



# Development of National Training Capabilities to Support Nuclear Security Infrastructure in Kazakhstan

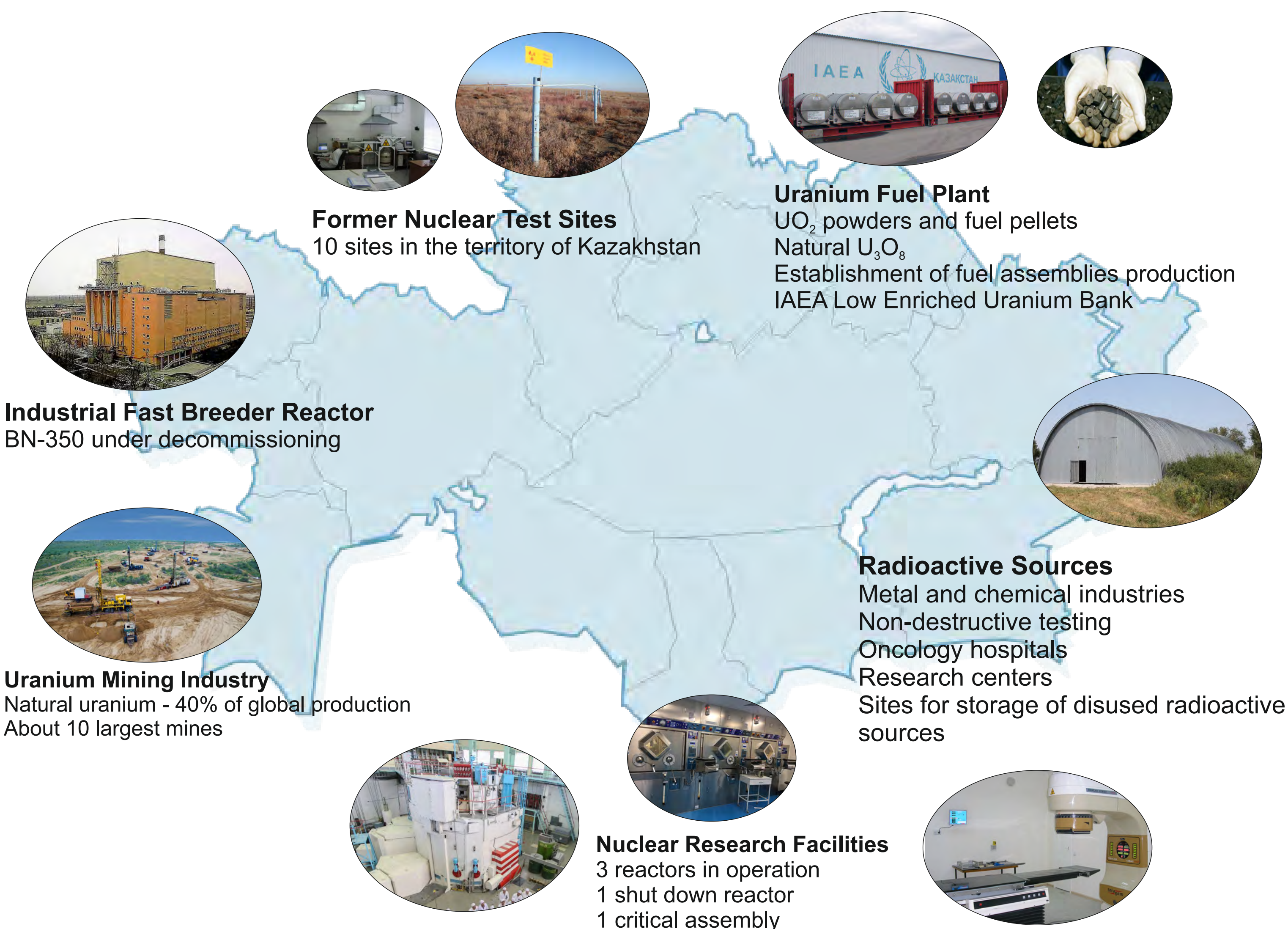
N. Izmailova, M. Idrissova

Nuclear Security Training Center, Institute of Nuclear Physics, 1, Ibragimov str., Almaty, 050032, Kazakhstan

