

Outcome of ISCN's Five-Year Activities: *Capacity Building Activities for Nuclear Security*

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Nonproliferation and Nuclear Security*

Japan Atomic Energy Agency



FNCA Open Seminar on Nuclear Security Capacity Building
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Introduction of
Integrated Support Center for Nuclear
Nonproliferation and Nuclear Security
(ISCN)

Establishment of Integrated Support Center for Nuclear Nonproliferation and Nuclear Security (ISCN)

Japan's National Statement at 2010 Nuclear Security Summit

Establishment of an integrated support center for nuclear nonproliferation and nuclear security in JAEA to contribute to strengthening nuclear security in Asia and other regions and development of technology related to measurement and detection of nuclear material and nuclear forensics based on international cooperation



On December 27, 2010, ISCN was established in JAEA.



Japan PM Speech at 2012 Nuclear Security Summit

"In particular, through our "ISCN" established in late 2010, Japan will expand its hosting and training of human resources. "

Japan PM Speech at 2014 Nuclear Security Summit

We will reinforce the activities of ISCN, established in December 2010 as the first CoE in Asia, in order to contribute to the human resource development and capacity building of other countries.



U.S.-Japan Joint Statement at 2016 Nuclear Security Summit

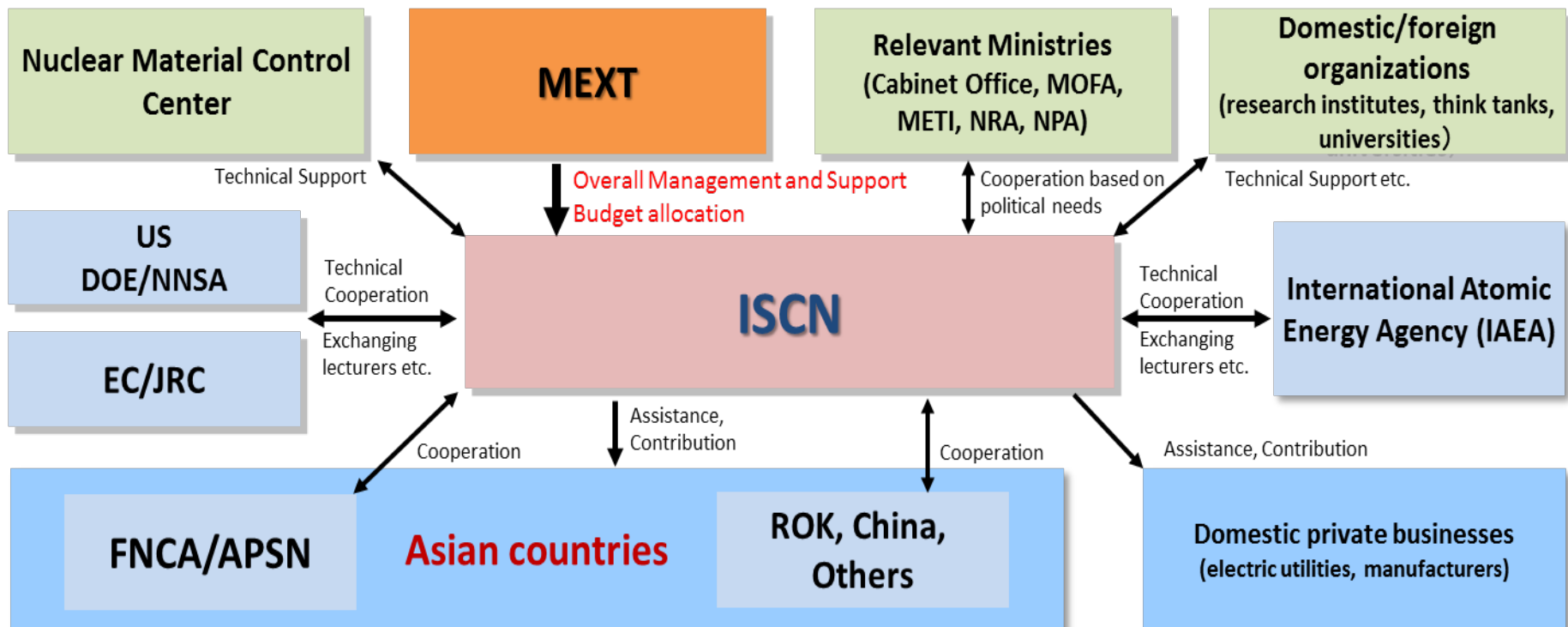
The United States especially applauds the indispensable role which the Japan Atomic Energy Agency's Integrated Support Center for Nuclear Nonproliferation and Nuclear Security (ISCN) is playing in the capacity building of personnel from other countries, particularly those from Asian countries, and expects ISCN to continue to serve as a leading Center of Excellence in this area.

