

size if the detection probability were placed at 10 per cent. Other numbers may apply to other systems and other areas, but the example shows that a system has a deterrence capability at considerably lower threshold than are usually contemplated when assessing global and regional seismic verification systems.

To create and preserve necessary confidence in a CTB treaty, it is important that all parties are convinced that the deterrence against clandestine activities is maintained. To achieve this the established verification system must be efficiently operated and maintained. It is also essential to provide a high detection and identification capability against such clandestine activities that in any significant way can influence the over-all nuclear-weapon situation. This means that there must be a high probability of detection and identification of explosions of yields large enough to make possible the development of new nuclear weapons or weapon systems.

A global seismological verification system will be a key part of the verification arrangements for a CTB treaty. Such a system will observe a large number of earthquakes every year in most parts of the globe. With few exceptions these earthquakes will be identified as such with the help of the seismological data provided by the system. It is, however, expected that on a few occasions uncertainty will remain as to the nature of the observed events. In those cases it is important that such events could be clarified through the verification provisions of the treaty. Thus the parties, by means of consultations, of access to additional scientific data or of on-site inspections, could be assured that the events were not clandestine nuclear-weapon tests. This includes arrangements for observing special events, i.e., large chemical explosions that might otherwise be misinterpreted. Lack of agreed procedures for efficiently taking care of suspicion about naturally occurring events could jeopardize the very existence of the treaty.

In the Swedish view, the verification arrangements included in the draft treaty presented by Sweden on 14 June 1983 (CD/381) contain the necessary provisions for adequate verification. In this context we also support the proposal earlier this week by the Minister for Foreign Affairs of Australia that such a verification system should be established without further delay, which is in line with our view that a verification system should be in operation when the treaty enters into force. If the most advanced technology is used we should then be able to demonstrate that any reasonable demands on a verification system are fulfilled and the presumed lack of adequate verification can then no longer be used as an excuse for further testing.

The Ad Hoc Group of Scientific Experts is presently planning a technical test covering the extraction of level I data at participating stations, the exchange of this data using network provided by WMO/GTS and the compilation and analysis of the data at specially established experimental international data centres. Sweden supports this work and will actively participate in the experiment by providing data from the Hagfors array station and by operating an experimental international data centre in Stockholm during the test. The Swedish delegation is convinced that the results from this test together with the results of national efforts to improve and develop the procedures and the facilities for seismic data recording, analysis and exchange will greatly facilitate the establishment of a global seismic verification system.

In the draft treaty submitted by Sweden last year which I have just mentioned we proposed that, in addition to the international seismological verification system, a similar system for monitoring atmospheric radioactivity be established. We have noticed with satisfaction that delegations have expressed interest in pursuing this idea further. The time therefore seems appropriate to start technical elaborations on this subject. As a system for monitoring atmospheric radioactivity closely resembles that for the exchange of seismological data, developed by the Ad Hoc Group of Scientific Experts, it could be contemplated to give the Ad Hoc Group the task to further study also this