[N.Izmailova@inp.kz](mailto:N.Izmailova@inp.kz); [M.Idrissova@inp.kz](mailto:M.Idrissova@inp.kz)

## 1. Background

Kazakhstan has a rich nuclear heritage and extensive nuclear infrastructure, including former nuclear test sites; uranium industry; BN-350 fast breeder reactor under decommissioning; nuclear research centers with research reactors and radiochemical laboratories; IAEA Low Enriched Uranium Bank; industrial companies and medical centers using thousands of radioactive sources.



### WE USE:

Nuclear Facilities  
Nuclear Materials  
Radioactive Materials  
Double Use Materials  
Nuclear Knowledge

### RISKS:

Risk of Sabotage  
Risk of Theft  
Risk of Dissemination  
of Sensitive Information  
Terroristic Threat!

### MEASURES TO MINIMIZE RISKS:

Regulatory Framework  
Physical Protection  
Accounting and Control  
Combatting Illicit Trafficking  
Information Security  
Personnel Training

Sustainable and efficient functioning of the nuclear security infrastructure, coordinated interaction and improvement of all its elements require continuous development of human resources. Recognizing the need for education and training of personnel in the field of nuclear security, at the 2012 Nuclear Security Summit, Kazakhstan announced its intent to establish a specialized training center.

## 2. Establishment of Nuclear Security Training Center in Kazakhstan

The Nuclear Security Training Center (hereinafter - the Center or NSTC) was constructed through a cooperative effort between Institute of Nuclear Physics (INP) of the Ministry of Energy of the Republic of Kazakhstan and the United States Department of Energy's National Nuclear Security Administration (DOE/NNSA). The Center, inaugurated in May 2017, provides training on nuclear security aspects and serves as platform for discussing best practices in this area.



Since the Center opening, 30 training courses and workshops, 20 working meetings were hosted and conducted. More than 400 specialists represented Kazakhstan's nuclear industry enterprises and nuclear research centers, state authorities, regulatory bodies, border guard and customs services, interior and national security agencies, and transport companies have been trained in the Center.

The training courses conducted at the Center demonstrated the advantages of nuclear security training in a specialized center equipped with full-scale simulators, mock-ups and demonstration stands, a training ground and a transport checkpoint with modern equipment, same as equipment being used at real facilities.



## 3. Development of NSTC Training Capabilities

To maintain and improve the relevance of the training provided by the Center, the nuclear security training needs within Kazakhstan must periodically be evaluated and re-assessed.

The initial Training Needs Analysis (TNA) was conducted in 2013 during conceptual designing of the Center. After first year of Center's operation, updated TNA was performed in 2018. As a result of jointed work of Kazakhstan and US experts, the need to include additional topics into the training curriculum, as well as additional technical, administrative and human resources needed to further develop the Center were identified. The updated scope of training includes, in particular, radiological and transportation security.