Main Activities of Human Capacity Building and Cooperation with Domestic/Foreign Organizations

Main Activities

1. Capacity building assistance through human resource development including training and education
2. Assistance for infrastructure development

Structure of cooperation with domestic/foreign organizations



Capacity Building Assistance through HRD

Three Courses

1. Nuclear security course
2. Safeguards and SSAC* course (* State system of accounting for and control of nuclear material)
3. International nonproliferation framework course

Objective

To help ensure that all existing nuclear material is used exclusively for peaceful purposes and is used sufficiently protected against theft and sabotage through:

- Knowledge-sharing,
- Experience-sharing,
- Support for legal development , and
- Hands-on training for state system of accounting for and control of nuclear material (SSAC) and physical protection of nuclear material.

Needs Oriented Approach:

Different Target Participants for Different Programs

- International/Regional Course
- Bilateral Support or Dispatching Course
- Domestic Course

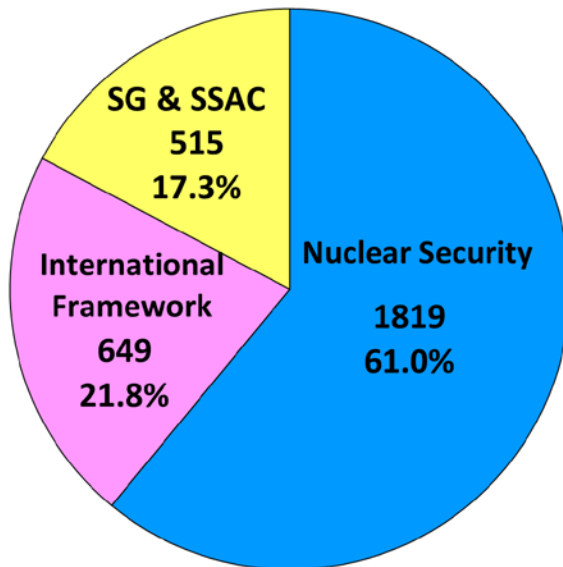


Distribution of Course Participants

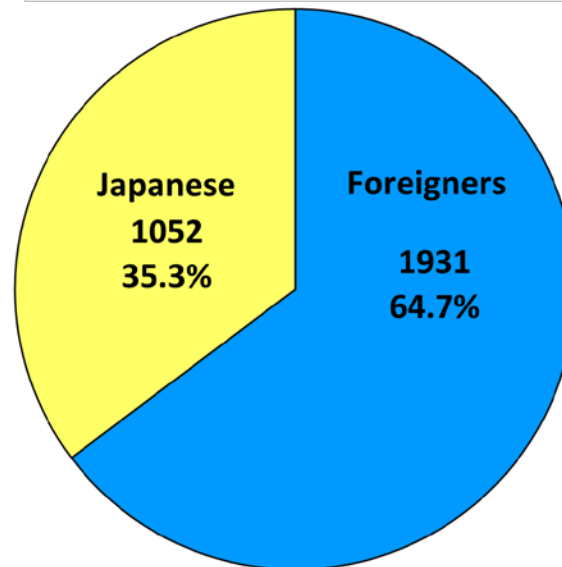
Activity Results of 2011- September 2016

Total 2983 participants in 108 courses
(73 countries, 3 international organization)

