

CONFERENCE OF THE COMMITTEE ON DISARMAMENT

CCD/PV.537
9 September 1971
ENGLISH

FINAL VERBATIM RECORD OF THE FIVE HUNDRED AND THIRTY-SEVENTH MEETING

held at the Palais des Nations, Geneva,
on Thursday, 9 September 1971, at 10.30 a.m.

Chairman:

Mr. H. KHALLAF

(Egypt)

(Previous verbatim records in this series appeared under the symbols
ENDC/PV.1-ENDC/PV.430).

GE.71-19432

PRESENT AT THE TABLE

Argentina:

Mr. E. de LA GUARDIA
Mr. M.E. DELPECH

Brazil:

Mr. R. SARAIVA GUERREIRO
Mr. P. NOGUEIRA BATISTA
Mr. L.F. PALMEIRA LAMPRELA

Bulgaria:

Mr. K. CHRISTOV
Mr. I. PEINIRDJIEV

Burma:

U WIN PE
U KYAW MIN

Canada:

Mr. G. IGNATIEFF
Mr. R.W. CLARK
Mr. R.E. MOORE

Czechoslovakia:

Mr. M. VEJVODA
Mr. J. STRUCKA

Egypt:

Mr. H. KHALLAF
Mr. O. SIRRY
Mr. M. ISMAIL

Ethiopia:

Mr. M. IMRU

Hungary:

Mr. I. KOMIVES
Mr. J. PETRAN
Mr. F. GAJDA

India:

Mr. P.K. BANERJEE
Mr. K.P. JAIN

Italy:

Mr. R. CARACCILOLO
Mr. E. GIUFFRIDA
Mr. R. BORSARELLI
Mr. U. PESTALOZZA

Japan:

Mr. H. TANAKA
Mr. H. OTSUKA
Mr. H. MATSUMOTO
Mr. Y. HAMADA

Mexico:

Mr. J. CASTAÑEDA
Mr. M. MARIN

Mongolia:

Mr. O. KHOSBAYAR
Mr. Z. ERENDO

Morocco:

Mr. M.A.A. KHATTABI

Netherlands:

Mr. E. BOS

Nigeria:

Mr. A.A. OLUMIDE

Pakistan:

Mr. T.O. HYDER

Poland:

Mr. W. NATORF
Mr. J. STACHOWSKI
Mr. S. TOPA
Mr. R. WLAZLO

Romania:

Mr. I. DATCU
Mr. C. GEORGESCO
Mr. C. MITRAN
Mr. N. CHILIE

Sweden:

Mr. L. ECKERBERG

Mr. U. ERICSSON

Mr. U. REINIUS

Union of Soviet Socialist
Republics:

Mr. A.A. ROSHCHIN

Mr. V.B. TOULINOV

Mr. Y.C. NAZARKINE

United Kingdom:

Mr. H.C. HAINWORTH

Mr. W.N. HILLIER-FRY

Mr. J.T. MASEFIELD

Mr. R. HOULISTON

United States of America:

Mr. J.F. LEONARD

Mr. J. MARTIN

Mr. A.F. NEIDLE

Mr. W. GIVAN

Yugoslavia:

Mr. M. VUKOVIC

Mr. M. MIHAILOVIC

Special Representative of the
Secretary-General:

Mr. I. PASTINEN

1. The CHAIRMAN (Egypt): I declare open the 537th plenary meeting of the Conference of the Committee on Disarmament.
2. Mr. BOS (Netherlands): In my statement today I should like to make some remarks about the question of the cessation of underground nuclear-weapon tests.
3. First of all, I welcome the opportunity to introduce briefly the working paper on the seismicity of the United States, the Soviet Union and China (CCD/349) submitted by my delegation. This document is based, with some clarifications and modifications, on the paper which was presented by our seismological expert, Dr. Ritsema, to the informal meeting on 30 June. The underlying study of the seismicity of certain chosen regions was undertaken in view of a feeling of uncertainty among members of delegations about the frequency of seismic events of given magnitudes in certain regions of the world. Large discrepancies had been found in this respect in oral and written communications on the subject, and consequently the efficacy of detection and identification systems for smaller magnitude events was not clear. The purpose of the Netherlands working paper is to clarify that controversy by a statement that can be verified by all of us, since it is derived from data available to anyone. It gives in simple terms what is known about the seismicity of those parts of the world where unidentified events could give rise to concern within the framework of a comprehensive test ban.
4. The working paper shows, for instance, that, with the present seismic monitoring system, annually about three earthquakes in the Soviet Union with a magnitude roughly equivalent to that of explosions in hard rock of 10 kilotons or higher may pass unidentified. For the United States that number is one and for China seven. With a modest and feasible improvement of the identification capabilities, those numbers could even be lowered considerably. For example, with an identification system as indicated in the Canadian working paper CCD/327, on an average only one earthquake a year in the Soviet Union down to such a magnitude would not be distinguished from an explosion.

