

Chairpersons' Summary
Regional Conference on 21st Century Capacity Building and
Virtual TSO in Asia

Friday, 29 October, 2010, Tokyo, Japan

On Friday, 29 October 2010, the Regional Conference on 21st Century Capacity Building and Virtual TSO in Asia took place in Tokyo, Japan, following the International Conference on Challenges Faced by Technical and Scientific Support Organizations (TSOs) in Enhancing Nuclear Safety and Security, 25-28 October 2010. Both conferences were co-hosted by IAEA and the Japanese Government, through the Japan Nuclear Energy Safety Organization (JNES). Approximately 60 participants attended the Regional Conference from 20 countries—particularly from those countries participating in nuclear safety regional networks including the Asian Nuclear Safety Network (ANSN), the Forum for Nuclear Regulatory Bodies in Africa (FNRBA), the Arab Network of Nuclear Regulators (ANNuR) and the European TSO Network (ETSON).

As a result of the dynamic change in the global nuclear community, including the emergence of new and the rapid expansion of existing nuclear power programmes and the wider use of radioactive sources, this Regional Conference focused on strengthening and expanding the human network among global and regional nuclear safety knowledge networks. It also focused on establishing and further enhancing effective nuclear safety Capacity Building and Infrastructure Development to ensure sustainable high levels of nuclear safety in the 21st century, supported by cyber platforms, inter alia, Virtual TSO.

Mr. K. Sogabe, President of JNES, warmly welcomed the participants and emphasised that this Regional Conference would provide a timely opportunity for all participants to discuss proactive measures for furthering the global and regional networking and creating human networks in the area of nuclear safety. He also mentioned that Japan attaches high importance to regional cooperation in this area and that JNES had been actively collaborating with other Asian countries for the establishment and expansion of ANSN since its launch in 2002. JNES is always ready to share its experience in establishing and operating the ANSN for building other regional networks.

Mr. K. Mrabit, Head of Safety and Security Coordination Section, Department of Nuclear Safety and Security, IAEA, expressing sincere thanks to the Japanese Government in hosting this important event through JNES, highlighted that the Regional Conference on Capacity Building and Virtual TSO was a perfect venue to address the complex challenges, opportunities and risks being faced by the nuclear community; and he also highlighted that the effective and efficient knowledge and experience sharing through active, in-depth and intensive interaction was a key for Capacity Building in the 21st century and to foster cooperation among the global and regional nuclear safety networks to support Capacity Building nationally, regionally and internationally.

The IAEA staff, Mr. M. Heitsch, Science Secretary of the International TSO Conference reported the conclusions and implications of this three day conference. The TSO conference covered four topical issues, to include: 1) Roles, Functions and Values that Guide TSOs; 2) Technical and Scientific Support for Nuclear Safety and Infrastructure Development and Capacity Building; 3) The Emerging Need for Nuclear Security Technical and Scientific Support; and, 4) Nuclear Safety and Nuclear Security Networking and Centres of Excellence. The following were some of the recommendations as result of the TSO conference:

- DS429—draft IAEA Safety Guide on External Expert Support on Safety Issues should be completed, approved and published as soon as possible, taking into account comments provided by Member States provide the basis for future IAEA peer review services, and allow for an objective evaluation of the performance of TSO functions, and the formulation of recommendations for their further improvement.
- The IAEA should initiate plans for a third international TSO conference, to be held in 2013–2014. In this respect, the conference welcomed the proposal of China to host this next conference.
- The IAEA should foster the establishment of a forum dedicated to nuclear safety infrastructure development issues related to scientific and technical support. This ‘TSO Forum’ would meet regularly in between the international TSO conferences.
- TSO functions should be extended to providing technical support to competent authorities in the field of nuclear security to achieve greater safety and security synergy.

The Regional Conference was divided into two panels accordingly: Topical Issue 1: Challenges of Capacity Building in the 21st Century in Asia and the establishment of a Network for Capacity Building Centres in Asia and Virtual TSO; and Topical Issue 2: Enhancing international and regional nuclear safety knowledge networking for internationally facilitating, establishing and enhancing capacity building. The first panel was chaired by Dr. Y. Nakagome, Vice-President of JNES, and the second panel was chaired by Mr. R.A.A. Raja Adnan, Director General of Malaysian Atomic Energy Licensing Board (AELB).