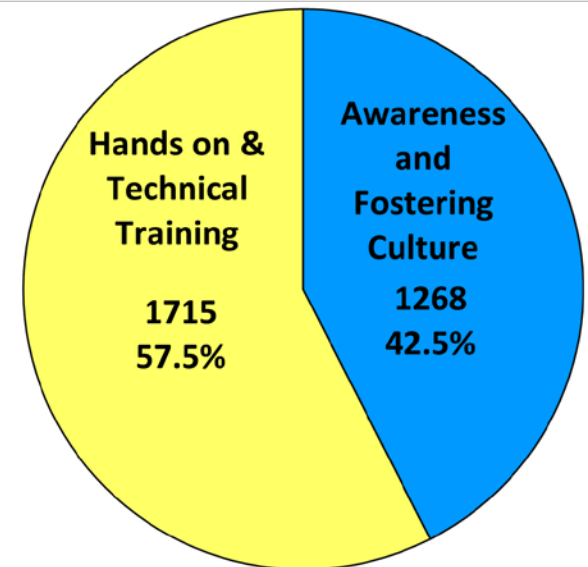
Course Topic



Nationality



Course Style



Providing Training Courses

Nuclear Security Course

Physical Protection

- ◆ Physical Protection for Nuclear Material and Facilities
- ◆ IAEA guidelines including INFCIRC/225/Rev.5
- ◆ Physical Protection Detection System Performance Testing
- ◆ PP Inspector Training
- ◆ Insider Threats
- ◆ PP Measures against Sabotage
- ◆ Security of Radioactive Sources

Nuclear Security Culture

- ◆ ISCN-WINS Workshop
- ◆ Workshop on Nuclear Security Culture

Other

- ◆ Cybersecurity

Bilateral Cooperation

- ◆ Seminar on Nuclear Security

- Needs-oriented courses to targeted participants
- Domestic, International/regional and Bilateral courses

