inspections. What was essential was the minimum of inspection necessary in the present state of scientific knowledge in order to assure all parties that a comprehensive test ban was being adhered to and to ensure that unidentified natural events did not become a source of contention. In his message to the Eighteen-Nation Committee of 27 January 1966, President Johnson had said that the United States would require only that number and kind of inspections which modern science showed to be necessary to ensure that the treaty was being faithfully observed.

16. His delegation's emphasis on the need for inspection did not in any sense mean that it did not attach the highest importance to the role that could be played by seismology in the process of verifying compliance with a comprehensive test ban agreement. The United States had consistently supported efforts to improve the collection, dissemination and analysis of seismic data. That was why it warmly welcomed the efforts made by a number of non-nuclear weapon States, on the initiative of Sweden, to facilitate the exchange of seismic data through the establishment of a "detection club". It was to be hoped that additional countries would take part in that undertaking.

17. His delegation regarded draft resolution A/C.1/L.380 as a useful and constructive proposal, although

in some respects, particularly in operative paragraphs 2 and 4, it appeared to lack the clarity of General Assembly resolution 2032 (XX). With regard to paragraph 2, the United States would oppose a recommendation for an unverified moratorium on underground nuclear testing. It understood paragraph 2 to call for an end to such tests pursuant to an effective agreement. His delegation would also have preferred to see a reference to the need for an effective treaty in paragraph 4, since that was, in reality, the question that had to be resolved if a treaty was to be concluded "without any further delay", as called for in that paragraph. His delegation welcomed the expression of hope contained in operative paragraph 3 of the draft resolution. If there was some way in which the United States could show its strong support for an exchange of seismic data, his Government was prepared to give consideration to it.

18. For the reasons he had indicated, his delegation would vote for the draft resolution and hoped that it would receive the widest possible support. It hoped that the resolution would facilitate the resumption of negotiations in the Eighteen-Nation Committee leading to early agreement on a mutually acceptable and effective comprehensive test ban treaty.

19. Lord CHALFONT (United Kingdom) said that his delegation believed, as did most others, that a treaty on non-proliferation must have absolute priority and that it would be wrong to take the slightest risk of interfering with progress towards such a treaty by linking it directly to other measures. However, that was not a reason for not attempting to clarify and solve the problems which had so far prevented agreement on a comprehensive test ban. That was evidently the intention underlying draft resolution A/C.1/L.380, which his delegation whole-heartedly supported.

20. A test ban treaty was a crucial element in an effective non-proliferation policy. Indeed, it was, in his view, the most important of the measures listed in the memorandum of 19 August 1966 on non-proliferation of nuclear weapons presented by the eight non-aligned members of the Eighteen-Nation Committee,^{4/} and it would be wrong to underrate the importance of a test ban in itself as a measure of arms control. A properly verified treaty, which every signatory could be certain was being observed by all the others, would have a twofold effect on the arms race, and particularly on the arms race between the two major alliances.

21. First of all, it would make it technically more difficult, if not impossible, to develop new and more sophisticated offensive and defensive weapons. He would not set forth again the reasons why he believed that an anti-ballistic-missile defence system might be just as unsettling and dangerous as a new offensive system, and far more expensive, but would merely refer the members of the Committee to the words of the Prime Minister of Canada, as quoted by the Canadian representative at the 1452nd meeting. The great Powers were often urged to divert the money now spent on weapons to the needs of the developing countries. The delegations which made that appeal were presumably concerned that, unless further

^{4/} Ibid., sect. P.

weapon development could be curtailed, particularly in the field of ballistic missile defence, it was almost certain that huge additional sums of money would be spent on armaments in the coming years. The United States Government had explicitly included those defensive systems in its proposals for a freeze on nuclear weapon delivery vehicles—proposals which had not so far been well received by the Soviet Union.

