

# CAPACITY BUILDING IN NUCLEAR SECURITY

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Center for Education and Training  
National Nuclear Energy Agency (BATAN)

**Open Seminar on Nuclear Security  
Capacity Building**

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# Introduction

## National Policy on Nuclear HRD

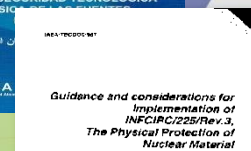
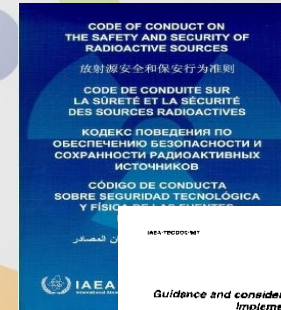
Research, development and application of nuclear science and technology are implemented for human well-being

Every personnel who works in nuclear research, development, and application should be provided adequate training in a certain level of competence.

# Introduction

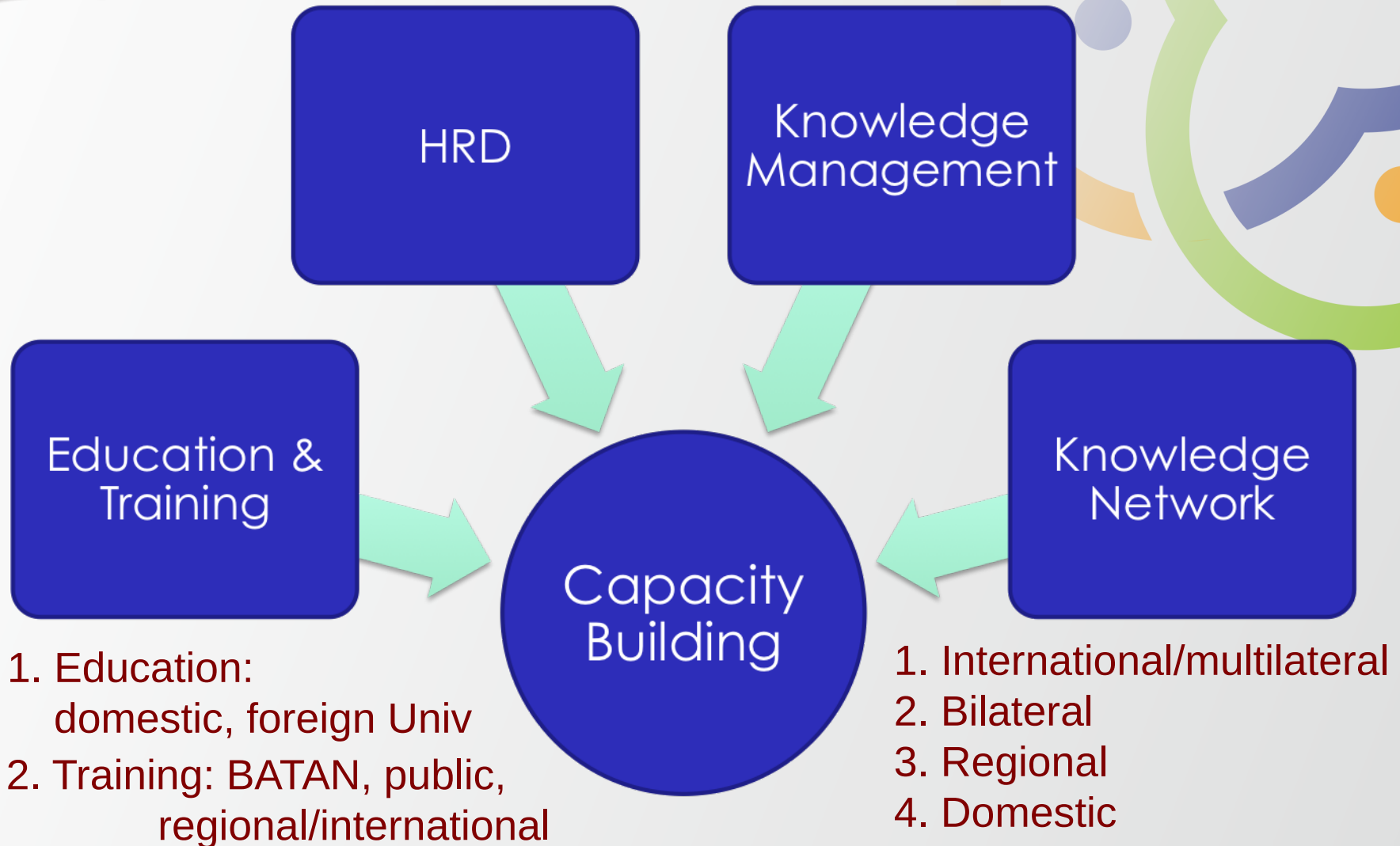
## Regulatory Framework on Nuclear Security