Activity Results of 2011 - September 2016

Total 1819 participants in 72 courses

<For Effective Learning>

Lectures



Group Exercises



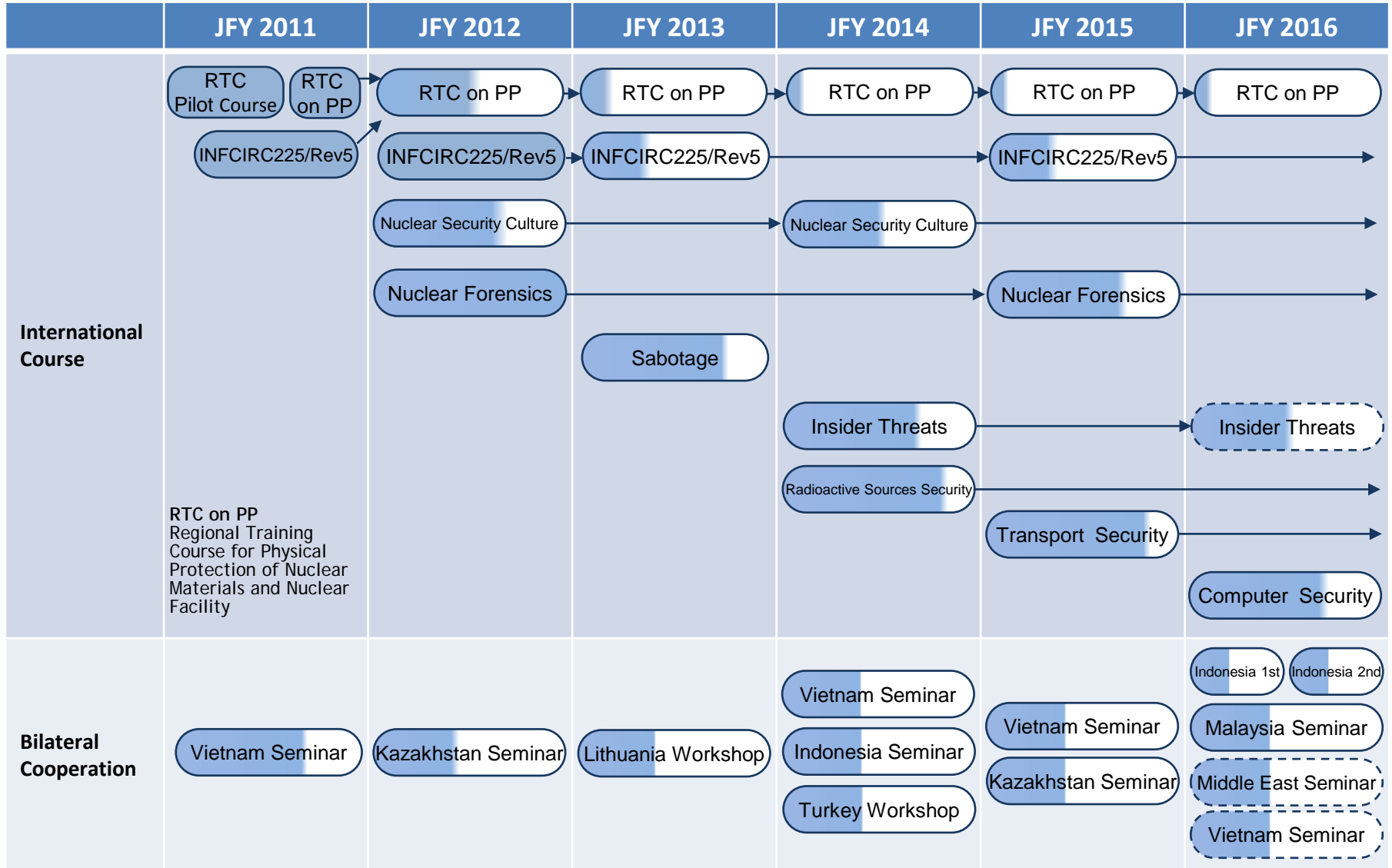
PP Exercise Field




Virtual Reality System




Progress in Provision of Nuclear Security Courses



RTC on PP
Regional Training
Course for Physical
Protection of Nuclear
Materials and Nuclear
Facility

 : contributed by organizations other than ISCN (e.g. IAEA, local country)

 : contributed by ISCN
Dashed line indicates planned activity.

Progress in Provision of Domestic Courses

	JFY 2011	JFY 2012	JFY 2013	JFY 2014	JFY 2015	JFY 2016
Domestic Course	INFCIRC225/Rev5 INFCIRC225/Rev.5 Nuclear Security Recommendations on Physical Protection of Nuclear Material and Nuclear Facilities (INFCIRC 225/rev.5)	PP	PP Performance Test Pilot	PP Cyber Security Scenario Development	PP	PP
Training Course for Regulatory/ Security Authorities		NISA NRA JGSDF	NRA 1st NRA 2nd NRA(Advanced) JGSDF JCG	NRA 1st NRA 2nd NRA(Advanced) JGSDF JCG JCG Radiation Protection NPA	Table Top Exercise NRA 1st NRA 2nd NRA(Advanced) JGSDF JCG JCG Radiation Protection NPA	Table Top Exercise NRA 1st NRA 2nd NRA(Advanced) JGSDF JCG JCG Radiation Protection NPA
ISCN-WINS Workshop	WINS	WINS	WINS	WINS	WINS	WINS
Lecture on Nuclear Security Culture at NPP in Japan	WINS: World Institute for Nuclear Security		4companies (5facilities)	8companies (15facilities)	9companies (13facilities)	? companies (? facilities)

: contributed by organizations other than ISCN (e.g. IAEA, local country)

: contributed by ISCN
Dashed line indicates planned activity.

TBD: to be determined
TTX: Table Top Exercise
CAS: Central Alarm Station
WINS: World Institute for Nuclear Security

NISA: Nuclear and Industrial Safety Agency
NRA: Nuclear Regulation Authority
JGSDF: Japan Ground Self-Defense Force
JCG: Japan Coast Guard
NPA: National Police Agency

Efforts to Develop Effective Training Courses (1/2)

- Conduct surveys and closely communicate with relevant organizations to figure out various needs of targeted countries
 - Feedback survey; Ready to introduce Systematic Approach to Training (SAT)

Table: Type of feedback survey conducted by ISCN

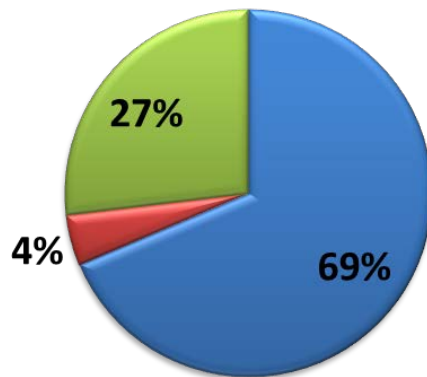
	Feedback Survey	Follow-up Survey	Follow-up Meetings
Objective:	To apply the result to next course to improve the course contents	<ul style="list-style-type: none"> • To determine effectiveness of the course and appropriateness of their contents and targets; • To apply the result to improve the course contents and level 	
Evaluation Points	<ul style="list-style-type: none"> • Course contents, • Time allocation for lectures • Lecturers' skill • Logistical arrangements etc. 	<ul style="list-style-type: none"> • Effectiveness of the course • Applicability to the participants' job • Reccomendability of the course • Level of the course contents • Topics of interest etc. 	
Target	Participants attending a course	Past Participants of Physical Protection (PP) and SSAC Courses	
Methodology	Distribute questionnaire to the participants <u>during the course</u>	Send questionnaire via e-mail to the participants	Held meeting and listen their opinion directly