22. Of course, a comprehensive test ban would not by itself completely prevent weapon development, but a properly verifiable test ban would have an important second effect of a psychological nature: it would relax some of the tension and suspicion which still prevailed and which made it difficult for Governments to resist pressures to develop new systems in the name of national security. Thus, while a test ban would act incidentally as a barrier to the spread of nuclear weapons to countries which did not possess them, it would obviously affect the nuclear Powers most of all. Provided that a mutually acceptable arrangement could be found, the United Kingdom was prepared to accept its share of the sacrifice involved for the sake of making progress towards the eventual elimination of nuclear weapons from the world.

23. The discussion in the Eighteen-Nation Committee during 1966 and the improvements made in scientific techniques of detection had brought agreement on the central problem of verification substantially nearer. Nothing would be gained from a test ban agreement which did not provide for adequate verification; indeed, suspicion and mistrust might actually increase as a result. The Western allies had until now maintained that without a small number of on-site inspections they could not be certain, at the present stage of development of seismographic techniques, that the Soviet Union was in fact observing a treaty. Improvements in seismographic techniques now made it possible for an increasingly large proportion of seismic signals to be positively identified as having been caused by earthquakes, but existing techniques were not adequate to deal with the doubtful events that still remained. The Soviet Union, however, maintained that the difficulty was a political rather than a technical one and that existing national means of verification were adequate for the purpose of policing a treaty.

24. Various attempts had been made to deal with that fundamental difference of opinion. Sweden had suggested the establishment of what might be called a "detection club"; an increased effort was being made to improve seismic techniques; and the Swedish representative in the Eighteen-Nation Committee had put forward the idea of "verification by challenge"—also referred to as "verification by consent"—under which any signatory to the treaty could call for clarification from a country in which doubtful seismic events occurred and failure to provide a satisfactory explanation would cause the question of an inspection or of withdrawal from the treaty to arise. In the view of his Government, the latter proposal still contained a substantial element of uncertainty. Much would depend on the co-operation of all parties in abiding by the spirit of the verification procedure, which might not have been agreed upon beforehand in complete detail. It was true that even if the treaty provided

for on-site inspection, a signatory might refuse entry to the inspecting team; however, such refusal would make it virtually certain that a violation of the treaty had occurred, while, under a system of verification by consent, a refusal to co-operate might still leave the issue in doubt.

25. Nevertheless, it should be possible to find a solution to the problem of verification, perhaps in some variant of the Swedish proposal. For example, it had been suggested at the International Assembly on Nuclear Weapons, in June 1966 at Scarborough, Ontario, Canada, that the idea of verification by invitation or consent should be tried out for a short period to see whether it would work in practice and whether all parties would co-operate. The idea called for testing to be suspended by common consent during that period. The United States was studying the proposal, but the Soviet Union's reaction had not been favourable. It was to be hoped that the Soviet Union would reconsider its attitude towards an idea which was one of the most promising ones put forward in the arms control field in the past several years and which was essentially designed to meet the Soviet Union's objection to the inclusion of the right to call for on-site inspection in a comprehensive test ban treaty.

26. He wished to stress once again the importance of a comprehensive test ban as a measure which would inhibit the arms race and the spread of nuclear weapons, and to stress the urgent need to reach agreement before new weapons were developed. It would be most unfortunate not to seize the opportunity now to halt and reverse the arms race.

27. Mr. SCHUURMANS (Belgium) recalled that almost thirteen years earlier the Prime Minister of India, Pandit Nehru, had appealed for a halt in nuclear weapon tests. When, ten years after that appeal, the Treaty banning nuclear weapon tests in the atmosphere, in outer space and under water had been signed, the parties had expressed their determination to seek means of putting an end to underground tests as well. He wondered how much longer the treaty would be observed if its logical complement—a ban on underground tests—were not soon forthcoming. A ban on underground tests would be the natural concomitant of an agreement on the non-proliferation of nuclear weapons and would help to stop vertical proliferation.

