Tenth special session
AD HOC COMMITTEE OF THE TENTH
SPECIAL SESSION
Agenda item 11

ADOPTION OF A PROGRAMME OF ACTION ON DISARMAMENT

Note verbale dated 2 June 1978 from the Permanent Mission of the Federal Republic of Germany to the United Nations addressed to the Secretariat

The Permanent Mission of the Federal Republic of Germany to the United Nations presents its compliments to the Secretariat of the United Nations and has the honour to submit annexed hereto a draft working paper entitled "Contribution to the seismological verification of a comprehensive test ban".

The Permanent Mission requests the Secretariat kindly to circulate the draft working paper as an official document of the tenth special session of the General Assembly under agenda item 11.
ANNEX

Contribution to the seismological verification of a comprehensive test ban

1. The Government of the Federal Republic of Germany attaches special importance to a convention concerning an adequately verified comprehensive test ban and sees it as a major step towards strengthening the non-proliferation system. It is following the trilateral talks between the United States of America, the Soviet Union and the United Kingdom of Great Britain and Northern Ireland with great interest and hopes that General Assembly resolution 32/78, adopted last year, will soon be implemented.

2. Ever since it became a member of the Conference of the Committee on Disarmament, the Federal Republic of Germany has played an active part in the Geneva talks in preparation for a comprehensive test-ban agreement covering underground nuclear explosions. The Federal Republic of Germany feels that it is particularly important to achieve an adequate verification arrangement since, like all arms control agreements, a comprehensive test-ban agreement needs this as a basis of confidence in its observance.

3. For this reason, the Federal Republic of Germany is represented in the ad hoc group of seismic experts which, following the Swedish initiative, was established on 22 July 1976 to review the possibilities of an international seismological monitoring system for the detection, location and identification of underground nuclear explosions as a basis for verification of a comprehensive test ban. This monitoring system is to embrace selected, high-capability seismic stations of a number of States. The Federal Republic of Germany has proposed the Central Seismological Observatory at Graefenberg for participation in the international seismic data exchange.

4. At their fifth meeting, held from 27 February to 8 March 1978 at Geneva, the group of experts finalized its report, entitled "International co-operative measures to detect and identify seismic events". It describes the technical implications and the operation of a seismological monitoring system. According to the report, the co-operative international effort should have three elements: a systematic improvement of the observations reported from a network of some 50 seismological observatories around the globe, an international exchange of these data over the Global Telecommunications System of the World Meteorological Organization, and processing of the data at special international data centres for the use of participating States.

5. The Federal Republic of Germany contributed to subsection III of the report (other data exchange systems), chapter 5 (a description of existing data exchange facilities) and chapter 7 (equipment and estimated costs to establish and operate the specified system). In addition, it has submitted a considerable number of technical and scientific reports, such as a detailed description of the Graefenberg Central Seismological Observatory (GSE/FRG 1), which makes special allowance for the

/...
requirements of a comprehensive test ban; a working paper (GSE/FRG 3) on broad-band instrumentation and data analysis, which describes specific aspects of the seismic data exchange, taking into account the new registrations of the Grafsenberg Observatory; and, together with Sweden, a working paper (GSE/SW, FRG 2), which elucidates the results of a bilateral experiment for the exchange of detection and identification parameters.

6. The data contained in the final report relating to detection and location probabilities of the proposed network of stations, which are important for comprehensive test-ban verification, are estimates and therefore urgently require experimentation. So far, the experts' report only has the quality of a project study; conclusions as to the actual functioning of a monitoring system can only be drawn after the most comprehensive test possible over a sufficient period of time. An international seismic data exchange, limited in time, should review on a global basis, the technical possibilities of monitoring a comprehensive test ban. This recommendation was also made by the seismic experts in their report.

7. Such a practical test phase as recommended by the experts might facilitate the conclusion of a comprehensive test ban. The Federal Republic of Germany is therefore willing to make available for such a network the Central Seismological Observatory at Grafsenberg, together with its installations, which are an integral part of all hypothetical networks in the project study. It is desirable that all countries in question should agree to the practical test phase and subsequently participate in an appropriate observation system.