
Report of the Ad Hoc Working Group on a Nuclear Test Ban

I. INTRODUCTION

1. At its 173rd plenary meeting, on 21 April 1982, the Committee on Disarmament adopted the following decision relative to item 1 of its agenda:

"In the exercise of its responsibilities as the multilateral disarmament negotiating forum in accordance with paragraph 120 of the Final Document of the first special session of the General Assembly devoted to disarmament, the Committee on Disarmament decides to establish an ad hoc working group under item 1 of its agenda entitled 'Nuclear Test Ban'.

Considering that discussion of specific issues in the first instance may facilitate progress toward negotiation of a nuclear test ban, the Committee requests the ad hoc working group to discuss and define, through substantive examination, issues relating to verification and compliance with a view to making further progress toward a nuclear test ban.

The ad hoc working group will take into account all existing proposals and future initiatives, and will report to the Committee on the progress of its work before the conclusion of the 1982 session. The Committee will thereafter take a decision on subsequent courses of action with a view to fulfilling its responsibilities in this regard." (CD/291)

II. ORGANIZATION OF WORK AND DOCUMENTATION

2. At its 178th plenary meeting, on 12 August 1982, the Committee on Disarmament appointed Ambassador Curt Lidgard (Sweden) as Chairman of the Ad Hoc Working Group. In the absence of Ambassador Lidgard, Mr. Carl-Magnus Hyltenius, Deputy Head of the Delegation of Sweden, acted as Chairman of the Working Group. Miss Aida Luisa Levin, United Nations Centre for Disarmament, served as Secretary of the Working Group.

3. At the 178th plenary meeting of the Committee on Disarmament, on 12 August 1982, the delegations of two nuclear-weapon States announced their decision not to participate in the Ad Hoc Working Group. A number of delegations regretted that decision and expressed the hope that it would be reconsidered at an early date.

4. At their request, the Committee on Disarmament decided to invite the representatives of the following States not members of the Committee to participate in the meetings of the Ad Hoc Working Group: Austria, Denmark, Finland, Greece, Ireland, Norway, Senegal and Spain.

5. The Working Group held 10 meetings between 13 August and 13 September 1982.

6. In addition to the official documents of the Committee on Disarmament circulated under item 1 of its agenda, other documents were submitted to the Ad Hoc Working Group during the 1982 session. These documents included the following:

Working paper entitled "Nuclear Test Ban", submitted by the Netherlands
(CD/NTEB/WP.1 and Corr.1)

Working paper on international verification systems for a nuclear test ban,
submitted by Sweden (CD/NTEB/WP.2)

In addition, the Secretariat prepared a list of documents relating to the question of a nuclear test ban, submitted to the Conference of the Eighteen-Nation Committee on Disarmament, the Conference of the Committee on Disarmament and the Committee on Disarmament (CD/NTEB/INF.1).

7. On 17 August 1982, the delegation of Norway demonstrated for members of the Ad Hoc Working Group a prototype system for an international seismic data exchange under a comprehensive test ban, using a low-cost micro-processor based system.

III. SUBSTANTIVE WORK DURING THE 1982 SESSION

8. In carrying out its mandate, the Ad Hoc Working Group bore in mind that, in accordance with the decision of the Committee on Disarmament referred to in paragraph 1 above, the Working Group should take account of all existing proposals and future initiatives.

9. It was generally recognized that in the examination of issues relating to verification and compliance, consideration should be given to all relevant aspects of a nuclear test ban. In this connection, a number of delegations argued, on the basis of paragraph 31 of the Final Document of the first special session of the General Assembly devoted to disarmament, that a meaningful examination of issues relating to verification and compliance would only be possible after agreement had been

