

CONDUCTING VIRTUAL EXERCISES FOR NUCLEAR FORENSICS CAPACITY BUILDING DURING THE PANDEMIC

1. **INTRODUCTION** Thailand arranged the ASEAN Regional Forum on Nuclear Forensics in December 2011. Then, the Office of Atoms for Peace (OAP) planned to establish a Nuclear Forensics Center. Since 2013, nuclear forensics in Thailand was established under the Seoul Nuclear Security Summit. The Prime Minister has declared to support global nuclear security as well as nuclear terrorism mitigation. OAP has been designated to build up nuclear forensics capabilities, which have three main functions to enhance the performance; network strengthening, signature analysis, and database development. Those are necessary to prioritize. The national training program is a key element to support the network development in communication among the competent authorities. Due to the pandemic, Thailand had to adapt the training course to the virtual engagement to keep the momentum of strengthening the networks during 2020-2021. The Standard Operating Procedure (SOP) evaluation and the software assessment for nuclear and radioactive materials were discussed through the virtual exercises to fulfill the requirement in practical use, which was complied with law and regulations.
2. **CONDUCTING THE VIRTUAL EXERCISES DURING PANDEMIC** The SOP was developed by discussing with the competent authorities and finished in 2017. The role and responsibility of the nuclear forensics networks were defined regarding the law and regulations from each procedure. In order to identify the strength and weakness of the SOP, the virtual exercises were conducted through interactive scenarios in 2020. The competent authorities assisted the OAP in completing the SOP. In addition, Thailand has created the software for assessment nuclear forensics signatures at a crime scene in phase I. The virtual exercises were also established to estimate the meet all requirements for practical use of the frontline officers. The software has arrayed in three authentications access, composed of frontline officers, regulatory agencies, and the nuclear forensics authorities.
3. **THE VIRTUAL EXERCISE OUTCOMES** The feedback from the competent authorities is valuable in terms of the development of the SOP and software for assessment, sixty participants from the frontline officers were responding to the evaluation forms. The SOP was adopted accompanied by national law and regulations. The finished SOP will be planned to include in the nuclear security regime in 2022. According to the software for assessment at the crime scene, more than two hundred participants attended the workshop and provided helpful comments. The software was planned to upgrade in phase II and will be completed in 2022.
4. **CONCLUSION** The virtual exercise is a vital factor for communication under the pandemic circumstance with the advantages of no limitation with attendees and distance to maintain the networks strengthen. However, the actual workshop is still necessary to practice with the relevant organizations to raise their awareness for combatting nuclear threats. Furthermore, the networks will have an opportunity to use the detection equipment to detect the nuclear and radioactive materials in the actual situation, including familiarity with the software for assessing nuclear forensics signatures at a crime scene too.

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