28. Every underground test increased the possibility of another Power or military alliance obtaining access to the knowledge required for manufacturing nuclear weapons which might upset the existing balance of power. In a vast and unexplored field such as that of nuclear armaments, technical progress paved the way for the development of a whole series of new weapons, each of which in turn called for the development of counter-weapons. Thus, far from slowing down, the armaments race was continually providing itself with new momentum and wasting the resources which so many peoples needed for their development. Increased knowledge of the techniques of nuclear weapon construction presented yet another danger. Experience showed how wrong it was to hope that new technical development could be kept secret for long. Often a mere revelation of its existence was enough to lead other scientists to the same discovery.

Espionage, or even indiscretions, accelerated the dissemination of technical and scientific knowledge. One recent—and not by any means the least important—development was the miniaturization of warheads. Who could say how long it would be before the technique of manufacturing small-calibre nuclear weapons was so widely known that irresponsible groups, or even individuals, could start producing them?

29. In view of all those mortal dangers, why had underground nuclear testing not yet been suspended? The answer to that question was brutally simple. Governments had not yet been able to agree on a universally acceptable system of verification which would effectively guarantee that undertakings given were being observed.

30. In his delegation's view, no country should refuse to accept on-site inspection if the other parties to the treaty insisted that that method of verification should be open to them. The fear of espionage, which was often used as an argument against that method of verification, could not be regarded as a serious excuse, since safeguards to prevent any abuse of the on-site inspection system could easily be provided.

31. Opponents of the on-site inspection system argued that events could be detected and identified by distant means of control. With modern scientific methods, they said, all underground tests—even those of low yield—could be detected without risk of error, and that would guarantee observance of undertakings given. But that argument had been contested, not only in the West but also by scientists in the non-aligned countries. In spite of recent advances, there was still a threshold below which seismic events could not be detected and identified beyond doubt. Accordingly, his Government still believed that national means of detection should be supplemented by a reasonable number of on-site inspections. But it noted with optimism the recent advances in distant detection and identification techniques. Those advances were so considerable that it might soon be possible to devise an effective verification system which would provide all parties to a treaty with a reasonable safety margin.

32. The Swedish delegation in the Eighteen-Nation Committee had made two interesting proposals. The establishment of an international "detection club" would help to promote close co-operation between countries and ensure a regular exchange of seismic data. The second proposal, referred to as "verification by challenge"—or, as the more flexible version was sometimes called, "verification by consent"—would strike a balance between the inaccessible ideal of absolute control and the need for effective verification.

33. Those proposals were not, of course, exclusive. The advantages of automatic seismic recording should not be overlooked, particularly in connexion with the Swedish proposals. By combining the various systems proposed it would be possible to use the verification data supplied by close-range stations and to check them by multiple comparison with the seismographic recordings of longer-range waves. The two sets of data would, in turn, provide a reliable basis for verification by consent.

34. The process would, of course, be largely deterrent in its effect, since the verification would in any case not be watertight. Any system based on psychological considerations was bound to entail some degree of uncertainty.

35. Nevertheless, in existing circumstances he favoured the idea of applying the system of "verification by challenge" as an experiment and for a limited period, as proposed at the International Assembly on Nuclear Weapons, held at Scarborough, Ontario, in June 1966. A try-out might perhaps pave the way for the final adoption of the system, perhaps in the form of "verification by consent". It might also demonstrate the value of a "detection club" as an additional source of information, as well as the merits of automatic seismic recording processes. The deterrents provided by a combination of the various methods might carry enough weight with the Powers principally concerned to induce them to conclude an agreement banning underground nuclear tests while there was still time.

36. Mr. KHATRI (Nepal) said that, as time went on, the prospects opened up by the conclusion of the partial test ban treaty in 1963 seemed to recede farther into the distance. No progress had been made towards a comprehensive test ban. The differences which had existed at that time regarding an underground test ban had not been resolved. In the circumstances, there was some doubt as to the sincerity of the nuclear Powers, which had done nothing to resolve their differences and had even rejected a number of compromise solutions proposed by the non-nuclear countries. It seemed that they were not really interested in an underground test ban. The two major nuclear Powers were, apparently, obliged to continue underground testing in order to perfect their new weapons. If that were so, they could not be expected to reach agreement until their weapons had been developed to their satisfaction. The history of the partial test ban treaty tended to confirm that view. For years the nuclear Powers had not reached any agreement and testing had continued in the atmosphere. It was only when the testing had begun to yield merely marginal returns that the differences had been settled and the treaty concluded.