During the first panel, Mr. C. Zhang, Nuclear Safety Center (NSC), China, presented nuclear power developments in China and its adherence to the principle of safety and quality first. He also discussed that the nuclear technology development and nuclear power programme brought forth both challenges and opportunities to NSC, China. He stated that NSC was willing to share their practices and welcomed all relevant organizations to participate in NSC activities and to share knowledge and experiences.

Dr. A.N. Lasman, Chairman of Indonesian Nuclear Energy Regulatory Agency (BAPETEN), presented the challenges of capacity building, including human resource development, especially the gap between junior and senior staff resulting from discontinuous staff recruitment and the lack of an established national capacity building policy. He introduced that the Education and Training Centre had been established in November 2008 and some foreign experts had been invited to enrich the knowledge of BAPETEN’s staff especially in the field of nuclear power plant (NPP) technology. He stated that the Virtual TSO could be utilized before the NPP project commenced as a vehicle for transferring knowledge between the advanced and developing countries—especially in the area of NPP license application. He further stated that from the advanced countries could provide information through the Virtual TSO medium as a means of sharing experience regarding siting, design and construction of the NPPs.

Mr. N.H. Luu, Head, Division of Nuclear Safety of Vietnam Agency for Radiation and Nuclear Safety (VARANS), presented an overview of VARANS and its TSO, introducing their challenges for the NPP programme, namely: the need for a qualified professional staff, trained and experienced in applying principles and methods of multiple disciplines and a thorough knowledge of the legal requirements necessary to develop the legal infrastructure. He stated that a key solution for capacity building was international cooperation and experience sharing with Member States, the IAEA, the European Commission, and that VARANS should have a strong TSO to support its regulatory activities, especially for its nuclear power program.

Mr. M-G Albert, Director for International Affairs, IRSN, France, introduced that the European Technical Safety Organization Network (ETSON), initiated in 2006, with the objective of being a

forum for exchanges on safety analyses and R&D in the field of nuclear safety and that ETSON would develop further with new European Members as well as non-European Associate Members. He also introduced that as an initiative of European Technical Safety Organization, the European Nuclear Safety Training and Tutoring Institute (ENSTTI) provided vocational training and tutoring in performing nuclear safety assessments and nuclear security and radiation protection. He stated that networking was highly beneficial to the advancement of nuclear safety, and recommended the establishment of links between ETSON activities and other international networks.

After the Keynote speeches, panel discussions took place focusing on: 1) Networking and capacity building, and 2) the Virtual TSO.

Concerning the first topic of networking and capacity building, the panellists and attendees expressed various views and opinions. Among them, they expressed views regarding administrative procedures —while thought to be important, were not sufficient in themselves for nuclear safety; decision-making required reliable information and a science-based approach; sharing and networking requires that each State have something concrete to share and bring to the table and networking could not compensate for those not having anything to share. A clarification was made from the IAEA that the Capacity Building Centre included more than just education and training, it also provided for expert advice, peer reviews and advisory services. It was noted that education and training materials available through the networks were valuable, but they could not replace classroom training only complement it. Acknowledging the differences in the ANSN and ETSON networks, there was a view that we could create more effective cooperation among networks if we connected different aspects of them.

With regard to the second topic of Virtual TSOs, the panellists and attendees expressed various views and opinions. There was a view that e-learning could be effective to check the basics in the first level of training, but might reach its limits in further levels where direct training from the trainer was most effective. There was another view that the Virtual TSO could be used at the beginning to trigger discussions among experts. Some issues about the Virtual TSO were raised in terms of timeliness, responsibility and compensation. There were some views that the Virtual TSO could work best under some sort of formal framework, like a Memorandum of Understanding (MoU) between two or more countries, and that a TSO network or forum might be effectively formed first under such a framework, and then something virtual could be explored.

During the second panel, Dr. Y-W Park, Director of International Nuclear Safety School (INSS), Korea Institute of Nuclear Safety (KINS), presented Korea's contribution to the global and regional knowledge networks, to include: KINS as an IAEA-affiliated regional training centre for capacity building, KINS' advisory service for regulatory infrastructure building for new entrants, and coordination of four ANSN Topical Groups in the field of education and training, government and regulatory infrastructure, safety analysis and siting. He highlighted Korea's international cooperation among new entrants and NPP countries in a flattening world, harmonising safety approaches for mixed reactor generations and fostering transparency and objectivity in new environments.

