Distr.: GENERAL
CTBT/PC-40/ES/1
13 June 2013

ORIGINAL: ENGLISH

CTBTO PREPARATORY COMMISSION | preparatory commission for the comprehensive nuclear-test-ban treaty organization

Fortieth Session
Vienna, 13-14 June 2013

OPENING STATEMENT OF THE EXECUTIVE SECRETARY AT THE FORTIETH SESSION OF THE PREPARATORY COMMISSION

INTRODUCTION

1. It is a great honour for me to welcome the President of Burkina Faso, His Excellency Blaise Compaoré, and members of his delegation.

2. Mr President, it has been a privilege to listen to your address. We very much appreciate your commitment to the Treaty and your strong support for the work of the Preparatory Commission.

3. This is my last opening statement at the Commission. During my last eight years as the Executive Secretary, I have had the honour to lead the organization through various challenges and share jointly with States Signatories in its successes.

4. As my tenure draws to a conclusion, it is time to reflect on the distance that we have travelled, and to take stock of what we have done during this time.

UNIVERSALITY

5. Since taking office, advancing the universality of the Treaty has been among my priorities. A range of initiatives were launched and many efforts were made to promote the Treaty and highlight the urgency of its entry into force and universality.

6. We initiated a persistent campaign to reach out to all States, both at high level and at the professional level, and encourage further signature and ratification. We also sought to provide a forum to assist States in their consideration of the Treaty.

7. In this respect, we took advantage of various international, regional and subregional events and conferences, as well as country visits to meet with State officials and parliamentarians. We undertook a series of targeted missions to key countries to promote the Treaty, its verification regime and the work of the Commission. Senior officials of many non-ratifying States were invited to visit the organization in Vienna and attend briefings. The briefings offered them a more comprehensive

understanding of the Treaty, its verification regime and its role in international security, as well as civil and scientific applications of the verification regime.

8. Consultations were held virtually each year with all States that have not yet signed or ratified the Treaty. We also engaged with a number of international organizations that interact on a regular basis with the States concerned. Our outreach efforts eyed Annex 2 States with special interest. We undertook to maintain regular contacts and dialogue with them at various levels.

9. Given its increasing role in political decision making, we also intensified our interaction with civil society. As an integral part of our outreach, efforts were made to provide both general and targeted information to the media, non-governmental organizations, academia and the public. This was done through involvement of scientific and academic communities as well as media in the activities of the Commission.

10. In addition, a large number of educational activities were launched. They aimed to provide information about the work of the Commission, to foster international cooperation in the exchange of verification technologies and to assist States Signatories on issues related to national implementation of the Treaty.

11. The results of these efforts are notable. In August 2005, 175 States had signed the Treaty and 122 States, including 33 of the 44 Annex 2 States, had ratified it. Today, the Treaty enjoys 183 signatures and 159 ratifications, among which 36 are by Annex 2 States. There is a much better understanding of the Treaty. There is a greater recognition of its contribution to global peace and security as well as civil and scientific applications of its verification regime. The call for the Treaty's entry into force is much louder. And the international norm against nuclear testing is much stronger and more solid than ever.

EVOLUTION OF THE VERIFICATION REGIME

12. In the last eight years, in joint efforts between the States hosting facilities of the International Monitoring System (IMS), local station operators, States Signatories and the Commission, significant progress has been made in development of the verification regime of the Treaty.

13. By July 2005, only 130 IMS stations and 5 laboratories had been certified. And there were no certified noble gas systems. Since then, the figures have grown extensively. The number of installed IMS stations has increased to 282, which is 88% of the stations foreseen by the Treaty. The number of certified facilities stands at 275, representing around 82% of the total planned. The figure includes 146 primary and auxiliary seismic, 63 radionuclide, 45 infrasound and 10 hydroacoustic stations, as well as 11 radionuclide laboratories. We have also managed to enhance our noble gas monitoring coverage. The number of certified IMS radionuclide noble gas monitoring systems increased to 12, which is 30% of the planned network. Together, they provide a reliable coverage of all components of our verification technologies.

14. Several major IMS recapitalization projects, including the repair of two IMS facilities in the Juan Fernández Islands and the hydroacoustic facility in the Crozet Islands, have also been undertaken.

15. With technological updates at IMS stations, our network resilience and our understanding of future events recorded by the network are sure to improve further.

16. These activities helped increase the overall data availability of the certified IMS stations, which has demonstrated a durable positive trend since 2009 towards the level required by the operational manuals. The data availability at certified facilities of the system has increased to 90%. This in August 2005 was around 83%. However, the important point is that at the time our network was rather new and at an early stage in its life cycle. In an ever growing but also ageing IMS network, reaching 90% in data availability is an impressive record. Our undertakings in recent years have thus not only mitigated the effects of obsolescence in the network but also reversed the decreasing trend in data availability experienced in the past.