37. If the nuclear Powers were sincere in their desire for agreement, they had before them several constructive and acceptable proposals advanced by the non-nuclear countries. For instance, draft resolution A/C.1/L.380 referred to the joint memorandum on a comprehensive test ban treaty submitted by the eight non-aligned countries in the Eighteen-Nation Committee,^{5/} which contained a proposal for "verification by challenge". That compromise proposal had been rejected both by the Soviet Union and by the United States, because they did not want it to be incorporated in the treaty. Draft resolution A/C.1/L.380 also took into account the possibility of establishing, through international co-operation, an exchange of seismic data; and it recognized the importance of seismology in the verification of the observance of a treaty banning underground nuclear tests.

38. His delegation realized that the insistence of the United States on on-site inspection was backed by a

^{5/} *Ibid.*, sect. O.

large number of scientific arguments, which had some validity. But the United States had not succeeded in proving that such inspection was absolutely necessary. It might not be possible to identify certain seismic events which could in fact be nuclear explosions; but he doubted whether one or two low-yield clandestine tests would be serious enough to affect the security of the other party. It was also hard to imagine that a major nuclear Power would take the tremendous risk of being caught conducting tests that were militarily insignificant.

39. On the other hand, his delegation was perturbed by the changes in the position of the Soviet Union, which had withdrawn its offer to accept three inspections annually. It would be helpful if the Soviet Union would provide scientific evidence to show why inspections were no longer necessary.

40. The two major nuclear Powers had rejected the proposal for "verification by challenge". But, that provision need not necessarily be incorporated in a treaty banning tests in all environments, because the procedure envisaged in the proposal would be applied in any case. In fact, a suspicious event would inevitably be followed by questions and answers, even in the absence of a verification clause in the treaty. Such an interrogation procedure had already been applied twice in connexion with the partial test ban treaty, which did not contain any verification-by-challenge provision. It had been applied in the case of the underground tests conducted by the Soviet Union in January 1965 and October 1966, and the United States had apparently been satisfied with the procedure. Under a comprehensive test ban treaty the same procedure would be applied, regardless of whether a verification-by-challenge provision was incorporated in the treaty or not. To meet the objections of the nuclear Powers, the verification-by-challenge provision could be omitted from a comprehensive test ban treaty, because the nuclear Powers would in any case adopt a procedure of that kind. The treaty should, however, contain a withdrawal clause, because the threat of withdrawal by one party would serve as a sanction against another party which proved itself recalcitrant.

41. His delegation believed that the conclusion of a comprehensive test ban treaty was the first step to be taken by the nuclear Powers in order to achieve a balance of mutual obligations under a treaty on the non-proliferation of nuclear weapons. If the nuclear programme of the major nuclear Powers precluded the conclusion of a comprehensive test ban treaty, then they should reach an agreement on a "threshold" treaty under which tests above a seismic magnitude of 4.75 would be banned. The nuclear Powers would then have to refrain from conducting high-yield or intermediate-yield tests.

42. While his delegation would also welcome a moratorium on tests below the specified threshold, it was aware of the wish of the nuclear Powers to continue with their nuclear weapon programmes. In that connexion, a treaty without a moratorium would be more attractive to the United States, whose nuclear programme called for low-yield tests. On the other hand, the Soviet Union, whose programme called for intermediate-yield or high-yield tests, would be op-