reached on the scope of a nuclear test ban treaty. Other delegations argued that it was not necessary to reach agreement on scope; work could proceed on the basis of certain broad assumptions. Different views were expressed on various fundamental aspects of a nuclear test ban. Some delegations were of the view that the work of the Ad Hoc Working Group should be based on the understanding that issues relating to verification and compliance should be examined as applied to a treaty which would prohibit all test explosions of nuclear weapons in any environment, would be of unlimited duration, would provide for a solution, acceptable to all parties, of the problem of underground nuclear explosions for peaceful purposes and would include among its participants all nuclear-weapon States. Other delegations, calling attention to the preamble of the 1963 Partial Test Ban Treaty, considered that a treaty on a nuclear test ban should aim at the general and complete cessation of nuclear-weapon tests by all States in all environments for all time. In their view, such a treaty should be equitable and non-discriminatory so as to attract universal adherence and should include a verification system that guaranteed equal access to all States. Still other delegations held that any nuclear test ban must necessarily cover both nuclear-weapon tests and nuclear explosions for peaceful purposes, and that issues of verification of and compliance with such a ban should be examined as applied to a future treaty which would ban all such explosions. Certain delegations considered that this ban should apply to all nuclear explosions in all environments for all time. In this connection, the view was also expressed that the importance of peaceful nuclear explosions should not be underestimated. Some delegations suggested that it was necessary to give consideration to all possible methods for the testing and qualitative improvement of nuclear weapons, such as laboratory tests and simulation techniques. Other delegations recalled the report of the Secretary-General on a comprehensive nuclear test ban (CD/86) in which it was stated that "it can be contended that a comprehensive test ban could not cover laboratory tests because they are contained and not verifiable". The view was however expressed that more recent technological advances, especially in simulation techniques, have added a new dimension to nuclear testing and qualitative improvement of nuclear arsenals. Laboratory tests, especially since these are not verifiable, provide an advantageous edge to some States.

10. It was not possible for the Ad Hoc Working Group to reach agreement on a work programme. A number of delegations strongly regretted this and pointed out that the lack of a work programme had only permitted the Working Group to have a general and largely unstructured exchange of views on the subject matter entrusted to it under

its mandate. During the first part of the Working Group's proceedings, efforts were made to reach agreement on a programme of work based on the Chairman's proposal and those from delegations. At the same time, there was also a general exchange of views on basic questions relating to a nuclear test ban. In light of the absence of a work programme, the Working Group followed the oral suggestion of the Chairman and devoted its last three substantive meetings to a continuation of the exchange of views and focused on general aspects of the question of verification and compliance, including the purposes, general requirements and effectiveness of verification, and on various specific aspects, such as, international seismic monitoring, the question of the need to consider atmospheric detection methods, the role of national technical means, the role of on-site inspection, committee of experts and procedures and mechanisms for consultation and co-operation. A number of delegations stated that their acceptance of this method of work was only a temporary measure to allow the Working Group to proceed during this session. A number of other delegations were of the view that, in spite of the absence of a formal work programme, the Working Group had been able, under the guidance of the Chairman, to have a fruitful and streamlined consideration of issues of verification of and compliance with a comprehensive test ban in the exercise of its mandate.

11. It was felt that in discharging its task, the Ad Hoc Working Group should draw on the knowledge and experience that had been accumulated over the years in the consideration of a comprehensive test ban in the successive multilateral negotiating bodies and in the trilateral negotiations.

12. The examination of issues relating to verification and compliance covered general aspects of the subject. Some delegations stated that the majority of countries were convinced that the means of verification presently available were sufficient to provide reasonable assurance of compliance with a nuclear test ban treaty. In this connection, they made reference to the statement of the United Nations Secretary-General to the Conference of the Committee on Disarmament on 29 February 1972, relating to a comprehensive test ban, in which the Secretary-General had, inter alia, stated the following:

"I believe that all the technical and scientific aspects of the problem have been so fully explored that only a political decision is now necessary in order to achieve final agreement.

When one takes into account the existing means of verification by seismic and other methods, and the possibilities provided by international procedures of verification such as consultation, inquiry and what has come to be known as 'verification by challenge' or 'inspection by invitation', it is difficult to understand further delay in achieving agreement on an underground test ban.

In the light of all these considerations, I share the inescapable conclusion that the potential risks of continuing underground nuclear weapon tests would far outweigh any possible risks from ending such tests." (CCD/PV.545, 29 February 1972)

Other delegations stated that the adequacy of verification was not simply a question of yield or detection level nor was it something that could be defined collectively. Rather it is based on a combination of factors and is determined by each State individually based on its national interests.