17. The impressive figures that I just mentioned, though, cannot give a sense of the sheer amounts of time and effort that have gone into site survey, installation, and training of National Data Centre (NDC) staff and the station operator for each and every single facility. Besides, the maintenance of such a vast number of facilities spread across the globe and ensuring their functioning around the clock have become an onerous task facing the Commission.

18. The Global Communications Infrastructure (GCI) is the backbone of the communication system for data and products transmitted between the IMS facilities, the Commission and States Signatories. With the 10 year GCI contract approaching its end, a broad review was conducted to ensure that the system would continue to meet the needs of the constantly expanding IMS network and the developments in the International Data Centre (IDC). The review took several years to conclude. It involved many experts from States Signatories. It considered specific needs of the Treaty's verification technologies and defined future GCI performance requirements and technology options. The migration of the GCI to a new technology platform (GCI II) was completed by July 2008. This was achieved without any major disruptions to the data flow. Today, we have a secure communications infrastructure that even covers some of the world's most remote and harsh environments.

19. Improvement in GCI performance has helped to keep the overall adjusted availability consistently above 99.6%. The Commission also increased its GCI satellite capacity in five satellite regions to accommodate larger data volumes.

20. A new state of the art Operations Centre was officially opened in January 2007. The centre, as the focal point for operational activities, has proven to be a crucial part of integrated operations. It consists of control, escalation and multimedia rooms and provides a real time window on the IMS. Activities of the centre include status reporting, operational incident management and GCI data, network and systems operations. The main tool employed in the Operations Centre in its day to day operations is the System-Wide Incident Tracking System, which is based on open

source technology. This serves as a single interface for reporting and tracking all types of incident.

21. Another key tool is the state of health (SOH) system, which was installed in the Operations Centre in 2009. This system collects and manages information on the SOH of all components of the IMS, GCI links, IDC programmes and servers, and any other source of data that may be relevant to the operation and maintenance of the IMS. In 2011, a test version of a Web based SOH system was released to station operators and NDCs. Every 10 minutes, the system presents the actual status of each IMS station, including the SOH parameters for components at the station and in the GCI link.

22. The volume of the data and data products of the Commission has grown more than threefold since 2005. Accommodating such a sizeable increase is a demanding task. The Commission has not only managed that but has also registered significant improvements in terms of quality and timeliness of its data services and products.

23. Incorporation of infrasound and noble gas monitoring into IDC operations is another accomplishment. In total, 45 infrasound and 12 noble gas systems are now in provisional operation.

24. We have made good headway in atmospheric transport modelling (ATM). This helps strengthen our capabilities to detect and locate possible sources of radioactive particles and noble gases produced from atmospheric or underground explosions and dispersed by the winds. Used in the opposite sense, ATM can help to forecast at which monitoring sites the plume of radioactivity may first arrive. We have also made sure that the most recent advances in the domain of atmospheric transport as well as the most comprehensive meteorological data sources are integrated into our operations.

25. Our atmospheric backtracking calculations are performed daily for each of the IMS radionuclide stations with near real time meteorological data obtained from the European Centre for Medium-Range Weather Forecasts. A software application has been developed by the Commission and provided to States Signatories. The software package enables them to download, generate, animate and analyse the ATM results. The software can be customized to particular needs. It enables States Signatories to assess whether multiple radionuclide detections are associated, to determine the possible source regions and to overlay any potential source with possible seismic, infrasound and hydroacoustic events occurring at the same time and place.

26. We used ATM technology in the aftermath of the 2009 and 2013 announced nuclear tests by the Democratic People’s Republic of Korea and the 2011 Fukushima nuclear accident on a daily basis.

27. In addition, a series of activities were focused on IDC hardware enhancements and software developments, which I do not intend to describe here in detail.

28. It is important to remind ourselves that all these things have been achieved within a zero real growth budget and with almost the same level of staff.

29. In 2005, we were just at the very early stages of a long process to develop on-site inspection (OSI) capabilities. With some lags due to financial limitations, building up the operational capabilities in the area of OSI has become a major focus of our activities in recent years. By holding tens of limited field and tabletop exercises and training events, we have extended our experience in different aspects of an OSI.

30. However, the conduct of the first ever Integrated Field Exercise (IFE) in 2008 in Kazakhstan was a turning point in our efforts. The exercise helped further augment our knowledge and experience in OSI related techniques and methods by applying the procedures and taking actions required by the Treaty and defined by a provisional draft OSI Operational Manual. It also resulted in a more widespread recognition among States Signatories that there was a need to build on this momentum through allocation of more resources to OSI development.

