

STATEMENT OF THE EXECUTIVE SECRETARY, MR TIBOR TÓTH

On the Occasion of the Scientific Symposium

31 August 2006

Hofburg, Vienna, Austria

Mr. State Secretary, Mr. City Counsellor, Excellencies, Mr. Director General, Ladies and Gentlemen, dear Colleagues,

It is a great pleasure to welcome you to this first Scientific Symposium entitled “CTBT: Synergies with Science, 1996-2006 and beyond.” Let me start by thanking the Federal Ministry for Foreign Affairs of Austria for providing this wonderful venue for our meeting. Furthermore I would like to thank the Government of Austria and the City of Vienna for being such generous and supportive hosts to the CTBTO Preparatory Commission.

This symposium is the first formal occasion celebrating an ongoing process that started well before the Comprehensive Test Ban Treaty was opened for signature 10 years ago. The Group of Scientific Experts, under the Chairmanship of our Master of Ceremonies, Dr. Ola Dahlman, laid the foundations for a close and fruitful relationship between the scientific community and the CTBT-community. A relationship that was focused very much on the design of a verification regime for the CTBT that would with high accuracy and probability detect nuclear test explosions and any other nuclear explosion.

The challenge of designing, building and operating such a system was very much at the heart of discussions about an international arrangement banning nuclear test explosions since the Indian Prime Minister Nehru first proposed a total ban on nuclear testing in 1954. Doubts about the verifiability of such a ban were strong even among those nations which were most advanced in registering nuclear explosions, mostly to find out what the cold war adversary was up to. This argument became even stronger once nuclear test explosions moved underground as a consequence of the Partial Test Ban Treaty. The PTBT banned tests in the atmosphere after the nuclear powers realized the global environmental impact of their testing programmes.

It is in no small part due to progress in science that by the early 1990ies the Members of the United Nations Conference on Disarmament were confident that a legally binding instrument banning all nuclear test explosions could be verified in a credible way.

Today, 10 years after the CTBT was adopted by the United Nations General Assembly, we are proud to state that the scientists and diplomats who predicted that a global verification regime would be feasible and credible were right.

The Provisional Technical Secretariat of the CTBTO Preparatory Commission was mandated to establish an International Monitoring System consisting of 321 monitoring stations in four technologies. Seismic, infrasound and hydroacoustic stations are registering energy propagated through the earth, through the atmosphere and through the oceans. The

radionuclide technology allows to filter radioactive particles and the noble gas stations will in addition also register minute quantities of noble gases present in the atmosphere. The geographic distribution of the stations allows for global coverage of the system and, if I may add, to some rather difficult locations to build and operate these stations. It is the combination of these four technologies that should ultimately allow Member States of the CTBT to make an informed judgment about events registered by our system.

As of today 72% of the station-network has been installed and over half of the stations have been certified which means that they meet the stringent specifications of the Preparatory Commission.

The data registered at our stations around the globe is sent to the International Data Centre in Vienna via satellite communication in near real time. Here the data are processed, redistributed to national data centres and archived. According to the CTBT the International Data Centre is supporting member states in the analysis of the data, providing raw and processed data. Our products which are made available to all member states are based on automated as well as human analysis. This should facilitate the task of finding the proverbial needle in the haystack. To give you an idea about the size of the haystack, the quantities of data currently processed by our system you should realize that terabytes of data are transmitted to the IDC and redistributed per year. Roughly 20.000 events are registered annually. After entry into force of the treaty, Member States with the assistance of the CTBTO should be able to identify and locate that one event among the 20.000 mostly natural occurrences which might be a clandestine nuclear explosion.

Once such a suspicious event is identified and located there will be the possibility to dispatch an On-Site Inspection that would have the right to inspect a fairly small area of 1000 square kilometers and look for indications of a nuclear explosion. The on-site inspection regime poses not only a large number of logistical and political challenges but also of technological ones that I hope will be the subject of further discussions with the scientific community.

The verification regime of the CTBT has several unique features which are worth mentioning. Firstly, it is a global regime that allows for no white spots on the map. Every corner of the globe is covered by it and an event even the remotest areas of our planet would be registered by our stations. Sometimes I even get the feeling that the more remote and the more isolated an area, the higher the likelihood that we still need to build a station there.

Secondly, due too the stringent specifications of the stations, we receive consistent data from the stations in near real time and with extraordinarily high reliability. This puts our network apart from other existing networks which operate under less strict rules of reliability.

Thirdly, the CTBT verification regime is a truly democratic and participatory system. The data and products of the CTBTO PrepCom are made available to every Signatory State, regardless of size or wealth or technological prowess, making sure that transparency is not limited to the few states who possess the necessary technical and financial resources. The

credibility of our verification system does not only reside in its technical performance but also in the open and equal access of all Signatory States.

Fourthly, to realize the open and democratic nature of the regime the Preparatory Commission is engaged in a wide range of training and capacity building activities that will allow all State Signatories to fully realize the benefits of the Treaty and the manifold potential civil and scientific applications of the verification technologies. In the exhibition you will find a display of our most recent initiative in this field, an e-learning programme, financed through voluntary contributions by the Netherlands, the Czech Republic and the European Union.

The CTBTO PrepCom and the activities of the secretariat are dependent on the assistance and cooperation of many actors. First and foremost the Signatory States whose technical, political and financial support for the organization are vital. With 176 signatures and 135 ratifications the CTBT enjoys near universal support. I would like to use this opportunity to thank all Signatory States for what they are doing in support of the Treaty and its verification system through their delegates, their experts, their political and financial commitment to our common cause.

The second group of actors which I would like to praise and thank here are the staff of the PTS. It is their dedication and talent that have brought us here today.

The third constituency of the CTBT family is the scientific community. Some of you here have worked with the Preparatory Commission on test ban

verification, in fact, without your input and constant readiness to advise and share your experience we would not be able to do our work. For many of you, however, this Scientific Symposium is the first direct contact with our organization and I hope that the discussions over the next two days will help us explore new avenues of cooperation.

The science on which our verification regime is based is evolving at a rapid pace, be it in the field of monitoring technologies or in the field of analysis and computing. The success and efficiency of our verification regime relies on a permanent dialogue with scientific institutions about the latest developments in their areas of expertise and their adaptation to our needs.

On the other hand, we hope to explore the vastly untapped scientific and civilian uses of the verification technologies at our disposal. We are having a lively debate about the contribution of the CTBTO Preparatory Commission to Tsunami early warning. Since the Tsunami of December 2004 killed hundreds of thousands and devastated many coasts in the Indian Ocean we have started through the Intergovernmental Oceanographic Commission of UNESCO to cooperate with international and national Tsunami warning centres to explore the potential of our verification regime for this important humanitarian purpose. It was encouraging to hear the almost enthusiastic presentations of the North West Pacific Tsunami warning centre in Japan and the Pacific Tsunami warning Centre in Hawaii who have tested the usefulness of raw data provided by some of our stations to them last year. Meanwhile many more institutions have come to similar conclusions. This is but one of many areas where the data collected by our stations might help not only the advancement of science but also the protection of human lives.

Let me conclude this little introduction by stating the obvious: We are gathered here to celebrate the achievements of the CTBTO Preparatory Commission and explore synergies with science that could be beneficial for our verification work. Ultimately this verification regime will only show its worth once the CTBT has entered into force. It is for those states listed in Annex 2 of the CTBT whose ratification is necessary for entry into force to consider the value of the Comprehensive Test Ban Treaty for their national and for international security. The reliable performance of the verification regime and the example of a growing number of ratifiers should help them with a positive decision.