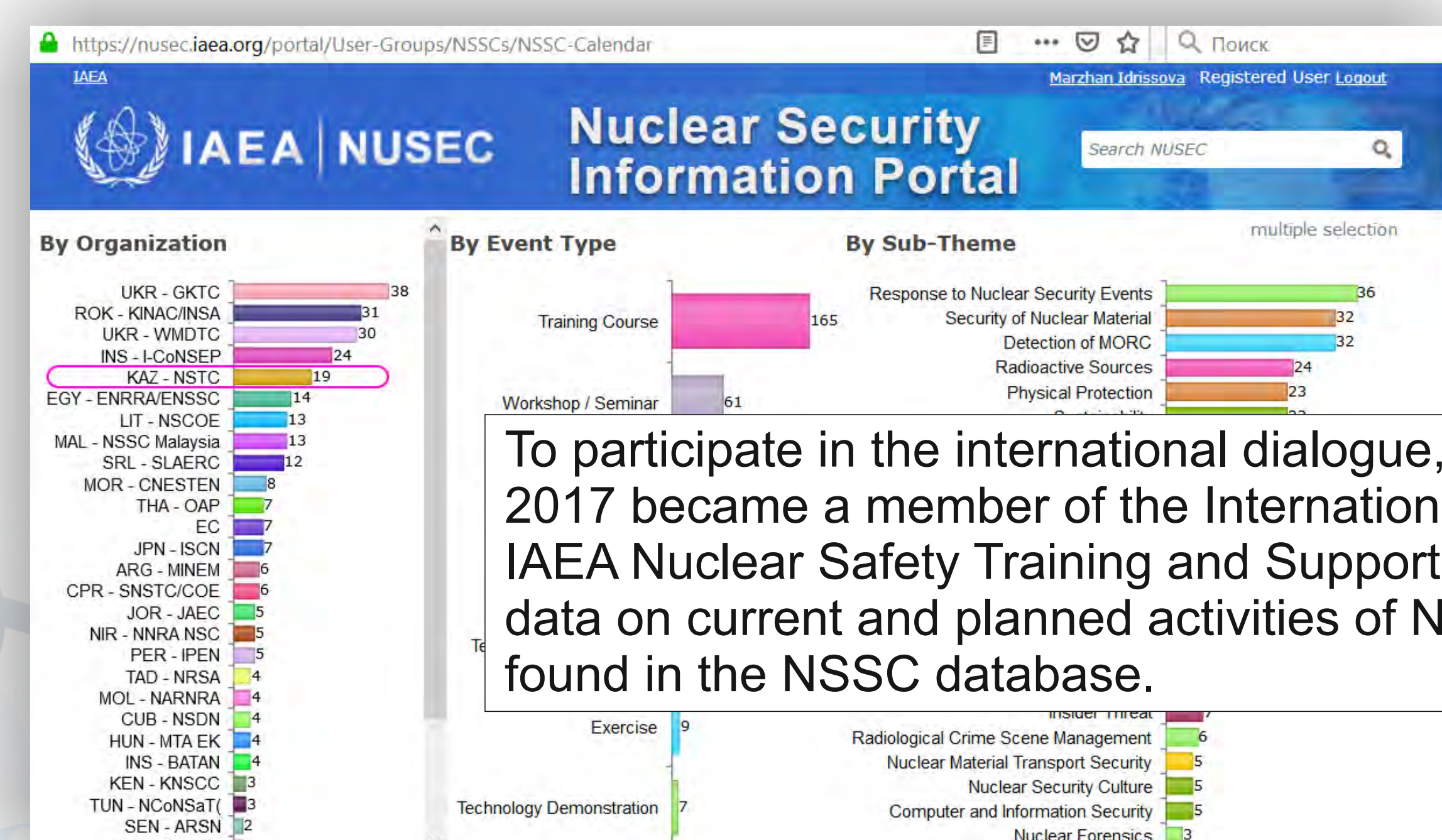
Taking into account the findings of TNA-2018, the Center in cooperation with US DOE is currently working on updating existing programs and training materials, as well as developing new training programs.

The training ground of the Center was modernized in 2019 with support of the Threat Reduction Agency of the US Department of Defense (DOD/DTRA) under the Global Nuclear Security Program.



## 4. International Cooperation

International cooperation is indispensable for maintaining high standard of personnel training in nuclear security. NSTC successfully collaborates with the US DOE, DOD and National Laboratories, JAEA and IAEA to share experiences and best practices and to improve the level of training in support of nuclear security regime.



The Nuclear Security Training Center in Kazakhstan has become not only an element of national security, but also Kazakhstan's contribution to strengthening global nuclear security.