31. As a follow-up and based on the lessons learned from IFE08, we developed an OSI action plan. The plan covers five main areas, namely policy planning and operations, operations support and logistics, techniques and equipment, training, and procedures and documentation. I am pleased to note that the implementation of the action plan is fully in accordance with the planned pace.

32. The decision by the Commission to conduct in 2014 a second Integrated Field Exercise (IFE14) created yet another opportunity for advancing our development of OSI operational capabilities. Preparation for IFE14 in Jordan is moving forward well. The task force of external experts from States Signatories made considerable progress in drafting a scientifically credible and comprehensive exercise scenario. Specific locations of interest in Jordan have been identified to facilitate the work of the inspection team during the exercise. .

33. With participation of around two hundred and fifty experts from States Signatories and staff of the Commission, two build-up exercises, involving procedures in the launch, pre-inspection and post-inspection phases of an inspection, were conducted in 2012. Just recently, from 26 May to 7 June, a third build-up exercise was conducted in Hungary. One hundred and fifty experts from States Signatories and staff of the Commission participated in the exercise. The exercise covered the inspection phase of an OSI, involving integrated procedures and comprehensive methodologies for search logic, and logistical and operational support for the inspection team in the field. Major training courses and tabletop exercises have also been held for over two hundred national experts and staff of the organization.

34. The build-up exercises have been evaluated thoroughly so as to draw lessons. The lessons will contribute to further improvements in the conduct of build-up exercises, training courses and, particularly, IFE14.

35. We are committed to sharing our OSI knowledge and expertise to ensure the existence of a reliable foundation for building up an OSI expert community for our future surrogate inspectorate arrangement. To that end, twenty OSI workshops have been held, in which essential topics, such as OSI techniques and equipment, targeted applications, the debriefing after IFE08 and the draft OSI Operational Manual, have been examined.

36. The training concept for inspectors was developed to lead our OSI training activities. The first training cycle is concluded and an initial roster of OSI surrogate inspectors has been prepared. The participants in IFE08 in Kazakhstan were selected from among the trainees in the first training cycle. The second training cycle is very near conclusion. Accordingly, the roster now includes approximately one hundred surrogate inspectors. The participants for IFE14 will be selected from among trainees in the two training cycles and staff of the Commission. Similarly, we have included OSI introductory courses and regional training courses in our outreach training for experts from States Signatories. So far, more than six hundred participants have attended these courses.

37. An OSI exercise is very demanding. It requires certain infrastructure and logistics to support a team of 40 inspectors in the field throughout the period of inspection. Therefore we have embarked on the development of facilities and procedures necessary to provide all logistical functions necessary for an OSI. Current projects in this respect involve provision of an Equipment Storage and Maintenance Facility and refinement of the systems required for an Operations Support Centre, including systems for communication and data security. They also include finalizing the procurement of a complete base of operations and a support system for information technology in the field, and the development of an Intermodal Rapid Deployment System to allow the deployment of equipment under the restricted time frame prescribed by the Treaty for an OSI.

STANDING UP TO THE CHALLENGES

38. The announced nuclear tests by the Democratic People's Republic of Korea in 2006, 2009 and 2013 presented serious threats to the Treaty and its established norm against nuclear testing. However, every cloud has a silver lining. To look on the bright side of otherwise unfortunate events, the reaction of the international community to each of the tests was immediate and resolute. States, the United Nations and institutions of civil society unequivocally condemned the tests. A very large number of States and non-State actors also took the opportunity to highlight the importance of the Treaty for nuclear non-proliferation and disarmament and the urgency of its entry into force.

39. Indeed, the tests, though unfortunate, highlighted the security benefits of the Treaty and proved the genuine value and capabilities of our verification regime.

40. The announced nuclear test in October 2006 was well recorded throughout the world by the IMS. This was achieved at a time when less than 60% of the IMS stations were in use.

41. The signals originating from the event were detected at more than 10 primary seismic monitoring stations. Less than two hours after the test, States Signatories received the first automated data product from the IDC, containing preliminary information on the time, location and magnitude of the event. We also expedited analysis of the seismic recordings and applied time lines for data processing and dissemination. We were able to reduce the uncertainty in the location for a possible inspection area to 880 square kilometres, which is well below the maximum allowed for an OSI under the Treaty.

42. Two weeks after the event, the IMS radionuclide noble gas monitoring station at Yellowknife in Canada picked up an unusually high concentration of the noble gas xenon-133. Applying atmospheric transport models to backtrack the dispersion of the gas, it was revealed that the noble gas was consistent with a hypothesized release from the event in the Democratic People's Republic of Korea. The relevant information was subsequently made available to authorized users on the IDC secure web site. In addition, technical briefings were held to inform States Signatories of the findings. The contribution of noble gas technology to the analysis of the event brought to the fore its importance in the verification regime of the Treaty.