- Government Regulation No. 33 / 2007, on ionizing radiation safety and security of radioactive sources
- Government Regulation No. 54 / 2012 on the Safety and Security of Nuclear Installations
- BAPETEN Chairman Regulation No. 7 / 2007, on Security of Radioactive Source
- BAPETEN Chairman Regulation No. 1 / 2009, on Physical Protection of Nuclear Materials and Facilities
- BAPETEN Chairman Regulation No. 1 / 2010, on Emergency Preparedness and Response
- Nuclear Security Act, Draft

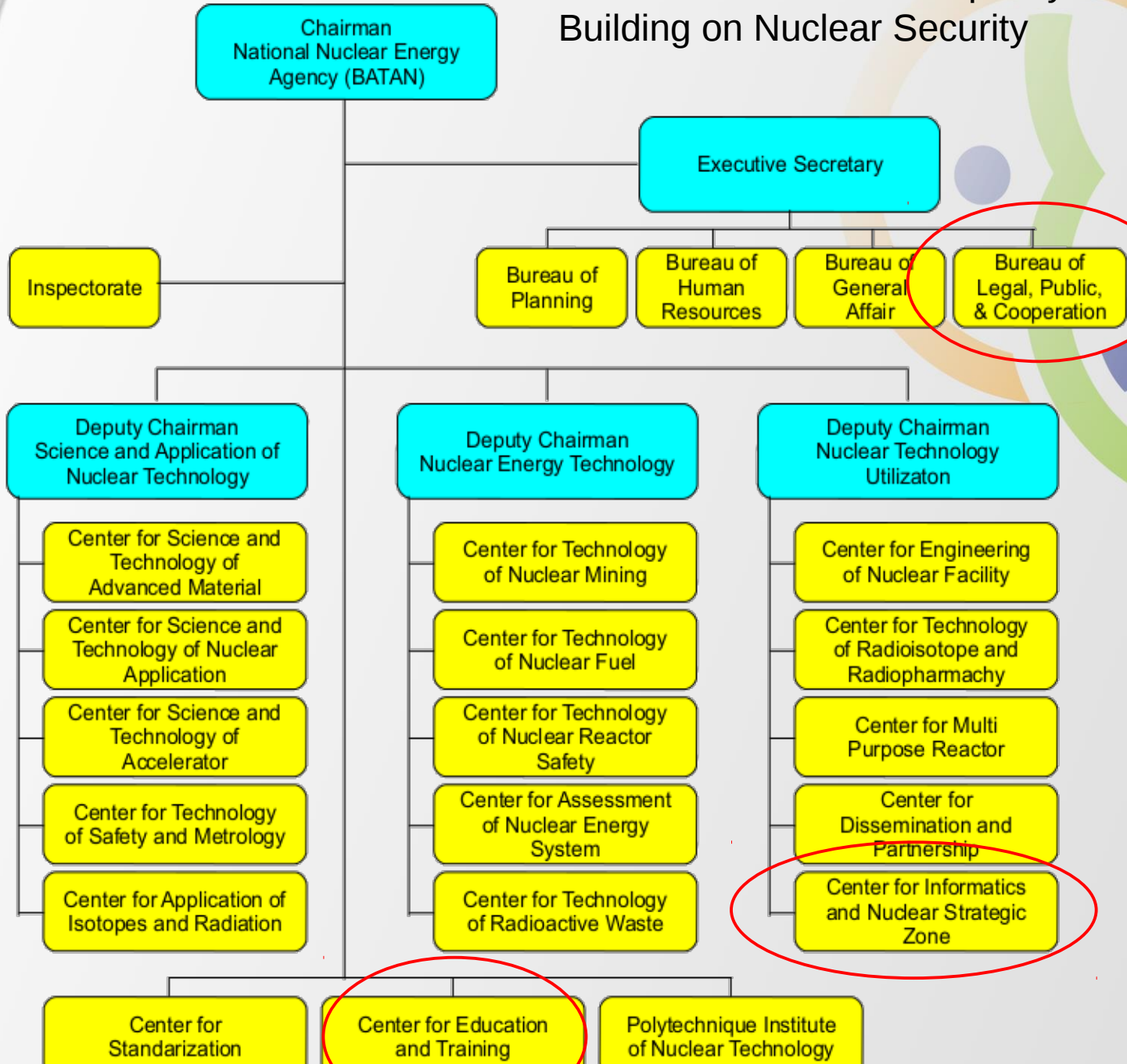


# Introduction

IAEA Model for  
capacity building



# Bureau & Centers for Capacity Building on Nuclear Security





# **NSSC in BATAN**

# BATAN: Nuclear Security Activities

1. Establishing Division of Nuclear Security and Physical Protection
2. Establishing Center for Security Culture and Assessment (CSCA)
3. Holding training on nuclear security
4. Participating party in I-Consep

