

Exploring new synergies between the scientific and the CTBT community

The scientific symposium “CTBT: Synergies with Science, 1996-2006 and Beyond”, held 31 August - 1 September 2006 in Vienna, attracted nearly 400 participants, among them internationally renowned scientists, key personalities acknowledged for their efforts toward nuclear non-proliferation and disarmament, and representatives from Member States and the press.

“To cooperate with science is not a luxury that we can have or not, but a necessity for the long-term sustainability of this organization.” These words by Dr Ola Dahlman, former Working Group B Chairman and moderator of the symposium, summarize best the two-day long exchange of ideas aimed at strengthening the interaction between the global scientific community and the CTBTO Preparatory Commission.

The close cooperation between the CTBTO and the scientific community dates back to the pre-negotiations of the CTBT at the Conference on Disarmament some 20 years ago when scientists helped to design the most comprehensive verification system ever built in order to verify compliance with the Treaty. Since then,

“Without CTBT in force, we risk that new countries might be tempted to test nuclear weapons without violating any legal norm.”

Mr Mohamed ElBaradei,
Director General of the IAEA



many significant scientific developments have taken place that are of relevance to the CTBT verification system. Some of them were discussed at the symposium:

- ‘Precision seismology’ to improve the accuracy of event location;
- Improved understanding of earthquake sources;
- New computational tools to understand wave propagation;
- New and improved methods and procedures for the analysis of large data volumes;
- Developing new analysis methods and procedures to increase the understanding of infrasound observations.

Today, with nearly three quarters of the International Monitoring System (IMS) completed, there is a great scientific interest in the data from the global IMS network. During the symposium and in the discussions afterwards, several scientists highlighted the great treasure of CTBTO data and their multiple long-term uses in scientific research which can lead to improved methods of data acquisition and analysis. Other scientists emphasized that cooperation should not be a one-way street:

international scientific cooperation has helped to provide state of the art models for the interpretation of CTBTO monitoring results; now Governments need to make verification data available for scientific purposes.

It became clear from the discussions that the scientific community and the CTBTO/PTS both could benefit from common research projects and data sharing. CTBTO data could be used in studies of the earth’s structure as well as in research on earthquakes, underwater explosion location and climate change monitoring. It could also help to improve early warning systems for tsunamis, volcanic and disastrous chemical explosions, and tropical cyclones.

Hopes were expressed that the important synergies that already existed between the CTBTO capabilities and the scientific community would be further developed. It is now up to the policy-making organs of the Preparatory Commission to digest the many ideas generated at the symposium and to take a fresh look at the many potential additional synergies. ■

“We cannot talk about nuclear disarmament without a sincere reflection of possible human tragedy that nuclear arsenals could bring upon people.”

Mr Nobuaki Tanaka, United Nations Under-Secretary-General for Disarmament Affairs





Secretariat snapshots

Managing the diverse administrative functions of the PTS

For the past five years, Mr Pierce Corden has served as the Director of Administration, managing human resources, general services, financial services, procurement, preparation of the programme and budget, the Medium Term Plan, and administrative information technology support. These diverse areas required him to be continuously in a multi-tasking mode.

In 2001, the Provisional Technical Secretariat (PTS) was subject to an external evaluation of human resources. The resulting report contained seventy-eight recommendations for improvements, ranging from recruitment to staff appraisal. In response, the then-Executive Secretary, Mr. Wolfgang Hoffmann, appointed a Steering Committee under the chairmanship of the Director of Administration and with participation from all PTS Divisions. The Committee in most cases proposed steps which led to changes in practices within the PTS. Examples included establishing summer working hours, providing language training subsidy, regularizing the recruitment process and strengthening the performance appraisal process. The Committee concluded its work in 2005.

Human resources is in some ways the most vital part of the Preparatory Commission, as the success in achieving the organizations' objectives to a large extent depends on the quality and commitment of its roughly 286 staff, drawn from some 60 Member States. The professional staff typically serves up to seven years in the Commission, which has a service limitation policy for such staff, designed to bring in fresh views and broaden participation in the work. However, the policy also makes a provision for extending a staff member's contract on an exceptional basis if he or she possesses essential memory or expertise, so that over time the institutional framework and capabilities of the Secretariat are optimized.

Because many professionals were hired at about the same time, presently Personnel is implementing recruitment procedures in a large number of cases in order to determine whether to bring on board new staff members or extend exceptionally staff members who are approaching the end of their contracts. This demanding task is carried out in addition to the normal recruitment and administration of services to staff members. The Personnel Section also implements personnel actions required as a result of the major restructuring of the International Data Centre (IDC) and International Monitoring System (IMS) Divisions. In this context, some 23 persons 'switched' Divisions and an additional 123 were affected by changes in job descriptions and organizational structure, necessitating numerous changes in the Personnel database. In addition, Personnel provides key support to the Joint Consultative Panel, the chief mechanism for staff relations, for which the Director of Administration has typically been the Chairman.