43. The performance of the verification system was beyond expectations. It displayed its sensitivity and effectiveness by rapidly locating, identifying and determining the very low yield of the test explosion. Data and data products were shared with States Signatories in accordance with the Treaty time lines, and noble gas monitoring put on view its potential capabilities.

44. As for the second announced nuclear test in May 2009, 23 IMS seismic stations succeeded in detecting the event immediately. Two hours later, the first automated waveform data were made available to over 1100 secure user accounts in 110 States Signatories, meeting the time lines of the Treaty. Once again, the system operated in a coherent and coordinated manner, recording the data, then performing data analysis and finally distributing the data and products in a timely manner.

45. Nonetheless, despite completion of an ample number of noble gas systems in the region and the high detection capability of our network, no radioactive noble gas was measured. This situation brought to the attention of the international community the importance of OSI as a critical part of the verification regime.

46. Besides provision of information to all States Signatories on the IDC secure web site, supplementary technical briefings were held in Vienna.

47. The announced test of 12 February 2013 offered yet another unplanned performance test for our verification system. Initially, 25 seismic and 2 infrasound IMS stations detected an unusual event. The first product based on IMS data was made available to States Signatories in little more than one hour, and before the announcement by the Democratic People's Republic of Korea.

48. We immediately arranged for a technical briefing to share our data and understanding of the event with States Signatories on 12 February. On 13 February, the Reviewed Event Bulletin was issued to States Signatories, in accordance with the time frame specified in the Treaty. A total of 96 IMS stations had received signals associated with this review. The IDC body wave magnitude of the test was estimated to be 4.9. We also identified the location of the event within a confidence ellipse that had a semimajor axis length of 8.1 kilometres.

49. Follow-up technical briefings were subsequently held for States Signatories on 15 February and 23 April. At the briefings, we shared further information about the announced test. This included data collected from auxiliary seismic stations, possible

atmospheric transport scenarios and noble gas detections from station RN38 at Takasaki in Japan.

50. The performance of the Treaty's verification regime, this time, was superior to its two previous experiences in 2006 and 2009. There was a significant increase in the number of IMS stations that detected the February event. Moreover, we managed to better identify the location. Our precision was 181 square kilometres in 2013, compared to 265 in 2009 and 880 in 2006. In addition, for the first time after being introduced into our Operations Centre, the IMS infrasound and noble gas systems were able to contribute to our response to the event. I can say with certainty that our improved detection capability this time was enhanced by the development of the verification system over the last several years.

51. The tragic Fukushima nuclear accident, following the devastating earthquake off the coast of Japan on 11 March 2011, forced an unintended 'stress test' on our verification system. Around twenty seismic and hydroacoustic monitoring stations of the Commission registered the earthquake.

52. The data from our stations contributed to the rapid alerts issued by tsunami warning centres in the Pacific region. This helped Japanese authorities to instantly issue tsunami warnings and avert greater fatalities.

53. On 15 March, our monitoring station in Takasaki, 200 kilometres away from the emission source, picked up traces of radioactive material. As the emissions moved further, other IMS stations became involved. Forty-one particulate and 18 noble gas stations detected emissions related to the event. The ATM tool was also employed to project the global spread of radioactive material.

54. The monitoring data and analysis were shared continuously with close to 1200 authorized users in 120 States Signatories through the IDC secure web site. The Commission provided detailed analysis of the isotopic composition of the radionuclides released into the atmosphere. We also developed a new platform for providing a graphical user interface to display concentrations of radionuclides as reported in reviewed IDC data products.

55. The data and products allowed States Signatories and authorized users to monitor the dispersion of the radionuclide particulates and noble gases and prepare for any necessary contingency planning. This contributed to regional and global efforts to assess the radionuclide risks for human health and the environment.

56. To keep States Signatories informed of our findings and predictions, six technical briefings were held in Vienna.

57. We also cooperated with other relevant international organizations, such as the World Meteorological Organization, the World Health Organization and the United Nations Office for Disarmament Affairs, to help mitigate the consequences of this nuclear disaster.

58. The functioning of our verification regime throughout the crisis was remarkable. It demonstrated high quality performance and resilience. It worked in a timely, integrated, effective and efficient fashion. It proved its strengths and unique capabilities. It showed its operational capabilities in effectively detecting seismic activity and radionuclide particulate and noble gas releases. It also displayed the competence of the IDC in providing high quality data and data products that can enable States Signatories in near real time to determine the nature of an event.