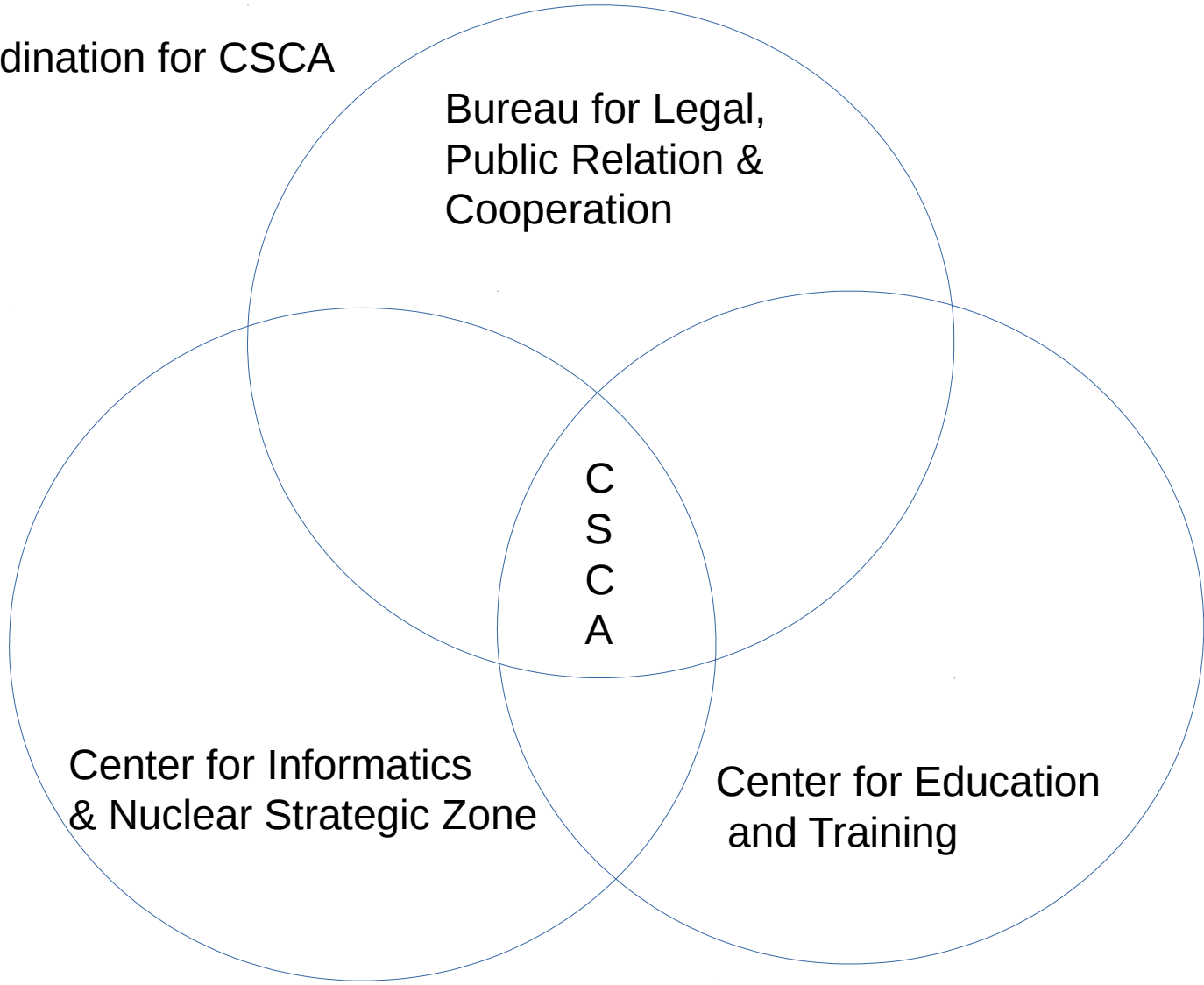
Coordination for CSCA

Bureau for Legal,  
Public Relation &  
Cooperation

C  
S  
C  
A

Center for Informatics  
& Nuclear Strategic Zone

Center for Education  
and Training





# BATAN: Nuclear Security Activities

## Center for Security Culture and Assessment

Technical support from UGA and plan of Inauguration at  
September 2014

### Function:

1. Conduct dissemination of security culture and its assessment method;
2. Review and comment on the results of the self-assessment and provide recommendations;
3. Assist the management to develop follow-up action plans and implementation of good security culture;
4. Cooperate with BATAN Safety Culture team;
5. .....

# BATAN: Nuclear Security Activities

## Center for Security Culture and Assessment

### Function:

5. Provide nuclear security awareness training and assessment;
6. Assessing security culture characteristics and indicators as well as its assessment methods;
7. Build networking and collaboration with organizations at the national, district / regional and international level;
8. Conduct an assessment of the security through performance testing and vulnerability analysis.

# BATAN: Nuclear Security Activities

Center for Security Culture and Assessment

- Structure of CSCA

Advisory Board

Steering Committee

Managing Office

Experts (BATAN inc.)

Center for E&T  
(Batan)

External  
Experts

