



**Integrated Support Center
for
Nuclear Non-Proliferation and Nuclear Security**

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**Masao Senzaki
Japan Atomic Energy Agency**

Japan's Commitment to Strengthening Nuclear Security (Announced at the Washington Nuclear Security Summit)

Japan's National Statement at the Washington Nuclear Security Summit (Excerpts)

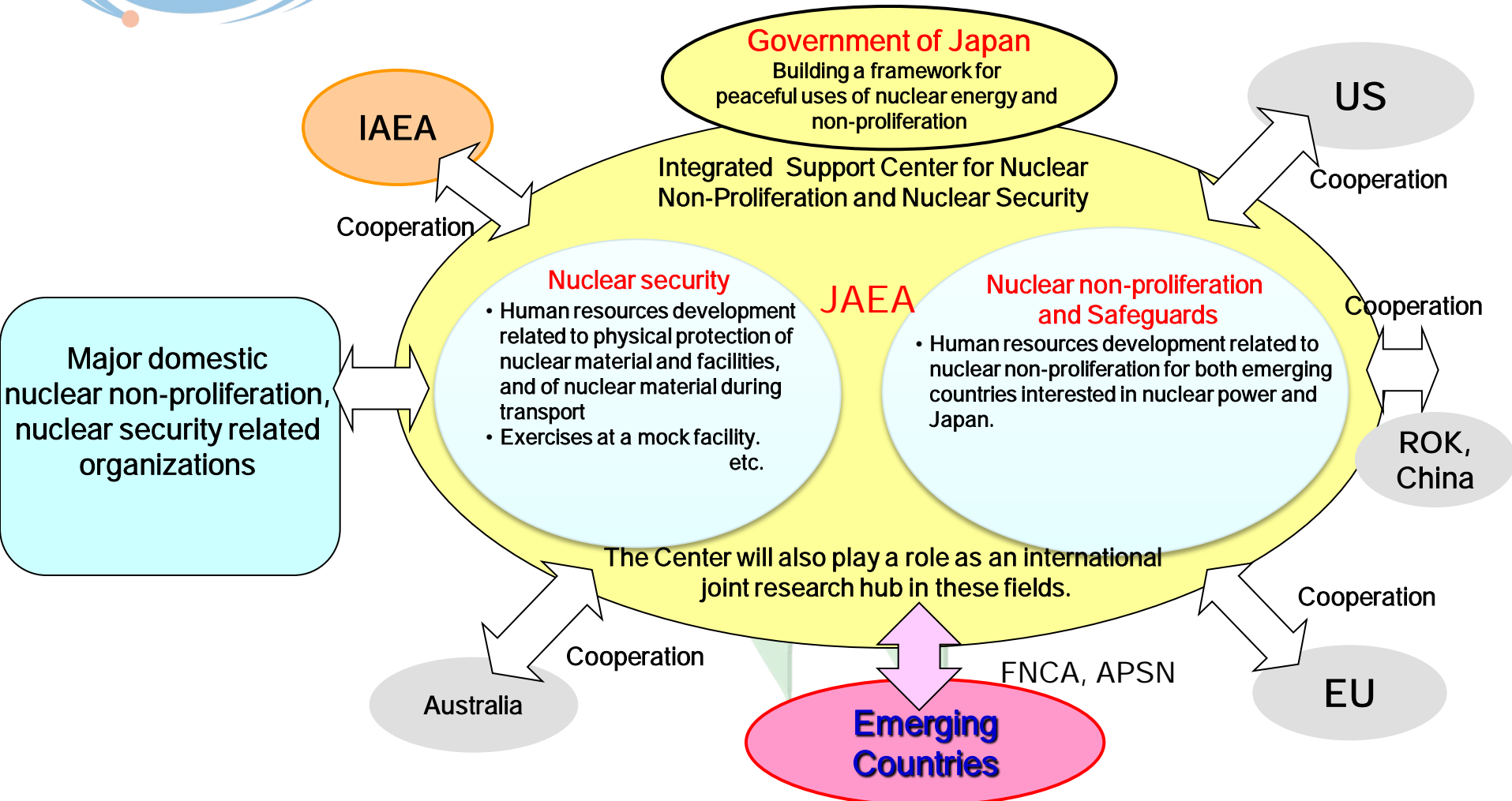
Ministry of Foreign Affairs of Japan,

http://www.mofa.go.jp/policy/un/disarmament/arms/nuclear_security/2010/national_statement.html

- Establishment of a regional support center for strengthening of nuclear security for Asia
"Japan will this year establish a regional center for the strengthening of nuclear security, tentatively named the "Integrated Comprehensive Support Center for Nuclear Non-Proliferation and Nuclear Security for Asia" under the Japan Atomic Energy Agency (JAEA), with the aim of institutionalizing support for nuclear security on a permanent basis and contributing to strengthened nuclear security in Asia and other regions in line with opinions expressed at the aforementioned seminar in January."
- Development of technology related to measurement and detection of nuclear material and nuclear forensics based on international cooperation
- Contributions to IAEA Nuclear Security Programs
- Hosting of a WINS conference



Structure of the Integrated Support Center for Nuclear Non-Proliferation and Nuclear Security



Lecturers will be invited from both domestic and foreign/international entities including the IAEA
 Mock physical protection facility and/or virtual reality systems will be built for training.