59. The operational capability of the Treaty's verification regime stood up to another test when a meteorite crashed over the Ural Mountains in the Russian Federation on 15 February. Nineteen IMS infrasound stations detected the related infrasonic waves, including an Antarctic facility that was 15 000 kilometres away.

60. In fact, the Commission succeeded in steering through all the foregoing events and came out stronger than before. Its solid track record in response to these challenges underscores the credibility and reliability of its verification system to detect nuclear tests in any environment. It equally illustrates the vast potential of the civil and scientific applications of the verification regime.

61. The challenges were not limited to our verification regime. The period of austerity in 2007 and 2008, resulting from cumulative unpaid assessed contributions, seriously risked the smooth functioning of the organization. To illustrate the seriousness of the situation, it is worth mentioning that at the end of 2006, the total amount of unpaid contributions expressed in equivalent US dollars had increased to $39.1 million from $28.4 million in 2005. This trend continued into 2007, with collection rates in the first half of the year persistently lower than in the corresponding period of the previous year. As a result, significant shortfalls in the General Fund and in the Capital Investment Fund were anticipated.

62. We decided to act and undertook a number of initiatives. The objective was to improve our collection rate, mitigate the situation and finally reverse the detrimental trend. We introduced a financial contingency margins plan for non-core activities of the organization by lowering our spending and tied some of our activities to the availability of resources. The contingency margins were calibrated carefully to avoid disruption of our core activities of importance to the Commission. These core activities included build-up of the monitoring network, IDC operations, the GCI and IFE08.

63. Altogether, these contingency margins generated about $12 million in deferred expenditures. Further cuts were also sought, in particular in the area of post-certification activities and in staff costs, where the gap was increased between the separation of staff members affected by the service limitation policy and the appointment of staff to replace them.

64. Interaction with States Signatories was also increased. This fortunately resulted in a notable surge in full and partial payments of assessed contributions. The number of States Signatories paying in full rose progressively during the course of 2007. Subsequently, from 2008 onwards, a positive trend in the payment of assessed contributions continued, allowing the organization to emerge from this difficult period of austerity.

65. It is encouraging to note that, in comparison with previous years, the collection rate of the assessed contributions for 2012 shows a substantial increase. A collection rate of over 93%, at a time when financial austerity policies are being exercised by many States Signatories, signifies firm commitment to the mission and a trust in the performance of the organization.

INTERACTION WITH SCIENCE AND TECHNOLOGY

66. Operation, maintenance and updating of a very reliable and vanguard verification regime require keeping pace with science and technology. This is most often a very costly enterprise that demands a great deal of resources.

67. In an effort to search for less costly alternatives, forging a structured interaction with the scientific and technological community became a key item at the top of our agenda from 2005. Our first major undertaking was in 2006 with the organization of a scientific symposium.

68. The 2006 symposium, known as “Synergies with Science”, attracted more than three hundred participants from various fields of science, disarmament and non-proliferation diplomacy and academia as well as representatives of States Signatories. The symposium reviewed ways and means of fostering the relations between the global scientific community and the Commission. It discussed scientific developments of relevance to the verification system, including improved methods of data acquisition and analysis. The participants also highlighted the civil and scientific applications of the Treaty’s verification regime.

69. As a follow-up, we held the “International Scientific Studies” conference in 2009 (ISS09). Preparation for the conference started in 2008 and involved over twenty senior scientists plus the staff of the Commission. Furthermore, a number of workshops and expert meetings were held on the topics of the conference.

70. ISS09 brought together over five hundred scientists from about one hundred countries, in addition to diplomats and journalists. The event assisted in making an independent assessment of the capabilities and readiness of the verification regime. It helped in identifying developments that could enhance the Commission’s capabilities in areas of seismology, hydroacoustics, infrasound, radionuclide monitoring, ATM, OSI and data mining.

71. Two years later, we took another major step to further foster interaction with the scientific community and seek cost effective technological improvements. The “Science and Technology 2011” conference was attended by around seven hundred and fifty participants from over one hundred countries, from every corner of the world. It involved scientists, academics, researchers, science administrators, technologists, State officials and representatives of the media and civil society. It offered a forum for discussion on advances in science and technology relevant to nuclear test ban verification and on civil and scientific applications of the verification regime.

72. The conference received more than three hundred research contributions and review presentations, many of which were original work. It covered a wide range of disciplines, including seismology, meteorology, acoustics, nuclear sciences, computer sciences, system engineering and maintenance, and information and communication technology.