13. Some delegations, while recognizing that it was important to clarify technical problems connected with verification of a nuclear test ban treaty, held that at some point a political decision should be taken, for, otherwise, there would be a danger that, as in the past, the question of verification would be used as a smoke-screen to cover up the lack of political will and delay indefinitely the conclusion of a comprehensive test ban treaty.

14. Some delegations held that those delegations which felt that there were still obstacles to be surmounted should point out what those obstacles were. Certain specific queries were addressed to the nuclear-weapon States that had been engaged in the trilateral negotiations relating to the existing means of verification and those proposed under an international seismic data exchange system, in particular the specific technical parameters of what, in their view, would constitute adequate verification. The three nuclear-weapon States were also asked to specify what were the "important areas where substantial work [had] still to be done", as stated in paragraph 23 of the "Tripartite Report to the Committee on Disarmament" (CD/130).

15. One of the parties to the trilateral negotiations noted that it shared the conviction that the existing means of verification were adequate to assure compliance with a treaty on the complete and general prohibition of nuclear-weapon tests. It explained that, as far as verification on a multilateral basis was concerned, agreement had been reached in the trilateral negotiations and that the outstanding questions were those mentioned in paragraphs 12 and 22 of the Tripartite Report.

16. The other two participants in the trilateral negotiations reiterated the statement contained in paragraph 23 of the Report. They also pointed out that it could not be presumed that all technical problems had been solved. In their view, conclusions relating to the capabilities of the verification system could only be reached when the characteristics of the system were known, but, as yet, there was no agreement on the precise parameters of such a system nor was such a system in existence. Beyond

that, they noted that the conduct of nuclear explosions, regardless of yield or ostensible purpose, could provide weapons-related benefits. They, therefore, argued that the question of adequacy could not be looked at as a question of merely establishing an "adequate" detection level in terms of yield of nuclear explosions. In their opinion, a determination of adequacy involved a whole complex of issues and was a matter for political decision by each Government in light of its national requirements and the circumstances prevailing at the time the decision was called for.

17. In connection with the above comments, some delegations made the following observations. First, it was said that it could not be argued that the characteristics of the verification system were, as yet, unknown for they had already been specified in great detail in the first two reports of the Ad Hoc Group of Scientific Experts to consider international co-operative measures to detect and identify seismic events (CCD/558 and Corr.1, CCD/558/Add.1 and Corr.1 and CD/43 and Add.1). Secondly, it was pointed out that the question of what would constitute an "adequate" detection level in terms of yield of nuclear explosions, had been raised because those two nuclear-weapon States had consistently held in the past that that question was crucial to the conclusion of a nuclear test ban treaty. Thirdly, the two nuclear-weapon States were asked to explain what was the whole complex of issues involved in a determination of adequacy. Finally, it was pointed out that the required political decision had to be taken on the basis of certain objective and mutually accepted norms and it should be the task of the Working Group to develop such norms.

18. Other delegations reiterated that the system proposed by the Ad Hoc Group of Scientific Experts was not in operation. In response to this observation, it was argued that since the specific characteristics of the proposed system were already known it was not necessary to await its being put into operation in order to determine its capabilities.

19. Some delegations, referring to the purposes and general requirements of verification, held that any verification system should provide confidence that the Parties observed their treaty obligations, deter them from conducting clandestine activities contrary to the treaty and counteract unfounded suspicion about naturally occurring events. These delegations further considered that technical and political requirements to satisfy those three tasks might be quite different and that although some technical capabilities of a verification system could be agreed upon, it was difficult to assess the overall capabilities and the adequacy of any verification system without knowing the political requirements of individual countries. These

delegations, therefore, suggested that it was neither possible nor necessary to make a general assessment of the adequacy of verification systems and that such assessment should be made on a national basis in light of national political requirements. The need to demonstrate the political will and firm commitment necessary for the fulfilment of treaty obligations was, however, stressed.