Support for capacity-building efforts including education and training, and for infrastructure development in emerging countries for nuclear use

Outline of the Integrated Support Center's activities

Taking advantage of the vast Japanese experience in peaceful uses of atomic energy, the Integrated Support Center aims to strengthen nuclear nonproliferation and nuclear security in emerging nuclear countries, especially those in Asia. The Integrated Support Center will conduct three main activities as follows:

1. Strengthening capacity building through human resource development, training and education

The Integrated Support Center provides training and education via lectures, exercises, workshops and e-learning systems, which are tailored for a wide range of bureaucratic and technical human resources, from leadership to technician levels, in order to assist building and sustaining successful, indigenous, nonproliferation and nuclear security organizations and programs. These activities also emphasize building networks among people in the Asian region to reinforce technical concepts, exchange information, and to increase regional confidence.

2. Supporting infrastructure development

The Integrated Support Center provides legal, regulatory and technical support for the development of domestic laws and regulations, and for development of efficient and effective nuclear material accounting, control and monitoring instrumentation systems and procedures.

3. Developing technology and providing support

The Integrated Support Center draws on extensive domestic research and development capabilities for nuclear material accounting, detection and measurement to provide technical support for building and strengthening nuclear security programs in other countries.

Summary of Human Resource and Capacity Building Assistance Activities

1 . Training courses for nuclear security

1 Expected participants

Officials/personnel from regulatory bodies, nuclear operators, radioactive material licensees, officers from police and coast guards

2 Program contents

- (1) Design and evaluation process of a physical protection system of facilities using nuclear and other radioactive materials
- (2) Design and evaluation process of a physical protection system of nuclear and other radioactive material during transport
- (3) Detection of and response to illegal acts related to nuclear and other radioactive material

2 . Training courses for safeguards and state system of accounting for and control of nuclear material

1 Expected participants

Nuclear operators and government officials involved in state system of accounting for and control of nuclear material, etc.

2 Program contents

- (1) IAEA safeguards
- (2) National system of safeguards
- (3) Material accounting system

3 . Training courses on the international nuclear non-proliferation framework

1 Expected participants

Nuclear operators and government officials responsible for the development of domestic legislation in the fields of nuclear non-proliferation and nuclear security

