The Preparatory Commission offers States Signatories training courses and workshops in technologies associated with the International Monitoring System, the International Data Centre and on-site inspection, thereby assisting in the strengthening of national scientific capabilities in related areas. Such capacity building serves to enhance the real and potential technical capabilities of States Signatories throughout the globe, as well as those of the Commission. As technologies expand and improve, so too do the knowledge and experience of designated personnel. Training courses are held at the Headquarters of the Commission, as well as in numerous external locations, often with the assistance of hosting States.
CAPACITY BUILDING

HIGHLIGHTS IN 2008

THIRD workshop on IMS operation and maintenance in Vienna

NDC development workshops in Jakarta and Tunis

INSTALLATION of the e-learning management system.

TRAINING STATION OPERATORS AND NDC TECHNICAL STAFF

A diverse range of training events for station operators and NDC technical staff was provided in 2008. Station operators benefited from four equipment courses and three regional events, including one in Russian that reached 49 participants. A total of 80 NDC technical staff were trained in two regional training events and a two-week advanced course. In addition, two participants from one State Signatory attended a visitors’ programme at the Headquarters of the Commission in Vienna.

TRAINING ANALYSTS

Review of data and generation of reviewed data products are core functions of the Commission. Analysts sift through volumes of data, providing an accurate accounting of all events that meet specific criteria. The job is demanding and requires a high degree of skill. The IDC analysts’ course is the longest of the training courses offered by the Commission; it lasts three months and requires a huge commitment from the participants. From the numerous applicants, only a handful are chosen to come to Vienna for the demanding course of instruction. In 2008, eight trainees were chosen to attend the training. Most of the course offers hands-on training with the analytical tools, preceded by a short theoretical introduction. By the end of the three months, the trainees leave in a much stronger position to apply for analyst posts in the organization.

ON-SITE INSPECTION OUTREACH ACTIVITIES

In parallel with activities that were part of the training cycle for the IFE (see Preparing for On-Site Inspections), the Commission continued with its regular outreach activities. The 15th OSI Introductory Course for members of Permanent Missions in Vienna was conducted from 14 to 17 October for a total of 22 trainees. A Regional OSI Introductory Course for States in South-East Asia, the Pacific, and the Far East was conducted in Daejeon, Republic of Korea, from 9 to 15 November. The Commission enjoyed support and cooperation from three Governmental institutions in implementing the regional course: the Korea Arms Verification Agency, the Korea Institute of Nuclear Nonproliferation and Control and the Korea Institute of Geoscience and Mineral Resources. In total, 25 trainees participated in the course, which started with a theoretical introduction to the OSI regime and ended in a small-scale field exercise, an exceptionally useful training tool for participants.

OPERATION AND MAINTENANCE WORKSHOP

The Commission convened the Third Workshop on Operation and Maintenance of the International Monitoring System in Vienna between 10 and 14 November.
A total of 69 participants from 34 States Signatories as well as staff of the Commission attended the formal presentations and working group discussions over the five days. The main topics covered by the workshop included the roles and responsibilities of the Commission, host country, station operators, contractors and other agencies with respect to operation and support of the IMS facilities; improving the performance and sustainment of the IMS network; IMS configuration management; and data quality control parameters and procedures.

**NDC DEVELOPMENT WORKSHOPS**

Two NDC development workshops were conducted in 2008, one in Jakarta and the other in Tunis. Their purpose was to promote understanding of the Treaty and the work of the Commission, to enhance national capabilities of States Signatories in the implementation of the Treaty, to promote the exchange of experience and expertise among States Signatories in the establishment, operation and management of an NDC, and to promote the application of verification data for civil and scientific purposes. The workshops included presentations from the Commission emphasizing the information needed to build and sustain NDCs, and presentations from representatives of NDCs in all stages of development.

**NOBLE GAS, INFRASOUND AND LABORATORY WORKSHOPS**

**St Petersburg**

A noble gas workshop, organized by the Khlopin Radium Institute with the support of the Commission, took place in October in St Petersburg, Russian Federation. The latest advances in research and development in noble gas technology were presented together with topics such as event categorization, quality control, atmospheric transport and progress in testing of noble gas systems at IMS sites. The workshop recognized that noble gas systems have reached a high degree of maturity and recommended the commencement of certification of noble gas stations while maintaining development efforts, with emphasis on the analysis of noble gas spectra.

**Bermuda**

An infrasound technology workshop was held in Bermuda (UK) in November. The workshop was organized by the University of Mississippi, USA, in collaboration with the Commission and provided a major insight into the current state of infrasound research and development. Among the topics covered were the status of the IMS network, processing at the IDC, sensors and calibration, infrasound waves generated by anthropogenic and geophysical sources, wind noise reducing systems, and modelling of infrasound propagation and network performance.
**Aldermaston**

A radionuclide laboratory workshop took place in December in Aldermaston, UK, organized by the Atomic Weapons Establishment in technical cooperation with the Commission. During the workshop, issues such as laboratory operation and analytical techniques were discussed. The workshop recommended that, in order to remain certified and to continue to receive Level 5 samples, laboratories should participate in the annual Proficiency Test Exercise and meet a specific set of requirements. Failure in two out of three consecutive exercises would trigger a revalidation process for the relevant laboratory, during which the sending of Level 5 samples to the laboratory in question would be discontinued.

**E-LEARNING**

Traditional training activities by the Commission have been mostly typical classroom training and field exercises. To enhance the learning opportunities for States Signatories and staff of the Commission, e-learning was introduced to complement classroom training and to broaden the reach of the training programmes for station operators, NDC technical staff and potential OSI inspectors. The e-learning platform can also be used to train staff of the Commission and to offer educational material to the Policy Making Organs (PMOs).

The primary objectives of the e-learning project are as follows: (a) to increase the number of participants in training activities of the Commission; (b) to prepare individuals prior to their participation in traditional classroom training and field exercises; (c) to reduce lecture room time in favour of field activity or hands-on exercises; (d) to provide a means for individuals to learn at their own pace where appropriate; and (e) to broaden the base of potential candidates for posts with the Commission, thereby assisting recruitment.

The e-learning facilities of the PTS were established in 2008 with the installation of a learning management system. The new system has all of the necessary features such as computer platform independence and compatibility with the official languages of the United Nations. In addition, it meets the requirements of the existing hardware, software, networking and security systems of the PTS. Courses can be updated quickly and easily. The system is secure and allows tracking of security violations as well as robust password checking. The user interface is clear and easy to follow, which is essential in view of its diverse population of users.

System testing was conducted in 2008 by representatives from 13 countries and the results have been positive. In addition, staff of the Commission were trained in the administration of the courses as well as in creating content so that updates to the course modules can be accomplished in-house. A large scale content development effort funded by the EU has begun with the aim of providing training courses from 2009. Several pilot course modules were also developed for testing and use as introductory information.