Efforts to Develop Effective Training Courses (2/2)

Outcome of Follow-up Survey

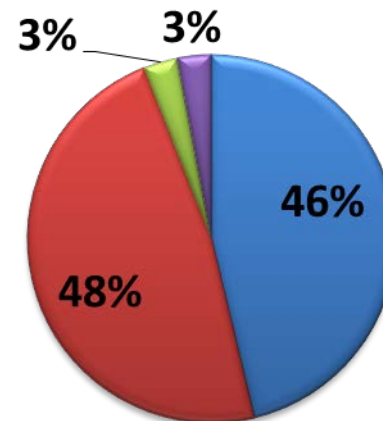
- First survey was conducted from Nov 2015.
- Number of Respondents who participated in PP course :
Total **68/110** (As of September 2016)

Satisfaction with Contents



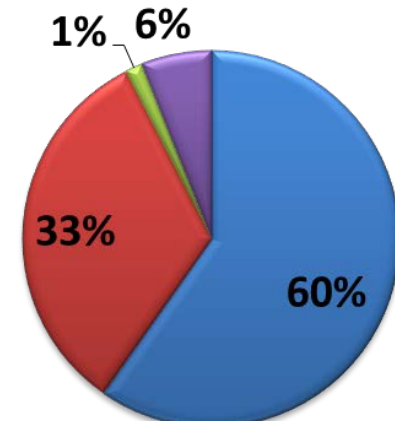
■ Satisfied ■ Basic ■ Practical

Applicability to Job



■ Strongly Agree ■ Agree
■ Disagree ■ Strongly disagree

Recommendability



Note: 27% want to participate in a course with **more practical contents**. Especially, **Indonesia** and **Malaysia** responders request to provide more practical courses.

Support for Other Training Center
- As a next step of enhancing nuclear security regime in Asian region -

Visiting Scholar Program

- The program is based on MOU or other bilateral agreement
- ISCN receives personnel for max. 3 months as a trainee to nuclear security team or SG team.
- Each trainee is required to have research theme, write a paper and give final presentation at the end of the program.

« Advantages »

- ✓ Trainees can study on specific topics deeply
- ✓ ISCN can provide lectures and share the knowledge/skill/ experience effectively based on the level of each trainee

Visiting Scholar Program (Cont.)

Example: Internship Program for Indonesia

- ISCN, BATAN and BAPETEN has been engaged in Instructor Training Program on PP in the framework of the internship program since 2015.
- One of objectives of this program :



To develop training program/material on PP by trainees

Time	Event	Note
5 Oct - 26 Nov, 2015	<u>Internship at ISCN</u> Research Theme: Design and Evaluation of PPS	Trainees: 1 from BATAN, 1 from BAPETEN
12 Aug - 16 Sep, 2016	<u>Internship at ISCN</u> Research Theme: Design and Evaluation of PPS	Trainees: 1 from BATAN, 1 from BAPETEN
19 - 23 Sep, 2016	BATAN-JAEA Follow-up Training Course on Design and Evaluation of PP	3 past trainees (2:BATAN, 1:BAPETEN) participated as an instructor; Most lecture/exercise materials were developed by BATAN; 3 ISCN instructors supported to conduct the course

Other Programs

Dispatch ISCN Lecturers

- ISCN has experienced delivering lectures at courses organized by other training centers.
- In these cases, ISCN makes and gives lectures based on the agenda developed by that training center, which requests ISCN's support.

Train the Trainer's course

- ISCN is ready to provide Train the Trainer's course on Physical Protection.

Next step of enhancing nuclear security regime in Asian region is :

To assist other training centers to conduct their own courses

(Including building up capabilities of these training centers' instructors, developing curriculum/material etc.)