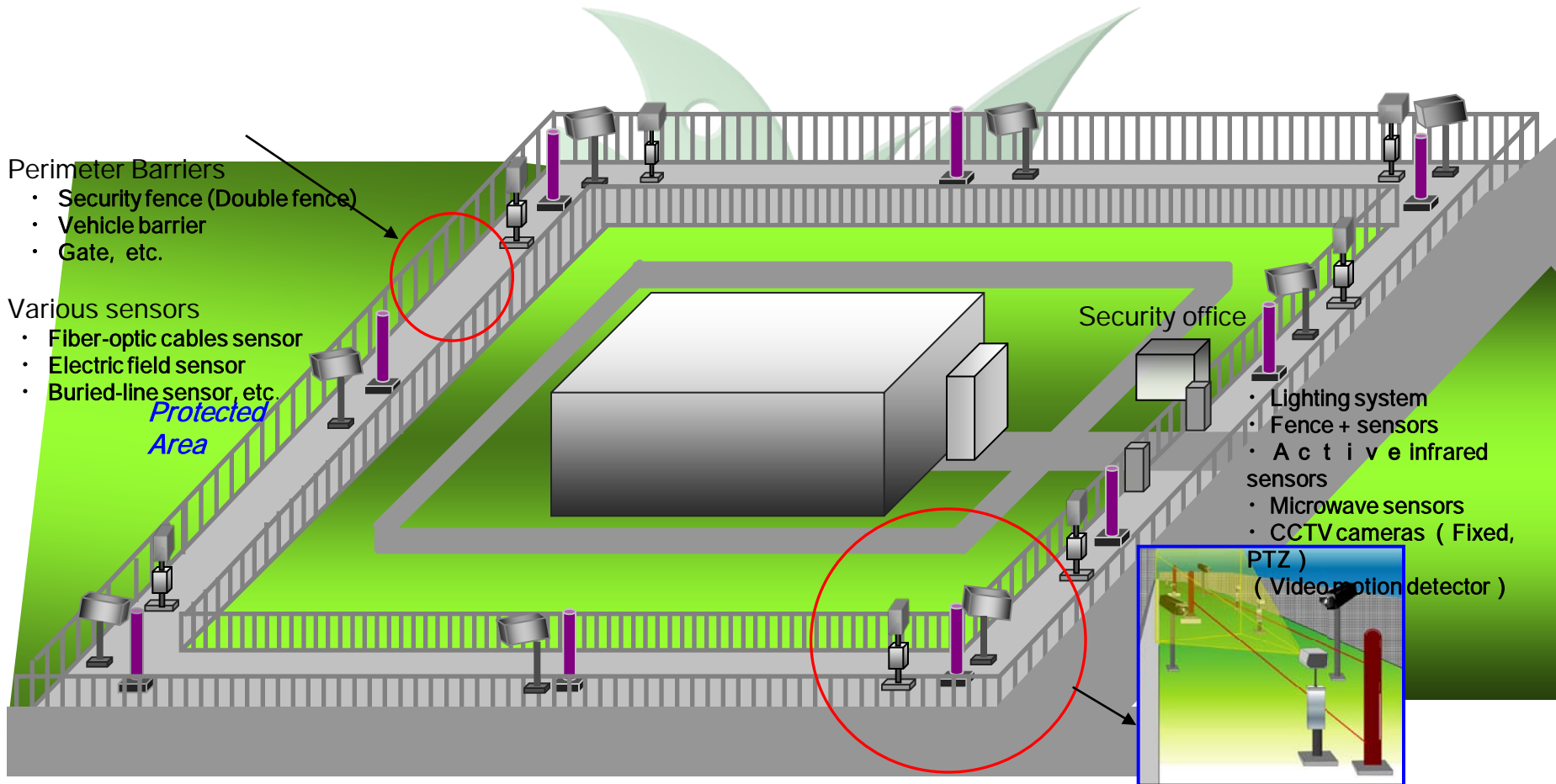
2 Program contents

- (1) History and international trend of peaceful uses of nuclear energy and nuclear non-proliferation
- (2) International framework of nuclear non-proliferation
- (3) Japan's efforts to ensure compatibility between peaceful uses of nuclear energy and nuclear non-proliferation

Training Field

Physical Protection Mockup Facility

Physical Protection Mockup Facility will be set up and introduced to training.

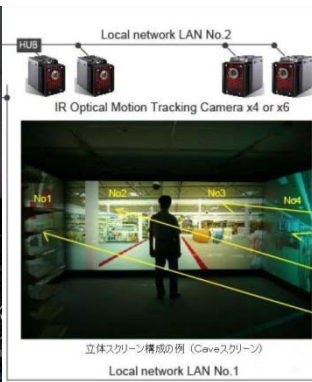


VR Training Images

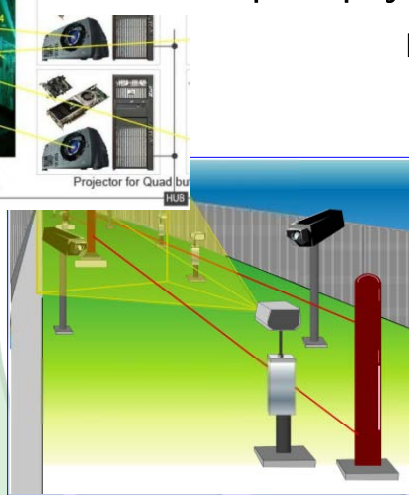
Training environment compatible to various conditions and support needs for ensuring nuclear security



◆ Visual Learning/Evaluation
(Group study using VR stereoscopic system at "Fugen")



◆ Visual Study, Experience, and Evaluation (Interactive study in real scale) (Usage example of CAVE VR stereoscopic display system)

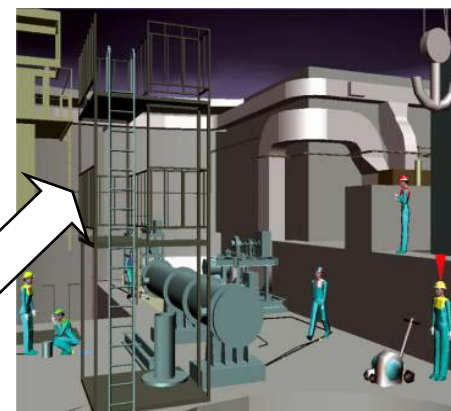
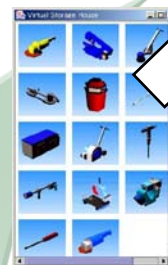


◇ Exercising installation of equipment interfaced with real training facilities

◆ Intrusion simulation
Analysis of route of entry
Design of protected facilities
(detection · delay · response)