posed to a treaty without a moratorium. The best solution would therefore be a threshold treaty coupled with a moratorium of limited duration, during which time the concept of verification by challenge would be tried out. An added advantage of the moratorium was that possible withdrawal by one party would not be as serious as withdrawal from a treaty. In the former case, withdrawal would end only the moratorium and not the treaty itself, assuming that the treaty was kept separate from the moratorium. Thus, while formulating an underground test ban treaty, the Eighteen-Nation Committee, and particularly the major nuclear Powers, might work on a threshold treaty consisting of two parts: a ban on tests above the threshold and a moratorium on those below for a trial period. If, at the end of the period, that solution were found to be satisfactory, the treaty could then be extended to cover the moratorium as well. That solution would correspond to the Soviet proposal, since a *de facto* suspension of tests would have the same effect as a *de jure* prohibition. But the Soviet proposal did not provide for technical discussions and exchange of scientific information, whereas, under the solution being proposed, the nuclear Powers would be expected to conduct such a dialogue with a view to progressively lowering the threshold. The proposed "detection club" would also play an important role under that solution. The question remained whether the nuclear Powers were willing to accept the solution and whether they were sincere in their professed desire to put an end to all nuclear tests and not to perpetuate their nuclear monopoly.

43. For the foregoing reasons, his delegation supported draft resolution A/C.1/L.380 and urged its unanimous adoption.

44. Mr. MATSUI (Japan) considered general and complete disarmament and the maintenance of international peace and security to be among the most important objectives of the United Nations. The problem thus had to be attacked on as wide a front as possible at every available opportunity. The General Assembly had already acted on the First Committee's recommendations with regard to non-proliferation of nuclear weapons. But his delegation also attached great importance to the suspension of nuclear and thermonuclear tests. When the partial test ban treaty had been concluded three years before, his Government had rejoiced at the prospect that mankind would be spared the dreadful effects of radioactive fall-out, and had trusted that the ultimate goal would be quickly reached and that nuclear weapons would disappear from the earth.

45. But since then, France and the People's Republic of China had conducted nuclear tests in the atmosphere. France had conducted a series of tests in the Pacific in 1966, and on 27 October the People's Republic of China had conducted its fourth test on the mainland.

46. Both those States sought to justify their tests on the ground that their independence, security and integrity depended on the perfection of their nuclear weapons. His delegation disagreed. The peace and security of all nations, large and small, rested upon a vigorous concerted effort by all nations to disarm and settle their disputes by peaceful means. He

fervently hoped that the two States would cease to sail against the tides which were carrying the world towards nuclear disarmament.

47. At the time of the signing of the partial test ban treaty, the United States, the United Kingdom and the USSR had announced that they would make further efforts to achieve the discontinuance of all test explosions of nuclear weapons for all time, and would continue negotiations to that end. Three years had since passed, and very little progress had been achieved. Progress towards the conclusion of a treaty on non-proliferation led him to hope that the great nuclear Powers would resume negotiations for the banning of underground tests, settle their differences in that area and reach a successful conclusion, as they had been able to do in the case of the partial test ban treaty.

48. Much had been said about the necessity of banning underground tests. Firstly, such a ban would be an inducement to France and the People's Republic of China to cease their nuclear tests.

49. Secondly, from the point of view of ensuring a balance, in the treaty on non-proliferation, of mutual obligations and responsibilities of nuclear and non-nuclear States, it was not justified that the nuclear Powers should be allowed to continue their testing for the purpose of improving and perfecting their nuclear weapons, while the non-nuclear Powers were called upon to refrain from developing such weapons.

50. Thirdly, among the collateral measures connected with a treaty on non-proliferation, the problem of the total banning of nuclear weapon tests had been discussed for a very long time. Very valuable ideas and proposals had been put forward and technical and scientific progress had been achieved. It should thus be possible to conclude a comprehensive test ban treaty within a very short space of time.

51. The only obstacle was the difference between the nuclear-weapon Powers concerning the means of ensuring observance of the treaty. The Soviet Union had been maintaining for a number of years that national means of detection were sufficient, while the United States had been maintaining that an international control system including on-site inspection was indispensable, unless it was possible to prove by scientific evidence that all underground tests could be detected. It was to be hoped that the United States and the Soviet Union, by doing their utmost to co-operate, would find it possible to resolve their differences on that point.