20. Some delegations pointed out that, due to a variety of factors, different countries had different possibilities to monitor compliance with a nuclear test ban by national technical means alone and that an international verification system should serve to even out such differences. Other delegations deemed that a combination of national technical means, international exchange of seismic data and other measures of international co-operation, such as, procedures for consultation and co-operation and on-site inspection "by challenge" in case of suspicious events, would provide adequate means of verification. As noted earlier, some delegations felt that the verification system of a nuclear test ban treaty should apply equally to all States and provide equal access to all. In that connection, it was suggested that clarification should be provided to the points raised in document CD/181 and in the synthesis, prepared by the Secretariat, of the discussions in the Committee on Disarmament on agenda items 1 and 2 during the informal meetings devoted to those items in March and April 1981 (CD/UN.SUMM/1).

21. The discussion also covered specific aspects of the question of verification and compliance, as set forth below.

22. Reference was made to the work of the Ad Hoc Group of Scientific Experts to consider international co-operative measures to detect and identify seismic events. Mention was also made of the co-operative seismic monitoring measures envisaged in the trilateral negotiations, as outlined in the Tripartite Report, including the establishment of an international exchange of seismic data and the setting up of a committee of experts. Some delegations were of the view that the establishment of an international system for the exchange of seismic data was a task of the highest priority. In their view, such a system should be in place before a comprehensive test ban treaty entered into force. Other delegations considered that the system should be set up in connection with a comprehensive test ban treaty and after such a treaty had entered into force. Some delegations felt that in the implementation of the system account should be taken of advanced available scientific and technological developments. They pointed out that, otherwise, those countries that would have to depend on the services of the international seismic data exchange system, would not have equal access to all the available information. Other delegations

argued that for the system to be accessible to all parties it should be based on widely used technology which all parties could afford. In addition, some delegations maintained that there was a close relationship between political negotiations on a nuclear test ban treaty and technical work on a verification system and that the latter should not be carried out as if it were an open-ended exercise that could go on indefinitely so as to take account of every scientific and technological advance. Furthermore, these delegations felt that, as noted earlier, the basic elements of an international system for the exchange of seismic data were already contained in the first two reports of the Ad Hoc Group of Scientific Experts. A number of delegations suggested that consideration should be given to the institutional aspects of an international seismic monitoring system and attention was drawn to the illustrative list of subjects contained in document CD/95. In the opinion of various other delegations, it would not be appropriate for the Working Group to undertake the consideration of such subjects at this time.

23. Different views were expressed concerning the need to examine methods for the detection of airborne radioactivity. Some delegations held that a nuclear test ban should include an integrated international monitoring system, comprising atmospheric as well as seismic detection methods. In that connection, it was suggested that the mandate of the Ad Hoc Group of Scientific Experts should be broadened to include the examination of atmospheric detection methods. Other delegations felt that there was no need to revise the mandate of the Ad Hoc Group of Scientific Experts. In this view, it was unnecessary to devote attention to verification issues relating to tests within the scope of the prohibitions contained in the Partial Test Ban Treaty, since compliance with that Treaty had not given rise to problems in the nearly 20 years it had been in force.

24. A suggestion was made that under a new and broader mandate, the Ad Hoc Group of Scientific Experts should be subordinated to the Ad Hoc Working Group established under item 1 of the agenda of the Committee on Disarmament. Some delegations stated that the current link between the Committee on Disarmament and the Ad Hoc Group of Scientific Experts should be maintained.

25. With respect to national technical means, some delegations referred to the relevant sections of the Tripartite Report. In their opinion, national seismic stations would actually be the basis of the whole verification system, since those stations would provide the data on which judgments as to whether or not a ban was being observed by the parties would be made. In addition to this, an international exchange of seismic data as well as other international co-operative measures would

give all parties ample opportunities to take part in the verification process. Other delegations held that national technical means alone were not adequate for the effective verification of a nuclear test ban and that, as noted earlier, given the differences in the national technical capabilities of States to monitor compliance with such a ban, an international verification system that provided equal access to all parties was needed to help reduce asymmetries or technical inequalities, thus creating the requisite confidence that the ban was being complied with by all parties.

26. Concerning on-site inspections, some delegations were of the view that provision for such inspections could be made on a voluntary basis along the lines of the procedure set forth in the Tripartite Report. At the same time, these delegations stressed that such inspections would not add much to the capability of the verification system. Other delegations emphasized the importance of on-site inspection to clarify the nature of ambiguous events and contended that provision for on-site inspection on a voluntary basis only would be insufficient to build confidence and to develop an effective verification system.

