

*Private Members' Business*

al Trade and by the Geophysics Branch of the Department of Energy, Mines and Resources.

The most important international forum for discussing seismic verification techniques is the scientific experts' group established in Geneva in 1976 at the Disarmament Committee Conference. The group's mandate is to define the technical specifications of a future international seismic data exchange system, to establish the facts and to provide analysis of data exchange methods. Mr. Speaker, the purpose of the scientific experts' group is not to design or develop an international system for enforcing a comprehensive nuclear (test) ban but rather to discuss the various aspects of such a system and to test its components. Canada has supported the scientific experts' group from the beginning.

Among the various initiatives taken by the scientific experts' group to date, the international seismic data exchange experiment in 1984 was the most important. The purpose of this experiment was to assess the effectiveness of the present world data exchange system when many countries simultaneously provide large amounts of data and to identify the parts of the system that need to be improved. Rapid international data exchange will be a key element of the effective enforcement of a comprehensive nuclear test ban treaty, if one is ever concluded.

Furthermore, seismic stations, even the remotest ones, must be able to communicate rapidly with each other for the purpose of collecting and analyzing information.

Canada's contribution to the experiment amply demonstrated the importance of our seismic stations. In fact, among the 70 stations throughout the world that took part in this experimental exchange of information, the three Canadian stations provided about 15 per cent of all raw data collected during the experiment. Canadian scientists took an active part in the post-test analysis, the results of which show that although during the decade preceding the experiment, substantial progress had been made with computerized transfer and analysis of data, we will need even greater capacity if we are to process efficiently the tremendous amount of information that

would be generated by a world seismic monitoring system.

At a workshop organized by the scientific experts group last September and hosted by the Canadian government in Yellowknife, there were discussions about the possibility of conducting a second, similar experiment which, considering the progress made in recent years, would offer more stringent testing of the international seismic data exchange system. The fact that far more detailed data, in the form of waves, will be exchanged by participating stations, is an extremely important factor for the second test. The Yellowknife seismic station, which has just been revamped at a cost of \$3.5 million, is one of the most advanced stations in the world and will have a decisive role to play in this new experiment.

Mr. Speaker, the government believes that it is research and preparations as advanced as these that will help it achieve its goal, which is a comprehensive test-ban treaty.

In any case, even if the proposal to amend the partial test-ban treaty, to make it a comprehensive one, may seem attractive because of its simplicity, the present government will continue to support the efforts of the scientific experts group in which Canada plays such an active role.

In concluding, Mr. Speaker, nuclear disarmament will never be truly possible unless we realize that our common security requires verification of all arms control treaties. There are no shortcuts in an enterprise as vital as this one.

[*English*]

**Mr. Deputy Speaker:** Because of the number of members who wish to speak on this issue, if the House will grant unanimous consent, I would like to recognize the member for Waterloo for three minutes, the member for Eglinton—Lawrence for three minutes and then we will call it three o'clock and go on with the business of the House.

Is that agreeable.

**Some hon. members:** Agreed.

**Mr. Deputy Speaker:** I thank the members of the House. The member for Waterloo.

**Hon. Walter McLean (Waterloo):** Mr. Speaker, I appreciate the opportunity to enter this debate, particularly as chairman of the Canadian group of Parliamentarians