General Services has the responsibility for ensuring that all staff members work in a comfortable environment with appropriate resources. It maintains the inventory of furnishings and equipment and ensures that the physical infrastructure of the Secretariat is in good shape. General Services is also the principal interface with other organizations in the Vienna International Centre (VIC) and participates in the Security and Building Management Advisory Groups, and the Garage, Kindergarten and Commissary Committees. The Chief of General Services advises the Director of Administration at the meetings of the Committee on Common Services, composed of the administration directors of the four organizations working in the VIC. The Chief also serves as a member of the Committee on Contracts, which reviews major procurements to ensure their effectiveness and consistency with the Commission's regulations and rules.

The Financial Services Chief serves as the Chair of the Committee on Contracts. More generally, Financial Services ensures that the payroll is met, implements the annual budget, prepares the annual programme and budget performance report, interacts with the external auditor and provides support to the Advisory Group on financial matters. It is to the credit of the Section that the external auditor has always provided an unqualified opinion on the accounts of the Commission.

Procurement is another key function. Without the work of this Section, the build-up and maintenance of the 337 facilities of the IMS network could not be accomplished. The Section has been especially challenged during the past year by the major contracting effort associated with the expiration of the existing contract for the Global Communications Infrastructure. Another major part of procurement is devoted to contracting for both hardware and software for the IDC.

Within the Office of the Director, the Senior Budget and Planning Officer has the responsibility to prepare the annual programme and budget. The Secretariat has benefited from substantial support from Member States in maintaining the funding necessary to implement its ambitious program of IMS facility installation, operation and maintenance, upgrade information technology in the IDC, and carry out exercises and equipment acquisition in the On-Site Inspection Division. Other cross-sectional and cross-divisional tasks, such as the preparation of the Secretariat-wide Mid-Term Plan are also managed in this Office. Finally, it provides the 'back-office' IT support needs for the Secretariat.

This summary is succinct. On any given day, there may be multiple additional demands placed on the relatively modest Administration staff of some 50 persons. ■



Fourth experts' meeting on civil and scientific applications in Hungary

From 2 to 3 September 2006, 44 experts from 28 countries met in Budapest, Hungary, to review and discuss new potential benefits deriving from the application of CTBT verification technologies for civil and scientific purposes. The event, which was organized by the Provisional Technical Secretariat (PTS) of the CTBTO Preparatory Commission and funded by a voluntary contribution of the Government of Hungary, built on expertise exchanged in previous such meetings held in London, United Kingdom, in 2002, Sopron, Hungary, in 2003, and Berlin, Germany, in 2004.

The meeting was divided in two substantive sessions, one focused on civil and scientific applications of CTBT verification technologies and the other one on the PTS e-learning project as a contribution to national capacity building.

As a result of the first session, it was stressed that there was an urgent need to provide verification data in real time and on a continuous basis to tsunami warning organizations recognized by UNESCO. With regard to volcano monitoring, the participating experts saw a clear need for scientific work on how verification data and products could be used to contribute to the provision of rapid alerts for the aviation industry.

It was further suggested that the scientific interface between the PTS, National Data Centres (NDCs) and the scientific community should be improved, and scientific results should be published, for example through links in the CTBTO public web site. In the context of radionuclide and noble gas detection technologies, it was felt that the publication of PTS in-house developments

in scientific journals could raise the profile of the PTS and enhance awareness of the Preparatory Commission and its work.

In the second session, e-learning was recognized as a powerful training tool that can reach many more individuals than a traditional classroom environment. However, participants also cautioned that it should not become too complex to use and the material made available for e-learning should be carefully chosen. NDCs can support the PTS in this context by testing and evaluating the prototype, and, where applicable, they can also make material available for e-learning.

A booklet of the experts' meeting was issued at the beginning of January, together with a CD-ROM containing the summary, statements and presentations made at the event as well as summaries of the London, Sopron and Berlin meetings. ■

New PTS Operations Centre completed



The newly built PTS Operations Centre (OC) will be fully operational in February 2007. It is responsible for monitoring PTS operations and system-wide incident management. This includes identification of operational incidents, logging and re-assigning, as well as timely reporting and classification of every incident. The OC is also a focal point for station operators and National Data Centres for IMS station operations. It ensures that IMS raw data reach the IDC, data and data products get distributed in a timely fashion, and that necessary corrective actions are taken to maintain quality and timely data availability. ■