

KINAC/INSA International Training Activities and Lessons Learned

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1. Introduction

The 2010 Nuclear Security Summit (NSS) was held in Washington, DC to enhance international cooperation to prevent nuclear terrorism. The summit communique acknowledged the need for capacity building for nuclear security and cooperation at bilateral, regional and multilateral levels for the promotion of nuclear security culture through technology development, human resource development, education, and training [1]. Since then, as their contribution to enhancing the nuclear security, several countries committed to establishing nuclear security training and support centers, sometimes called “Centers of Excellence” (CoEs), dedicated to ensuring the long term sustainability and effectiveness of nuclear security through human resource development, technical support, and scientific support [2].

In an effort to strengthen the coordination of the nuclear security training and support centers, the International Atomic Energy Agency (IAEA) established the International Network for Nuclear Security Training and Support Centres (NSSC Network) in February 2012. In February 2013, NSSC Network members from China, Japan and the Republic of Korea (ROK) established the “Asia Regional Network” under the auspices of the NSSC Network to enhance regional collaboration to harmonize activities of the regional CoEs to provide effective support on nuclear security. Japan opened its CoE, Integrated Support Center for Nuclear Nonproliferation and Nuclear Security (ISCN) in February 2011. The Chinese CoE, so called State Nuclear Security Technology Center (SNSSTC), is expected to open in March 2016.

In 2010 NSS, the ROK made national commitment to establish the nuclear security CoE by 2014 in order to share its expertise and support the Summit’s mission. As a result, the ROK’s nuclear security CoE, so called International Nuclear Nonproliferation and Security Academy (INSA), was established in the Korea Institute of Nuclear Nonproliferation and Control (KINAC) on February 19, 2014. In March 2014, the KINAC/INSA provided its first international training course. In this paper, international training activities of the KINAC/INSA will be introduced and the lessons learned from those activities will be identified.

2. International Training Activities of KINAC/INSA

The goal of the KINAC/INSA is to contribute to the world peace via advanced and excellent nuclear

nonproliferation and security training. The KINAC/INSA runs both domestic and international training programs in the area of nuclear nonproliferation and security. The domestic training program includes training courses for national nuclear facility operators, nuclear fuel cycle researchers, nuclear inspectors, and the general public. The test-bed facility for the nuclear security located at the KINAC/INSA, so called the SETT (Nuclear Security Research, Training and Test facility), is beneficial for the security R&D, training, and performance testing of security equipment.

The ROK made contracts with the United Arab Emirates in December 2009 to supply four nuclear power plants and with the Jordan in March 2010 to supply one research reactor. Meanwhile, there has been an international concern for the risk of potential nuclear proliferation in the Middle East. As one of nuclear suppliers in the world, the ROK needs to contribute to strengthening global nuclear nonproliferation and security regime by supporting nuclear newcomer countries to establish or strengthen their national regime.

The international training program of KINAC/INSA comprises the INSA international training courses (ITCs) in the area of nuclear security, safeguards, and strategic trade controls and the IAEA regional training courses (RTCs) in the area of nuclear security and safeguards.

The target audience of the INSA ITCs is foreigners from nuclear newcomer countries, including countries that consider introducing the new nuclear power plant for the first time. Its objective is to help newcomer countries to establish their own nuclear nonproliferation and security regime by awareness and professional development training. The KINAC/INSA has developed the INSA ITCs in close cooperation with the U.S. national laboratories. Each INSA ITC consists of not only class-room lectures but also individual or subgroup exercises which provide the participants with the opportunity to apply the lecture material to practical situations. Some of the INSA ITCs include a technical visit to the facility such as the SETT and the nuclear power plant. The six INSA ITCs with specific themes in total have been developed so far. Each area has one introductory level course and one intermediate level course. The intermediate level course has prerequisites that participants of the course should have completed at least one training course in that area. It is planned that more intermediate level courses with different themes will be developed in the future.