# Training in Nuclear Security

## Training Scheme

To create  
Experts  
& Trainer

Advance  
Training Courses

external  
support

Indonesian  
experts

To fullfill  
technical  
competence

Intermediate  
Training Courses

Intermediate  
Training Courses

To fullfill  
regulation  
requirements

Basic  
Training Courses

Basic  
Training Courses

Basic  
Training Courses

Security Personnel;  
Head laboratory:

Technical personnel;  
Researcher:

Top manager;  
Administrative

# Nuclear Security Training Scheme

**Advance**

1. ITC on PPS Design and Evaluation ;
2. ITC on PPS for Inspection
3. Vulnerability Analysis of PPS ;
4. ToT for Self-Assessment Team on Security Culture;
5. ToT on PPSM ;
6. ToT on Vulnerability Assessment

**Interme-  
diate**

1. PPSM for Medic Fac,
2. PPSM for RR
3. Protection and Prevention Measures against Sabotage
4. PP Measures against Insider Threat
5. Contingency Plan
6. Gap Analysis on INFCIRC/225 Rev 5
7. PPS Performance Testing
8. Inspection of PPS
9. Evaluation of PPS

- 10 NMAC (Safeguards) For Supervisor
11. Computer Security
12. Inteligent Security
13. Nuclear Crime Scheme
14. Security Investigation
15. Nuclear Forensic
16. NS in Transport of NM and RS
17. Nuclear Security MS
18. PPS equipment

**Basic**

1. PPSM of NM and facility;
2. PPSM of Radioactive Sources;
3. School on Nuclear Security
4. INFCIRC/225 Rev 5
5. Nuclear Material Accountancy and Control (Safeguard)