52. In that connexion, the Japanese delegation greatly appreciated the efforts of the non-aligned members of the Eighteen-Nation Committee in offering various ideas and suggestions in an attempt to break the deadlock. His delegation had been particularly attracted by the idea of "verification by challenge", but the reactions of both the United States and the Soviet delegations had been negative. That suggestion might be tried out for a short period, as had been suggested unofficially at the International Assembly on Nuclear Weapons in June 1966.

53. The sealed seismographic installations—the so-called "black boxes"—referred to by the representative of Canada (1433rd meeting) could also play a useful part in solving the problem, if they were placed

in geographically adequate regions and in sufficient number.

54. His delegation welcomed the suggestion that underground tests producing seismic events above a certain threshold should be prohibited, provided that the intensity of the seismic events could be measured by scientific means and accurately enough to determine whether or not it exceeded the established threshold.

55. The representative of the United Arab Republic had suggested to the Eighteen-Nation Committee that underground tests below the established threshold should be suspended by instituting a moratorium, or prohibited by applying the "verification by challenge" idea. The Japanese delegation would prefer definitive agreement to a moratorium.

56. He recalled that the General Assembly, in resolution 2032 (XX), had requested the Conference of the Eighteen-Nation Committee on Disarmament to take into account the improved possibilities for international co-operation in the field of seismic detection. The "detection club", to which Japan belonged, had been designed to meet the need for perfecting detection techniques and to ensure the necessary international co-operation.

57. He was aware that a total ban on nuclear tests would be difficult to achieve, but that should not prevent every possible effort from being made to bring it about at the earliest possible date. If no underground test ban was concluded in the very near future, how could there be any real hope of proceeding towards the total elimination of nuclear weapons?

58. That was why Japan had asked to become a sponsor of draft resolution A/C.1/L.380, submitted by the eight non-aligned members of the Eighteen-Nation Committee. He hoped that the draft resolution would be adopted unanimously.

59. Mr. BELAUNDE (Peru) said that his delegation, which had always favoured the complete cessation of nuclear tests, supported draft resolution A/C.1/L.380 without reservation. He recalled that His Holiness Pope Pius XII, in his 1955 Christmas message, had referred to the possibility of a halt in nuclear weapon tests and had stressed the unfavourable effects of such tests on human life. In 1956, India had made a formal proposal to the Disarmament Commission for a cessation of all nuclear weapon tests.^{6/} A favourable atmosphere had thus been created for the moratorium on tests which had gone into effect at the end of 1958. The moratorium had not lasted, however, and it had only been after a serious international crisis that the great Powers had been willing to sign a treaty—the Treaty banning nuclear weapon tests in the atmosphere, in outer space and under water. The problem remained serious, since that treaty was only partial and had not put an end to the armaments race. It had soon become evident that the treaty must be completed by extending its application to the one environment in which the nuclear arms race could still be pursued and intensified. The question had been studied thoroughly by the Eighteen-Nation Committee. Today it was vitally

^{6/} See *Official Records of the Disarmament Commission, Supplement for January to December 1956*, document DC/98.

important to abolish the escape clause and to impose on all Powers the obligation to suspend all nuclear tests as a guarantee against proliferation, particularly vertical proliferation, and as a logical step towards the creation of an atmosphere favourable to the reduction or destruction of existing stockpiles.

60. His delegation favoured any initiative aimed at working out procedures for bringing the great Powers closer together on the question of verification. It was convinced that on-site inspection would neither constitute a violation of sovereignty nor create a risk of espionage if it were carried out with the consent of the country concerned, in a scientific spirit, by inspectors acting essentially as neutral technicians, belonging to institutions whose competence and moral integrity were beyond question, and accompanied by representatives of the country where the inspection took place. On the contrary, inspection would prove that there were no closed societies in the world and that the term "iron curtain" coined by Sir Winston Churchill was no longer applicable. But, if the Soviet Union continued to object to on-site inspections, other methods could be used, such as those proposed by the Swedish, United States and Canadian delegations, to reconcile the different points of view. All that the First Committee could do was to list those methods in the preamble or the operative part of the resolution to be voted on, express the hope that they would be adopted and appeal to the great Powers not to miss a unique opportunity of rounding off their work in 1966 or at the beginning of 1967 by concluding a treaty on non-proliferation. He hoped that draft resolution A/C.1/L.380 would be adopted unanimously.