73. It entertained five specific themes. It deliberated on the earth as a complex system, understanding the nuclear explosion source, and advances in sensors, networks and observational technologies. It reviewed advances in computing, processing and visualization for verification applications. Moreover, it discussed creating knowledge through partnerships, as well as training and information and communication technology. It elaborated on technology foresight in the search for new and innovative verification capabilities

74. The event involved keynote talks, oral presentations, poster contributions and discussions. There were also some panel discussions. The gathering featured a special session on the earthquake and tsunami in Japan and the subsequent Fukushima nuclear accident. The session brought into the spotlight the extensive civil and scientific potential of the Treaty's verification capabilities. Special attention, in this regard, was given to the system's ability in providing real time warning and its other applications such as for disaster management.

75. Monday, 17 June, is the opening of our next "Science and Technology" conference. The conference, building on our previous experiences, pursues four goals. It aims to capitalize on scientific and technological innovations for verifying compliance with the Treaty and to promote the wider scientific application of data that are used for test ban verification. It will also attempt to enhance the exchange of knowledge and ideas between the Commission and the broader scientific community and to enlarge the scientific community engaged in test ban monitoring.

76. The conference will address three main themes. They are the earth as a complex system, understanding the nuclear explosion source, and advances in sensors, networks and processing. The conference is also to serve as an occasion to further explore the potential civil applications of the Treaty's verification regime.

77. Enormous time and effort have gone into our initiative of engaging with science and technology. This is a genuine investment in the future, whose achievements will not only benefit the Commission in the years to come but will also be of great value to the wider international community. The initiative similarly provides a platform for outreach activities and to raise public awareness of the Treaty and the viability of its verification regime. And it will prepare for our future steps in that direction. I believe the virtual Data Exploitation Centre is a good vehicle for such broadly based collaboration.

TRANSPARENCY AND ACCOUNTABILITY

78. Over the years, the Commission has striven to attain high standards of oversight, transparency and accountability. States Signatories have now at their disposal many means by which they can review and monitor the Commission's performance and

actively participate in its planning. Some of these means are unique and have no equal in the United Nations system.

79. Through our annual Programme and Budget proposals, voluminous quality information is provided. The information describes our planned programmes, projects and activities, as well as the expected results and the financial resources required for each activity. We have incorporated certain features in our Programme and Budget proposals to enable States Signatories to measure our performance at different levels. The goals, objectives, key performance indicators (KPIs) and outputs are described in accordance with the programmatic structure. Tables are provided to support textual information at different levels of detail. The document is reflective of our holistic approach to planning and budgeting as well as monitoring and evaluation.

80. We have been promoting results based management. Essential elements of such management have already been incorporated into our Programme and Budget documents. This also enables the Commission to effectively monitor and communicate the results of its work and measure its performance.

81. The annual Programme and Budget Performance Report is another tool that ensures maximum transparency and accountability. The report is aligned with the Programme and Budget document, thus making it more comparable. In over two hundred and fifty pages, it presents comprehensive information on the organization's performance, processes, products and services. It contains a summary of allocation and utilization of resources along with actual achievements, offering a comparative review of our activities and budget implementation. The achievements are measured against the expected results. In addition, a host of comparative tables and figures are presented by which the performance of a given year can be easily compared with those of previous years.

82. We have given States Signatories continuous online and real time access to performance information on 10 KPIs related to the strategic goals of the Commission via the Experts Communication System (ECS). This is an exceptionally dynamic, interactive performance reporting platform that enjoys a very powerful search capability. Data can be searched by process and product. They can also be retrieved by date, by geographical region or for an individual country or even a specific IMS station. There is the possibility, thus, to generate more than one thousand standard views and assess the Commission's performance at macro, micro and even nano levels.

83. By means of our monthly performance reports, we share an account of over fifty performance related parameters. These include performance information on the IDC, its data, products and services. Besides, at least twice a year, over eighty performance related parameters are reported to Working Group B through presentations and official conference documents, which are also accessible on the ECS.

84. At present, the data and analysis are shared constantly with close to 1400 authorized users in 123 States Signatories.

85. Advancing accountability and transparency in the area of internal controls, every year we issue a detailed annual report on Internal Audit activities. The report, which is

prepared independently by the Chief of Internal Audit, includes audit findings and the results of follow-up on previous recommendations. This exercise follows the good practice of many international organizations.

86. In order to strengthen oversight within the PTS, in 2008 we initiated a review of the terms of reference, or Charter, of Internal Audit. The process was completed in May 2010 and resulted in a significant update of the Charter. The update takes on board recent developments in professional auditing and best practices. The revised Charter further clarifies the role, authority, responsibility and accountability of Internal Audit. It equally addresses the accountability of the Chief of Internal Audit and resources.

87. In brief, our stakeholders are provided with yearly, half-yearly, monthly, near real time and continuous online real time performance reporting. In fact, all along we have encouraged them to review and monitor our performance and welcomed their feedback.