The first INSA ITC was held in March 2014. The theme of the course was the nuclear security

infrastructure development at the introductory level. Since then, the nuclear security course has been regularly held every March while the INSA ITCs in the area of nuclear safeguards and strategic trade controls have been held every June and November, respectively. In 2014 (even year), the INSA ITCs at the introductory level for each area were held and the INSA ITCs at the intermediate level were held in 2015 (odd year). For each INSA ITC, the course is open to two or three people from each country with a maximum of thirty participants. The applicants are asked to be nominated by each country. After receiving the nominations through official channels, the KINCA/INSA determines acceptance of nominated applicants through the selection process.

3. Lessons Learned

From the last two-year experience on the INSA international training program, the four lessons have been learned as follows. The first two lessons are good practices and the other two lessons are challenges to the INSA international training.

Firstly, participants of the INSA ITCs emphasized the usefulness and practicality of exercises conducted during the course. It showed the importance of exercises which provide trainees with the opportunity to apply the lecture material to practical situations. Exercises have been carried out either individually or in small subgroups. Subgroup exercise usually requires more attention for organizers since subgroups work in separate rooms. Nevertheless, it has advantage in providing trainees with more chance to work with other participants in the same subgroup during the exercise activities. Sometimes, trainees learn from each other. It is also worth mentioning that it was valuable to utilize the SETT for the subgroup exercise particularly at the INSA ITCs in the area of nuclear security since many participants had not had a chance to experience real security equipment such as various types of intrusion detection sensors and fences, access control equipment, and alarm management system. In the course evaluation results, many participants suggested more exercises and/or to allocate more time to exercises rather than lectures.

Secondly, there were positive feedbacks from participants on the maturity of the INSA ITCs conducted even in its first year of operation. It resulted largely from the train-the-trainer workshop and the “dry-run” (or a practice run) of the INSA ITC conducted before the delivery of each INSA ITC. To ensure the high-quality delivery of the INSA ITCs, the KINAC/INSA has conducted a train-the-trainer workshop and a dry-run of the INSA ITC before each INSA ITC is actually delivered to newcomer countries. After the training materials had been developed by subject matter experts, a train-the-trainer workshop was conducted to build a pool of instructors of the INSA ITCs and participants selected as potential instructors

were trained by the subject matter experts on delivery of the INSA ITC. A dry-run of the planned INSA ITC was conducted in order to assess readiness for the INSA ITC. Training modules during the dry-run were delivered by instructors who will deliver the INSA ITC and participants serving as observers provided feedback on each training module and course as a whole.

Thirdly, the necessity of visiting training program needs to be analyzed, taking its benefits into account. For the last two years, the KINAC/INSA has provided the international training only for foreigners invited to ROK. The visiting training program would be cost-effective since instructors from the KINAC/INSA are to be dispatched to the specific foreign country rather than inviting foreigners from various countries. It would be more effective if the training course for visiting program is tailored to visiting country or organization, considering the nuclear development phases and situations specific to that country or organization. The disadvantage of visiting training program is that KINAC/INSA facilities such as SETT cannot be utilized in the training course.

Fourthly, the difficulty of securing qualified instructors was identified due to lack of qualified full-time instructors in these areas in spite of the train-the-trainer workshop. Since main instructors of the KINAC/INSA are part-time employees, they can keep their job only up to four years in accordance with the provision of personnel at the KINAC. Although some other instructors are invited from relevant divisions at the KINAC, they cannot be fully devoted to the course delivery and material developments.

4. Conclusion

As one of ROK’s national commitments at the 2010 NSS, the KINAC/INSA was established in 2014 in order to share ROK’s expertise and support the Summit’s mission. International training activities of the KINAC/INSA for two years have been introduced and the lessons learned from those activities have been identified. While the KINAC/INSA as the ROK’s CoE has begun on the right foot, it still remains challenging to achieve real excellence in training. Such international training efforts of the KINAC/INSA will eventually contribute to the ROK acknowledged as a global leader in the area of nuclear nonproliferation and security and a nuclear supplier fulfilling responsibility on global nuclear nonproliferation and security regime.

REFERENCES

- [1] Communique from Washington Nuclear Security Summit, April 13, 2010.
- [2] International Atomic Energy Agency, Establishing a National Nuclear Security Support Centre, IAEA-TECDOC-1734, p. 2, 2014.