AGENDA ITEM 27

Question of general and complete disarmament: report of the Conference of the Eighteen-Nation Committee on Disarmament (continued)^{2/} (A/6390-DC/228, A/C.1/L.370/Rev.1 and Rev.1/Add.1/Corr.1 and Rev.1/Add.2-6, A/C.1/L.374, A/C.1/L.377, A/C.1/L.378 and Add.1, A/C.1/L.379, A/C.1/L.381/Rev.1)

CONSIDERATION OF DRAFT RESOLUTIONS (continued) (A/C.1/L.370/REV.1 AND REV.1/ADD.1/CORR.1 AND REV.1/ADD.2-6, A/C.1/L.374, A/C.1/L.377, A/C.1/L.378 AND ADD.1, A/C.1/L.379, A/C.1/L.381/REV.1)

61. Mr. CSATORDAY (Hungary) referred to the various amendments proposed to the Hungarian draft resolution (A/C.1/L.374), and particularly those contained in document A/C.1/L.381/Rev.1. On certain points, his delegation could agree to the amendments suggested.

62. The first of the amendments in document A/C.1/L.381/Rev.1 placed the question of the prohibition of weapons of mass destruction in a broader perspective. His delegation accepted the addition of the new clause, which reflected the feelings of all mankind.

63. The second amendment, suggesting the addition of a new preambular paragraph, deserved close attention, although contemporary international law, and particularly the Charter of the United Nations, ex-

cluded war as a means of settling international disputes. A resolution on the conduct of warfare as such was not therefore really necessary. However, that basic rule of international law was often violated and many peoples had to resort to self-defence in order to preserve their independence or sovereignty. Furthermore, the provisions of the Charter relating to self-determination for all peoples were often violated by countries which wished to prevent certain peoples from achieving self-determination. Those peoples, which were under the colonial yoke and were unable to solve their problems by peaceful means, were entitled to resort to self-defence if they were attacked. That meant that war still existed in some cases and that problems connected with that question still had to be dealt with. First of all, weapons of mass destruction should be excluded from any international conflict. Accordingly, his delegation accepted the second amendment.

64. With regard to the third amendment in document A/C.1/L.381/Rev.1, the wording of the new paragraphs to replace the original operative paragraphs 2 and 3 differed considerably from the original text. His delegation believed that international sanctions should be applied against those who violated the basic rules of international law and who used weapons of mass destruction against other peoples. It seemed, however, that the use of strong language regarding the application of sanctions sometimes gave rise to certain complications; and the sponsors of the amendment were apparently anxious to present the matter in a form acceptable to a much larger number of delegations, though they agreed in principle with the condemnation expressed in draft resolution A/C.1/L.374 and in the Geneva Protocol of 1925. His delegation had considered the problem carefully and, in a spirit of compromise, it was prepared to accept the amendment in order to facilitate agreement on a text which would command general support.

65. With regard to the invitation to all States to accede to the Geneva Protocol, his delegation noted with satisfaction that certain newly independent countries had very commendably already acceded to it.

66. The objective of the Hungarian draft resolution, with the amendments incorporated, was very clear. The draft resolution prohibited the use of weapons of mass destruction, particularly chemical and bacteriological weapons. It was based on the Geneva Protocol of 1925 and other international agreements. His delegation believed that, by accepting the amendments in document A/C.1/L.381/Rev.1, it could avoid points of friction and offer an acceptable basis for agreement in the Committee.

67. Mr. FOSTER (United States of America) wished to state that the Hungarian draft resolution, as amended, remained unacceptable to the United States delegation. He appreciated the desire of the sponsors of the amendments to find less controversial language. Unfortunately, he could not accept the new wording, particularly in the light of certain interpretations which had just been given. His delegation would therefore maintain the amendments (A/C.1/L.382) which it had sponsored jointly with Canada, Italy and the United Kingdom.

^{2/} Resumed from the 1458th meeting.