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5. Moreover, it should be borne in mind that the figures given in the paper are on the conservative side. No use has been made of the location of centres of population in the earthquake areas of the countries. If such regions also were excluded from the study, as were the border regions with neighbouring countries, the numbers of earthquakes that might be interpreted erroneously as explosions would be lowered accordingly.

6. It may be remarked also that many explosions have been identified as such during the past eight years although of a magnitude below that of the 90 per cent probability identification level as given in the Canadian study by

Drs. Whitham and Basham. It has been found that under favourable conditions actual identification is sometimes better than was theoretically predicted.

7. Having said that with regard to my delegation's latest working paper, I should like now to revert to my intervention in this Committee of 29 April (CCD/PV.512) in order to clarify one of the points I raised on that occasion. The argument in my statement of 29 April on the problems of verifying a comprehensive test ban was based essentially on the following considerations:

First, none of the proposed verification systems would make it possible to identify all types of underground nuclear explosions.

Second, when discussing requirements for a comprehensive test ban, both seismic and non-seismic observation possibilities have to be taken into account.

Third, the principal aim of verification is deterrence from evasion.

Fourth, the possibility of on-site inspection can enhance deterrence.

Fifth, the risks that may arise from the partial evasion of a test ban by a rival Power have to be weighed against the risks arising from the continuation of underground tests without restriction.

8. Although I could comment in further detail on each of those five considerations, I shall limit myself to the first one because we think that this point is helpful for viewing the question of on-site inspection in its proper proportions.

(Mr. Bos, Netherlands)

9. With respect to the possibilities of detection and identification by national means, we can divide the whole spectrum of possible underground nuclear explosions into three categories: explosions that can be detected, located and identified; explosions that can be detected and located but not identified; and explosions that cannot be detected at all or, in some cases, can be detected but cannot be located. It is only with respect to the second category that the question of on-site inspection comes under consideration, for in order to carry out any on-site inspection it is necessary first to detect and locate a seismic event. With respect to the **third** category, the possibility of on-site inspection is of no avail. That implies that all parties to the test ban negotiations have always been prepared to accept some risk of evasion.

10. If we compare the different proposals that have been made on the verification of a comprehensive test ban, we should realize that we are never offered a choice between a comprehensive test ban with a risk of evasion and a comprehensive test ban without a risk of evasion; for with none of the proposed systems will there ever be 100 per cent certainty that a comprehensive test ban is fully complied with. Therefore I said in my statement of 29 April that --

"... we must in any case ponder the question of what is more important: the banning of all tests, with a risk that small explosions could go on undetected, or the continuance of underground tests without restriction." (ibid., para. 40)

11. In order to view the controversy on verification in its proper proportions, it might be useful to describe the three above-mentioned categories of explosions in more quantitative terms.

12. First of all, as to the category of explosions **which** can be detected and identified by national means with a high degree of certainty, it should be concluded from the Canadian analysis of 1970 (CCD/305) that this category comprises explosions down to a yield of about 50 kilotons in hard rock in the Northern Hemisphere, using the present seismic monitoring system. However, in their excellent new analysis of 29 June (CCD/327), the Canadian experts showed that explosions down to a yield of about 20 kilotons in most natural environments, except dry alluvium, can be identified with the present system.

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13. Moreover, it is indicated in their paper, as it was in our working paper CCD/323, that it seems possible to install a seismic monitoring system capable of identifying hard-rock explosions down to a yield of about 5-10 kilotons in the Northern Hemisphere. Such a system can be achieved mainly by the installation of a number of long-period vertical seismometers (LPZ-instruments) at selected places. I may add that even if sometimes there should be natural earthquakes which behaved as explosions, the recent Netherlands working paper indicates that their number would be very small in this range. In this context I may refer also to the article by Dr. Ericsson which was circulated by the Swedish delegation.