27. With respect to procedures for consultation and co-operation, some delegations pointed to the procedures envisaged in the trilateral negotiations as outlined in the Tripartite Report. A suggestion was made that, in addition to arrangements for bilateral and multilateral consultations among Parties, provision should be made in a nuclear test ban treaty for the establishment of two committees. One would be a technical body entrusted with the task, inter alia, of overseeing the operation of the international verification system and of solving any technical problem that might arise in the operation of that system. The other would be a consultative committee which would serve as a forum for political discussions of issues related to the implementation of the treaty, including its verification. Another view was expressed to the effect that experience regarding the implementation of existing multilateral treaties in the field of arms limitation and disarmament indicated that it was not necessary to set up two committees. According to this view, in the case of a nuclear test ban treaty a committee of experts, as envisaged in the trilateral negotiations, would suffice.

28. Some delegations expressed the view that the possibility of bringing complaints to the Security Council would provide an additional guarantee of compliance with a nuclear test ban treaty. Other delegations, referring to the experience with certain multilateral disarmament agreements, dwelt on the shortcomings of a complaints procedure that was limited to recourse to the Security Council.

29. Some delegations drew attention to the possible relevance of arrangements between two or more parties to a nuclear test ban treaty and commented that such arrangements could provide additional assurance of compliance and serve as a confidence-building measure.

30. Delegations also expressed views on the mandate of the Ad Hoc Working Group. Some delegations held that the mandate was inadequate in that it did not provide for negotiations leading to the conclusion of a nuclear test ban treaty. In the view of these delegations, the Working Group should use the time available to it in 1982 so as to enable the Committee on Disarmament to give it a broader mandate as envisaged in the Committee's decision on the establishment of the Working Group. Other delegations disagreed with this view and believed that the Working Group should proceed with substantive discussions based on its mandate without prejudice to any future decision regarding the mandate of the Working Group. Some delegations observed that, while the mandate was unsatisfactory, it provided an opportunity for making a start towards the resolution of verification problems in preparation for future negotiations. Still other delegations expressed the view that the mandate did not preclude negotiations leading to the conclusion of a nuclear test ban treaty especially since the mandate directed the Working Group to take into account all existing proposals and future initiatives. It was pointed out by one delegation that, although it was not prepared to negotiate a comprehensive test ban treaty at this time, it desired to undertake substantive discussions on verification and compliance issues. Some delegations regretted that in the opinion of this delegation the time was not propitious for negotiations on a nuclear test ban and felt that the Working Group should not be used as a cover for the unwillingness to conclude a treaty on the complete and general prohibition of nuclear-weapon tests. The attention of that particular delegation was drawn by other delegations to the Partial Test Ban Treaty of 1963, in whose preamble it is stated "seeking to achieve the discontinuance of all test explosions of nuclear weapons for all time, determined to continue negotiations to this end, and desiring to put an end to the contamination of man's environment by radioactive substances", and they expressed the view that this constituted a legal commitment. That delegation was asked how it reconciled being a party to that Treaty with the position it had now taken. That delegation stated that it did not accept the assertion that it had violated legal treaty commitments. It, therefore, stated

its intention to respond fully to that assertion. Some delegations held the view that the Working Group had completed the substantive examination of issues relating to verification and compliance and that, therefore, the Committee should revise without delay the mandate of the Working Group with a view to enabling it to negotiate on a treaty prohibiting all nuclear-weapon tests, having in mind that this is a question of the highest priority and taking into account all existing proposals and future initiatives. In the view of other delegations, a revision of the mandate was not called for under present circumstances; considerable work still remained to be done in resolving various issues relating to verification and compliance because, inter alia, the Working Group had not been able to work on the basis of a structured programme. Several delegations pointed out that they had accepted the terms of the present mandate only because they were persuaded that the explicit reference to the need to take into account existing proposals and future initiatives and to the adoption of a decision by the Committee on Disarmament on subsequent courses of action, should necessarily be interpreted as meaning that the Group's mandate should be broadened, as required by those proposals and initiatives, not in the indefinite future but at a very early date.