

would constitute a positive and realistic contribution in support of the bilateral negotiations.

**Comprehensive
test ban**

While this Committee has not been involved in direct negotiations concerning a possible comprehensive test ban (CTB), many members, myself included, have registered our interest and concern. Progress towards a CTB agreement has been considered by all to be painfully slow, but we have recognized at the same time the complexity of the technical issues involved, particularly those relating to verification. The Norwegian representative underscored this fact for all of us, I think, when he pointed out on March 10, 1981 (CD/PV.113) that "an adequate verification system is a necessary component in a total test-ban régime, both in order to ensure compliance and to build confidence". In highlighting his own country's contribution through "NORSAR" in the area of seismic verification, he acknowledged the important progress achieved by the *Ad Hoc* Group of Scientific Experts to Consider International Co-operative Measures to Detect and Identify Seismic Events.

Canada considers the work accomplished by the *Ad Hoc* Group to be of singular significance in practical terms towards the realization of a comprehensive test ban. A ban is one of the four elements in the "Strategy of Suffocation" which Prime Minister Trudeau outlined at the first special session of the General Assembly devoted to disarmament, in 1978. Beyond that, however, it is an area of interest to Canada precisely because it is one in which advanced technology, unfettered by other considerations, could provide adequate verification with practical and almost immediate results. I need hardly point out that as far back as in 1962, it was the Soviet Union which declared that, in the interests of seismic verification, it was "prepared to agree to two to three inspections a year being carried out in the territory of each of the nuclear powers" and that the proposal it had put forward for "automatic seismic stations" included "elements of international control" (ENDC/73).

Eighteen years later the negotiating states, in their tripartite report to this Committee (CD/130), acknowledged the contribution which co-operative seismic monitoring measures could make in verifying compliance with a treaty. The report accepted conditional "on-site" inspection as a co-operative measure. We strongly believe that this Committee and the seismic experts group could supplement in a very practical manner the efforts of the negotiating states.

A pivotal role

These two areas of negotiations — CTB and CW — are representative of those in which verification plays a pivotal role. Very often it appeared that difficulties in verification issues were based on preconceived differences regarding purpose, methodology and definition. It was in part the frustration of being so close to and yet so far from a number of agreements which prompted the initiation of the basic research program of which this conceptual paper is a result.

We accept the argument put forth very often that specific terms of verification cannot be negotiated before the arms-control problem itself is defined. It has been our view, however, that there are similarities in the concept of verification which extend across the spectrum of the arms-control problem. Hence we can and should learn from our experience. It is in this spirit that we developed the "compendium", to see what had