14. With respect to explosions in dry alluvium, the seismic detection and identification possibilities relate to yields about tenfold those given for hard-rock explosions. However, explosions in dry alluvium of a yield of 20-30 kilotons or higher would normally cause cratering of the surface, which might be discovered, for instance, by satellite photography.

15. The third of the three categories I mentioned, that is the category of explosions that cannot be detected at all or, in certain instances, may be detected but not located, comprises explosions of a few kilotons or less in hard rock as well as bigger explosions in dry alluvium. In contrast to the first category, the carrying-out of nuclear test explosions in dry alluvium becomes interesting here because for yields under about 10 kilotons there seem to be better possibilities of avoiding the phenomenon of cratering. Incidentally, a would-be test-ban violator would probably take no risk of being found out and therefore would only test explosive devices well under 10 kilotons. I may mention in passing that of the relevant countries some have only very restricted areas where there are sufficiently thick layers of dry alluvium.

16. From what I have said so far about the first and third categories of explosions we can get a clearer view of the scope of the second category -- namely, the only category which has relevance to the problem of on-site inspection. This category now seems to comprise a range of yields between a few and about 20 kilotons and may be further reduced by the introduction of advanced methods and instruments. At the same time, the number of earthquakes equivalent to explosions in this range is relatively small, which would restrict the possibility of violating a test ban without raising serious suspicion. When we say that on-site inspections can

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serve to strengthen the deterrence from evasion, we should take account of those facts and figures for the second category of explosions -- that is, the category of explosions that can be detected and located but not identified by national means -- in order to obtain a correct understanding of the dimensions of the problem.

17. After that amplification of the verification problem, I should like now to give our reaction to the questions asked by the Swedish representative at our meeting of 4 May (CCD/PV.513, paras. 38-43).

18. Her first question was whether any delegation could state specific political reasons, contingent upon the present situation -- for instance, in connexion with the Strategic Arms Limitation Talks (SALT) -- why we should make efforts to elaborate a threshold treaty despite the general political and technical objections to such a solution. I have already stated my delegation's views on the threshold idea in my statement of 29 April (CCD/PV.512, paras. 24 et seq.), and I think those still hold. We do not think that a formal threshold treaty, even in the present situation, is a very suitable solution of the test-ban problem, although it is better than nothing at all. However, we can imagine that even without a formal treaty the major nuclear Powers would restrict themselves in the performing of test explosions. In this respect we are thinking especially of those tests which are clearly related to weapons which it is hoped will be encompassed by a SALT agreement and which can be identified easily by national means.

19. The second Swedish question related to other partial agreements, such as a phasing-out agreement. In answer to that question my delegation wishes to state that we can accept a phasing-out solution if the phasing-out period is not too long and if there is a real prospect of a complete cessation of tests in the near future.

20. In reply to the third question, concerning the relationship between a ban on underground tests and the Moscow Treaty (ENDC/100/Rev.1), we would prefer to see such a ban laid down in an independent treaty. We know, of course, that the Moscow partial test-ban treaty contains references to a comprehensive test ban in its preamble and in its article I, paragraph 1(b), and in view of this one could also envisage covering underground tests in an additional protocol to the Moscow Treaty. But such

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a protocol, as we see it, would probably be longer and more complicated than the original Treaty, as it would have to include, for instance, provisions about complaints and verification and about exceptions for nuclear explosions for peaceful purposes. Furthermore, complications could arise with regard to the questions of participation, entry into force, and amendment of the protocol if it were linked to the Moscow Treaty. The third possibility mentioned by Mrs. Myrdal, namely, incorporating the ban on underground tests in a revision of the Moscow Treaty itself, would not be advisable in our view because we see some risk in renegotiating a text which now enjoys such great standing and wide acceptance.

21. The Swedish delegation asked in its fourth question whether we wish to work simultaneously on a treaty and on a series of transitional measures facilitating and leading up to a comprehensive solution. My answer is that the Netherlands delegation is willing to work simultaneously on all possible measures which can promote a comprehensive test ban. In particular, I wish to state that my delegation is prepared to lend its support to all the suggestions for transitional or confidence-building measures contained in the Canadian working paper CCD/336.