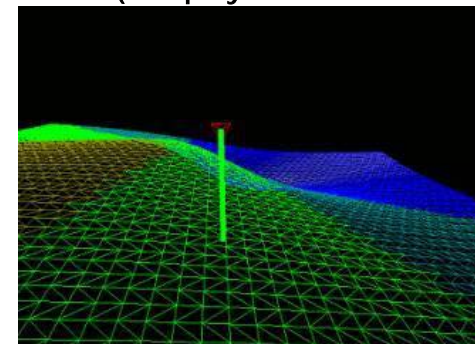
Function parts



◆ Exercise of equipment installation and lay out
(Evaluation of sensor or camera lay out and its effect)

◆ Emergency response (when R D D is activated)
Simulation of response in radiological environment

(Display of source distribution)



◆ Security design of nuclear facilities and their surrounding area, walk through training both within and without facilities

Education program collaboration with universities



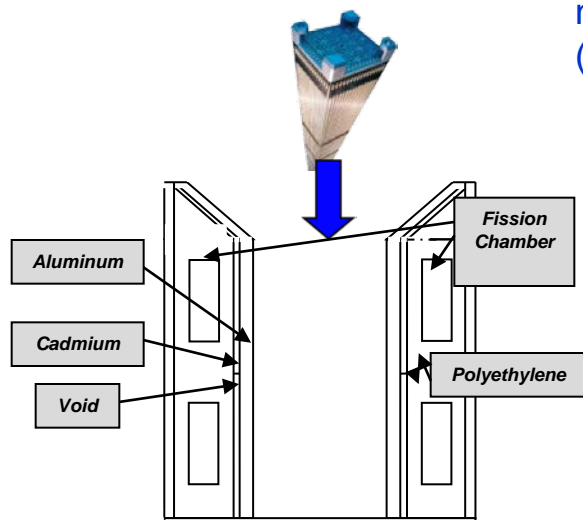
- ❑ Cultivate human resources who will take leadership roles in nuclear non-proliferation and peaceful uses of nuclear energy not only in their own countries, but also in international society recognizing importance of non-proliferation and nuclear security in cooperation with universities, such as Department of Nuclear Engineering and Management School of Engineering, the University of Tokyo or Department of Nuclear Engineering, Graduate School of Science and Engineering, Tokyo Institute of Technology.
- ❑ Utilizing the functions of the integrated support center, based on past collaboration experience with the University of Tokyo and Tokyo Institute of Technology.
- ❑ Implementing detailed trainings based on related information including IAEA-INSEN(International Nuclear Security Education Network) and, at the same time, preparing programs for technical research and development on nuclear security in order to cultivate leaders of nuclear security, who also have academic sophistication.
- ❑ Intended participants: Students with Master's degree or PhD. Not only domestic students, but also foreign students are accepted.

Developing Technology and Providing Support

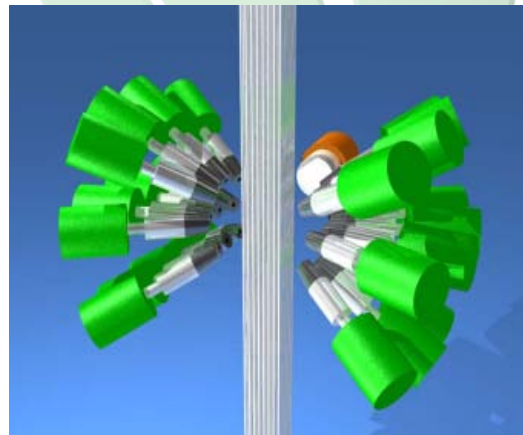
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Technology development by using Japan's R&D capabilities

① Demonstration of Pu-NDA for Spent Fuel Measurement



② Laser Compton Scattering γ -ray Nuclear Resonance Fluorescence non-destructive measurement (LCS γ -NRF)



③ He3-alternative Neutron Detector

- The demand of Helium-3 for neutron detectors has significantly increased.
- The Helium-3 shortage is serious.
- Alternative techniques to the Helium-3 neutron detectors for nuclear security and safeguards systems are necessary to be developed.

International Coordination and Collaboration



In carrying out these activities, the Integrated Support Center engages in mutually complementary cooperation with international organizations including the International Atomic Energy Agency (IAEA), the European Atomic Energy Community (EURATOM) and countries such as the United States, Australia and Asian neighbors, while orchestrating the all-nation project with Nuclear Material Control Center, Japan Nuclear Energy Safety Organization and other relevant organizations and universities in Japan under the coordinated direction of government ministries, which include the Cabinet Office, the Ministry of Education, Culture, Sports, Science and Technology, the Ministry of Economy, Trade and Industry and the Ministry of Foreign Affairs.

Thus, the Integrated Support Center contributes to the global strengthening of nonproliferation and nuclear security measures by sharing Japan's vast experience and knowledge, and through active collaborations and information dissemination.