Keeping Close Communication and Cooperation with Other Organizations

Regional Collaboration and Harmonization

IAEA

INSEN
International Nuclear
Security Education Network

NSSCs
International Network for
Nuclear Security Training &
Support Centers

Collaboration topics

- Information exchange on each training course and curriculum
- Exchange of lecturers
- Joint training and outreach
- Joint curriculum development
- Sharing training materials

Regional Frameworks in Asia

3COEs

ISCN (JAPAN) in active
Integrated Support Center for
Nuclear NP & NS

INSA (ROK) in active
International Nuclear Security Academy

SNSTC (China) just became active!
State Nuclear Security Technology Center

CBRN CoE South East Asia of EC-JRC
(in Philippine)

APSN (Asia Pacific Safeguards Network)

FNCA
(Forum for Nuclear Cooperation in Asia)

Other COEs

Activities through Regional Collaboration

among 3 Asian COEs

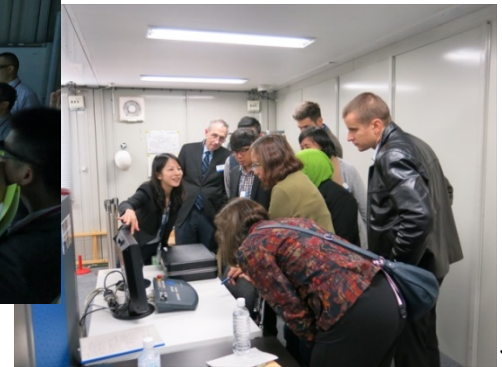
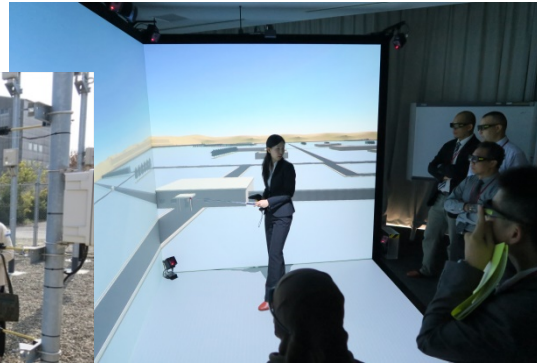
ISCN promotes activities of Asia Regional Network under NSSC framework.



Time / Location	Events organized/co-organized by ISCN	Objective
Feb 2014, Vienna	Workshop on “Nuclear Security Centers of Excellence in Asia: Harmonization and Nexus”	To discuss collaboration and cooperation among 3COEs
Jul 2014, Washington D.C	Seminar on “Nuclear Centers of Excellence in Asia: Next Steps”	To exchanged ideas on the missions, roles and accomplishments of COEs in Asia
Dec 2016, Vienna	Workshop on “Nuclear Security Centers of Excellence in Asia: Progress and Way Forward”	To identify how COEs would be able to contribute to the global efforts to enhance nuclear security

Summary

- To provide effective capacity building assistance, ISCN will
- Enhance ISCN's own capacities including human resource and training equipment and tool
 - Continue to conduct surveys to figure out various needs of targeted countries
 - Develop new curriculum and improve existing curriculum
 - Further strengthen bilateral cooperation with each of targeted countries, and respond to more specific requests from them.
 - Collaborate on task allocations, and enhance cooperation and communications with other COEs and relevant organizations.



Thank you for your attention.

Please visit our website!

http://www.jaea.go.jp/04/iscn/index_en.html



The screenshot shows the homepage of the Integrated Support Center for Nuclear Nonproliferation and Nuclear Security (ISCN). The page features a blue header with the ISCN logo and navigation links: Home, About us, News, Activities, Events, Resources, Links, and Contact. Below the header is a large blue banner with the ISCN logo and the text "Integrated Support Center for Nuclear Nonproliferation and Nuclear Security". The main content area includes an "Information" section with a link to "The 2014 International Forum on Peaceful Use of Nuclear Energy, Nuclear Non-Proliferation and Nuclear Security - Future direction toward promoting non-proliferation and the ideal method of developing human resources using Centers of Excellence (COEs) following the New Strategic Energy Plan -". Below this is a "Welcome to ISCN" section with a paragraph of text and a link to "For policy research, technology development (except for the measurement and detection of nuclear material), CTBT and other former STNM's activities, please click here!". The footer contains contact information and a copyright notice: "Copyright © Japan Atomic Energy Agency. All Rights Reserved."



**Integrated Support Center
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