22. The other questions put forward by Mrs. Myrdal on 4 May were directed to the nuclear-weapon Powers. In this connexion I may also refer to the interesting suggestions made by the delegation for Sweden for the provisions of a treaty including a phasing-out period and regulations concerning peaceful nuclear explosions (CCD/PV.524, paras. 7, 8; CCD/348). As I said, we are willing to support every constructive idea which can promote a comprehensive test-ban treaty; but before my delegation comments in detail on the different provisions of the proposed treaty and protocols, it prefers to await the comments of the nuclear-weapon Powers in the Committee.

23. Looking back on our Committee's study of the test-ban question in the course of this year, I think we can agree that great progress has been made in clarifying the scientific aspects of the issue. It may be questioned now whether we should expect much from a further exploration of these aspects.

(Mr. Bos, Netherlands)

My delegation has the impression that the scientific aspects and the technological possibilities have been almost fully explored and that relatively little can be added to the picture by a further continuation of the scientific and technical discussions. If this is correct, I wonder whether we should not conclude that the time has come for the Powers most directly concerned to make such political decisions as are needed in order to achieve the comprehensive test ban for which we are all striving.

24. Mr. CARACCILOLO (Italy): Today I wish to make a short statement, or rather a reminder of an old subject very familiar to the Committee.

25. Once again the General Assembly will consider, at its forthcoming session, the problem of general and complete disarmament, listed as item 29 of its provisional agenda. The Committee is well aware of the great importance attached by my delegation, as well as by many others, to this issue. I am pleased to note that it has been kept in mind in the course of this year by both the co-Chairmen of our Committee.

26. The representative of the USSR has referred on several occasions to the problem of general and complete disarmament as one of the major tasks facing the Committee. In his statement of 29 June Mr. Roshchin called upon all members of the Conference of the Committee on Disarmament "to contribute in every way to progress in this **direction**" (CCD/PV.517, para. 47). I should like to mention also Mr. Leonard's latest statement, made on 26 August, in which he referred, dealing with the problem of restraints on conventional armaments, to both the American and the Soviet plans of the early 1960s for general and complete disarmament. (CCD/PV.533, para. 22)

27. I need hardly recall that members of our Committee have done a good deal of work on this problem in previous meetings of the Conference of the Committee on Disarmament. Those efforts have been commended by the General Assembly in its resolution 2661 C (XXV) (CCD/318), in operative paragraph 2 of which it expressed its appreciation of the documents submitted to the Conference, including the working papers on a comprehensive programme of disarmament submitted by the Netherlands (CCD/276) and by Italy (CCD/309), the draft comprehensive programme of disarmament submitted by Mexico, Sweden and Yugoslavia (CCD/313), and the comprehensive programme of disarmament submitted to the General Assembly by Ireland, Mexico, Morocco, Pakistan, Sweden and Yugoslavia (A/8191).

28. In operative paragraph 3 of the same resolution the General Assembly also recommended that the Conference take into account, in its further work and in its

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negotiations, document A/8191 and other disarmament suggestions presented so far or to be presented in the future. In the organization of our future work we must not forget this recommendation of the General Assembly concerning achievement of the fundamental goal of the Committee's activities, which reflects a widespread and deeply-felt aspiration of the entire international community.

29. We realize that the continuing negotiations on a convention for the prohibition of biological weapons and toxins have absorbed much of the attention of this Committee during the year. We do not underestimate the importance of such a treaty as the first measure of actual disarmament, aimed, as stated in the preamble to the parallel drafts (CCD/337*; CCD/338*), at facilitating the achievement of general and complete disarmament under strict and effective international control.

30. We believe, however, that further efforts will be required in order to make substantial progress towards that goal. We should like, therefore, to stress the need to resume work at the next session of this Committee on the problem of general and complete disarmament as the main item on our agenda. All the documents that I have mentioned above contain constructive material for a fruitful discussion. Let me add that the organic method proposed in the Italian working paper (ENDC/245) offers appropriate guidelines for a gradual, balanced and comprehensive approach to the problem. We are confident, therefore, that a new impetus will be given by the Committee to the consideration of this issue.

The Conference decided to issue the following communiqué:

"The Conference of the Committee on Disarmament today held its 537th plenary meeting in the Palais des Nations, Geneva, under the chairmanship of H.E. Ambassador Hussein Khallaf, representative of Egypt.

"Statements were made by the representatives of the Netherlands and Italy.

"The next meeting of the Conference will be held on Tuesday, 14 September 1971, at 10.30 a.m."

The meeting rose at 11.5 a.m.