FORCE MULTIPLIERS

88. Despite a constant rise in its activities, the Commission has been working with a zero real growth budget since 2002. Its staff level has also remained the same as it was in 2003, except for a few increases in 2011. Managing an ever growing workload with a constant level of resources has been a serious challenge.

89. From 2006 onwards, the Provisional Technical Secretariat was restructured. In parallel, the limitation of tenure policy was implemented, leading to a full rotation by the end of 2009 of the Professional staff that was on board at the end of 1997. During the same time frame, as I noted earlier, we had to deal with some serious financial problems, including a high rate of unpaid assessed contributions.

90. Overcoming this cumbersome situation was indeed a tightrope walk. We started seeking possible force multipliers that were intended to maximize resource savings and efficiency gains.

91. We reviewed our policies, redefined our priorities, promoted internal synergies and improved our human resource management. We also began to streamline our procurement and outreach activities and cut travel and publication costs. At the same time, new and innovative management tools, such as results based management, PRINCE2 project management and quality management were employed to promote greater synergies and optimal use of resources.

92. We pursued vigorous partnerships with the scientific community, about which I have just spoken. Further emphasis was given to the search for innovation. The added value of these force multipliers has been substantial. They involve many fields, including verification technology and method refreshment, technology foresight, monitoring of IMS performance, enhancements and upgrades of IDC application software, data processing, event review and a reference event database for the hydroacoustic and infrasound technologies.

93. We also decided to migrate IDC systems to open source software, including operating systems. This allowed more independence from vendors, more flexibility, potential long term cost saving and making most of the available resources. The migration was also carried out using primarily in-house software developers.

94. Moreover, an organization-wide project management application system was adopted. The system's benefits are many. It offers a clearer vision of what the PTS is required to undertake in the short, medium and long terms. It also provides for the coherent, real time and coordinated planning, management and tracking of activities. The project management application system ensures further synergies and efficient employment of human and financial resources. The system also helps align the resources with tasks.

95. Another area that has benefited from a force multiplier included provision of cost-free experts, voluntary contributions, contributions in kind and extrabudgetary support.

96. In recent years, there has been a willingness on the part of States Signatories to support, on a larger scale, specific areas of the technical work of the Commission. For instance, we have received voluntary contributions for a range of OSI activities. They involve measurement of the global radioxenon background. A voluntary contribution has also been provided for the development of OSI specific techniques, such as noble gas detection systems, multispectral imaging, airborne gamma spectrometry, active seismic techniques and drilling. The list continues with the project to strengthen NDCs and new OSI techniques.

97. In addition, extrabudgetary funding was provided for projects to accelerate development of the Treaty's verification regime. These projects also involved the Regional Seismic Travel Time software and earth models, as well as deployment of the transportable xenon laboratory to characterize the background of radioxenon in the atmosphere.

98. Sizeable voluntary contributions have allowed us to reallocate funds within the Regular Budget to other high priority technical tasks. I would like to express my gratitude to all donors for their voluntary contributions and to States Signatories for their adoption of supplementary appropriations for several 'big ticket' projects.

99. The IPSAS-compliant Enterprise Resource Planning project is another force multiplier that contributes to smart planning and optimal work. One can come up with a long list of benefits of the project in terms of operations and financial management. It clarifies processes, procedures and practices. It helps better analysis and comparability of activities. It fosters efficiency. And it enhances communication, transparency, oversight and accountability.

100. The project is advancing according to plan. We have achieved significant milestones. Risks and project time lines are being closely monitored to ensure that the project will continue on its solid track.

101. Capacity development has clearly assumed importance as a powerful force multiplier on several accounts. The enterprise has helped in building up relevant technological infrastructure in developing countries. It has facilitated access by all States to our verification technologies and their applications, furthering the universal character of our

work and the democratic nature of our services. It has promoted better understanding of the Treaty and increased awareness about the work of the Commission.

102. Thousands of national experts, NDC staff, station operators, academics and government employees have benefited from the capacity building and Capacity Development Initiative programme through workshops, seminars and our e-learning platform. The subjects have covered many technical and non-technical issues related to the Treaty and its verification technologies.

103. Our engagement with the broader academic community has continued apace. Through reaching out to the world's leading universities, think tanks and research institutions, we are investing in the sustainable future of the Treaty and its verification regime, ensuring that they are supported by the best and the brightest. We have partnered with more than fifty institutions to explore innovative ways of integrating topics on political, legal, scientific and technical aspects of the Treaty in university curricula.