Dr. A.M. Dela Rosa, Director, Philippine Nuclear Research Institute (PNRI), focused on the biggest challenge faced by both the current players and the new entrants was to source a critical mass of competent human resources who had in-depth understanding of the complexities of the nuclear power technologies. She introduced the training courses and framework of PNRI, their human resource development strategies (strengthening the PNRI Nuclear Training Centre by linking it with Regional Training Centres and sending staff for training abroad through bilateral or multilateral mechanisms) and their methods for maximising benefits from international and regional cooperation in ANSN, EC, IAEA, etc. She stated that countries in Asia could draw from each other's strength through regional networking to further the common interests and aspiration

of a better life for the majority of the people in the region and that Asia could share its knowledge and expertise in nuclear power with the other regions.

Prof. S. Elegba, Director-General, Nigerian Nuclear Regulatory Authority, presented that the FNRBA was promoting its Model Project Approach and Thematic Working Groups for pursuing the enhancement, strengthening and harmonization of the radiation protection, nuclear safety and security regulatory infrastructure and framework in Africa. He emphasized the importance and great value of cross-linking the networks, stating that safe and secure operation of NPP was of global concern and people must not only think globally, but also act globally.

Dr. A. Mahjoub, Director General, Arab Atomic Energy Agency (AAEA), introduced their recently developed: 'Arab Strategy for Peaceful use of Atomic Energy up to 2020'. He stated that this was approved by the Arab Leaders and AAEA's mandate was to assist Arab states to develop their nuclear infrastructure and act as coordinator between member states to foster the exchange of experience. He also mentioned that ANNuR launched recently to: 1) enhance, strengthen and harmonize the regulatory infrastructure among Arab countries; 2) provide mechanisms for ANNuR to be an effective and efficient internationally recognized network for exchange of regulatory experiences and practices among the nuclear regulatory bodies in Arab states. He further announced that ANNuR formulated a three phase project—planning & analysis, identification of scope— in 2010 with project implementation planned to begin in 2011 with full implementation from 2012.

Mr. K. Mrabit, IAEA, presented the Agency's perspectives on Capacity Building and Global Nuclear Safety and Security Network (GNSSN). He introduced the Agency's broad range of Capacity Building efforts, to include: the establishment of the Vision for Capacity Building and the Principles for Capacity Building; establishment of the International Nuclear Safety Centre (INSAC); establishment of the Regulatory Cooperation Forum (RCF); and its promotion of cooperation and collaboration among GNSSN and regional networks. He stated that GNSSN was launched to ensure that critical knowledge, experience and lessons learned about nuclear safety and security were distributed and exchanged as widely as possible. He also stated that GNSSN would play a more prominent role in strengthening and continuously improving the Global Nuclear Safety and Security Framework. He highlighted that Member States needed to build their own strategy for capacity building, and that enhancing collaboration and coordination among the global and regional networks was crucial to face the current and future dynamic and complex challenges. He emphasized that commitment and support from all the stakeholders was essential.

After the Keynote speeches, the panellists and the floor discussed the value of networking and the optimization of resources when developing further networks. Chairman Raja Adnan concluded the session, summarizing: 1) no cyber linkage have been developed among networks yet; 2) further development of GNSSN is needed, acknowledging GNSSN could provide significant value as a one-stop centre providing global access to all information and providing a bridge to all networks to disseminate and share this information among the networks. On the other hand, it was cautioned that GNSSN should not be another layer of bureaucracy and should avoid unnecessary duplication and accumulation of network activities; its important is to maximize and optimise resources for pursuing further development and cooperation among networks.

At the closing session, Chairman Nakagome and Chairman Raja Adnan reviewed the conclusions of the panel discussions and expressed their appreciation to the panellists for their valuable presentations and to all the attendees for their active participation to the constructive panel discussions. They further thanked JNES for their extraordinarily fine hosting and also thanked the IAEA secretariat for its efforts in organizing the event.