104. As a follow-up to our 2012 Intensive Policy Course, a CTBT Diplomacy and Public Policy Course will be held from 15 to 19 July in Vienna. The course will comprise an online e-learning component combined with a one week lecture course that will be broadcast live via the public web site. Participants will be able to cover the fundamentals of the Treaty and its verification regime through the online component. This will be completed with a week of in-depth lectures and high level panel discussions on the diplomatic and policy aspects of the Treaty, as well as a simulation exercise.

105. We have consistently looked beyond the more traditional methods of capacity development to reach a wider audience. In this respect, a robust presence on iTunes U, a growing online platform for free educational content, was set up. The unique presence on this platform offers wider distribution of Treaty related resources.

OUTREACH

106. The Commission's outreach programme has grown significantly. The main objective is to promote signature and ratification of the Treaty, educate the general public about the work of the Commission and foster international cooperation in the exchange of verification related technologies. In doing so, it targets States, international organizations, academic institutions, non-governmental organizations, the media and the general public.

107. Over the last several years, the programme has shifted from the communiqué style to an intensive, interactive method of public information. A special focus has been put on use of video–audio content, presence in the social media, including YouTube and Twitter, and shortening the turnaround time for reporting on new developments. This is particularly important on two accounts. One, it provides quick information on key defining events such as the announced nuclear tests by the Democratic People's Republic of Korea and the Fukushima nuclear accident. Two, it caters to the enquiries of a larger community at a time when many are trying to educate themselves about breaking news. By adopting a proactive and open stance in informing the media and the

public about its role and contribution, the Commission has increasingly enhanced its visibility and perception as a reliable source of information.

108. The public web site also provides very useful information on the history of nuclear tests and arms control initiatives, as well as the Treaty and its verification regime. In this way, it serves as a knowledge portal for the wider community on issues related to the Treaty and to nuclear testing.

109. In 2009, we developed the capacity to produce and make available broadcast quality video and audio material to broadcasters worldwide. Close cooperation with United Nations TV and UNifeed has been developed to make use of their exclusive global network of broadcasters.

110. We have also managed to expand our visibility through exhibition panels at the Vienna International Centre, United Nations Headquarters in New York and the United Nations Office at Geneva, reaching hundreds of thousands of visitors to the United Nations annually. To this list, I should add exhibitions set up at relevant regional and international special events and conferences.

111. Since 2007, our biannual publication *CTBTO Spectrum* has evolved from a standard organizational newsletter to a key publication in the field of nuclear disarmament and non-proliferation. The publication offers different perspectives on selected issues and encourages debate on them. It also enjoys featured contributions by leading international figures, foreign ministers, political analysts, scientists and members of civil society.

CONCLUSION

112. We have gone through a tough yet teachable journey, advancing the cause of the Treaty. Together we have stood up to many challenges and have turned them into opportunities. We have proved that with all stakeholders joining forces, there exists no insurmountable obstacle, however big or powerful.

113. I wish to say that it has been an honour to serve as the Executive Secretary of the Preparatory Commission, experience its difficult moments and be part of its successes. I am profoundly grateful to you for twice giving me the honour to work with you and serve a noble international cause.

114. In a month or so, it will be time for me to hand over my responsibilities to my successor, Dr Lassina Zerbo. I would like to congratulate him on his well deserved election. Dr Zerbo has been a reliable and dedicated colleague through my eight year tenure. All along, he has spared no effort to serve the organization and has displayed remarkable managerial skills and sound leadership. I have no doubt that he will make a perfect Executive Secretary. And I wish him every success in his new position.

115. As put in a Shakespeare play, “parting is such sweet sorrow.” The sweet part is the sense of accomplishment that I feel today. The sorrow is in leaving many friends and colleagues with whom I worked for so long, an organization that I love, and a cause that

I truly believe in. However, what gives me consolation is the fact that I will follow the developments and remain interested in the future of the Treaty and the Commission.

116. Now, a few words to the extraordinary staff of the Commission.

117. I wish to repeat what I have once said. Our technologies, IMS facilities, communication and computer systems, data and products appear faceless. But behind all of these are dedicated men and women of high calibre like you who, by effective teamwork, lend their support to the objective of closing the door on nuclear testing. Whether as station and system operators, technologists, analysts or support staff, you work day in, day out to run and maintain our system. Though overtasked, you do your utmost to generate quality data and data products. Similarly, you are making sure that States Signatories have continuous real time access to what is produced.

118. I would like to use this opportunity to deeply thank you for your dedication and long hours of hard work. I am grateful to you for helping me in the discharge of my responsibilities. This has been a very dynamic and demanding time, and you have risen to every challenge. With dedicated work, you have made the Treaty better known, its verification regime more reliable and the Commission stronger than ever.

119. I salute you for your selfless services and wish you every success in your future endeavours.