**Introduc-  
tory**

1. Introduction to Nuclear Security;
2. Nuclear Security Culture

# Nuclear Security Training 2009-2012

**Organized by CET-BATAN**

<b>1</b>	<b>Physical Protection and Security Management of Radioactive Sources</b>	<b>3-5 November 2009</b>	<b>25</b>
<b>2.</b>	<b>Physical Protection for Nuclear Material and Facilities</b>	<b>22-26 March 2010</b>	<b>20</b>
<b>3.</b>	<b>Physical Protection and Nuclear Security Management for Operators</b>	<b>25-28 April 2011</b>	<b>22</b>
<b>4.</b>	<b>Physical Protection and Nuclear Security Management for Officers</b>	<b>13-17 June 2011</b>	<b>25</b>
		<b>26-30 March 2012</b>	<b>24</b>

# Nuclear Security Training 2012-2014

5	<b>Vulnerability Analysis</b>	<b>25-29 June 12</b>	<b>25</b>
6	<b>PPSM for Medical Facilities (Level A)</b>	<b>16-20 Sept.13</b>	<b>18</b>
7	<b>Workshop on Insider Threat and Human Reliability Program,</b>	<b>18-22 Nov. 13</b>	<b>25</b>
8	<b>Regional School on Nuclear Security</b>	<b>13 – 27 October 2014</b>	<b>30</b>
9	<b>RTC on PPSM for RR</b>	<b>Sept 14</b>	<b>25</b>
10	<b>INFCIRC Rev.5</b>	<b>9-10 Sep 14</b>	<b>26</b>
11	<b>Gap Analysis on INFCIRC Rev 5</b>	<b>11-12 Sept 14</b>	<b>16</b>
12	<b>Contingency Plan</b>	<b>Nov. 14</b>	<b>25</b>
13	<b>Human Reability Program</b>	<b>1-3 Oct 14</b>	<b>22</b>

# Nuclear Security Training 2015

			<b>Participants</b>
<b>4.</b>	<b>Performance Testing 1</b>	<b>6-12 April 15</b>	<b>23</b>
<b>5.</b>	<b>Nuclear Security Management System</b>	<b>23-27 Feb 15</b>	<b>30</b>
<b>6</b>	<b>Perpormance Testing 2</b>	<b>28 – 29 July 2015</b>	<b>15</b>
<b>7</b>	<b>Perpormance Testing 3</b>	<b>1-2 Sept 2015</b>	<b>23</b>
<b>8</b>	<b>TOT for Self Assessment Team of Security Culture</b>	<b>27-30 April 15</b>	<b>25</b>
<b>9</b>	<b>Nuclear material Accountanty and Safeguard</b>	<b>9 March- 21 May 2015</b>	<b>12</b>
<b>10</b>	<b>HRP Implementation In Indonesia,</b>	<b>20 – 21 Oct, 2015</b>	<b>31</b>



# Nuclear Security Training 2016

			<b>Participants</b>
<b>1</b>	<b>Nuclear security culture, NSSC Indonesia in cooperation with ISCN</b>	<b>23-27 May 2016</b>	<b>25</b>
<b>2.</b>	<b>Regional School on Nuclear Security, NSSC Indonesia in Cooperation with IAEA</b>	<b>17-28 Oct 2016</b>	<b>40</b>
<b>3</b>	<b>Implementation of PPS on Nuclear Installation and Facility,</b>	<b>8-12 August 2016</b>	<b>25</b>
<b>4</b>	<b>TC on HRP Roadmap for RR August in Cooperation with PNS</b>	<b>May 2016</b>	<b>25</b>
<b>5</b>	<b>Performance Testing of Response Personnel in Cooperation with USDoE</b>	<b>April 2016</b>	<b>31</b>

# Other Training Cooperation



## IAEA:

- Regional school on Nuclear Security
- Workshop on Physical Protection
- Workshop on Safeguards and NDT

## USDoE and USDoS-PNS

- Search and Secure Training
- Inspection on Radioactive Source Security
- Workshop on Nuclear Sabotage
- Gap Analysis, Performance Testing
- Insider Threat and Human Reliability Program

## KCL:

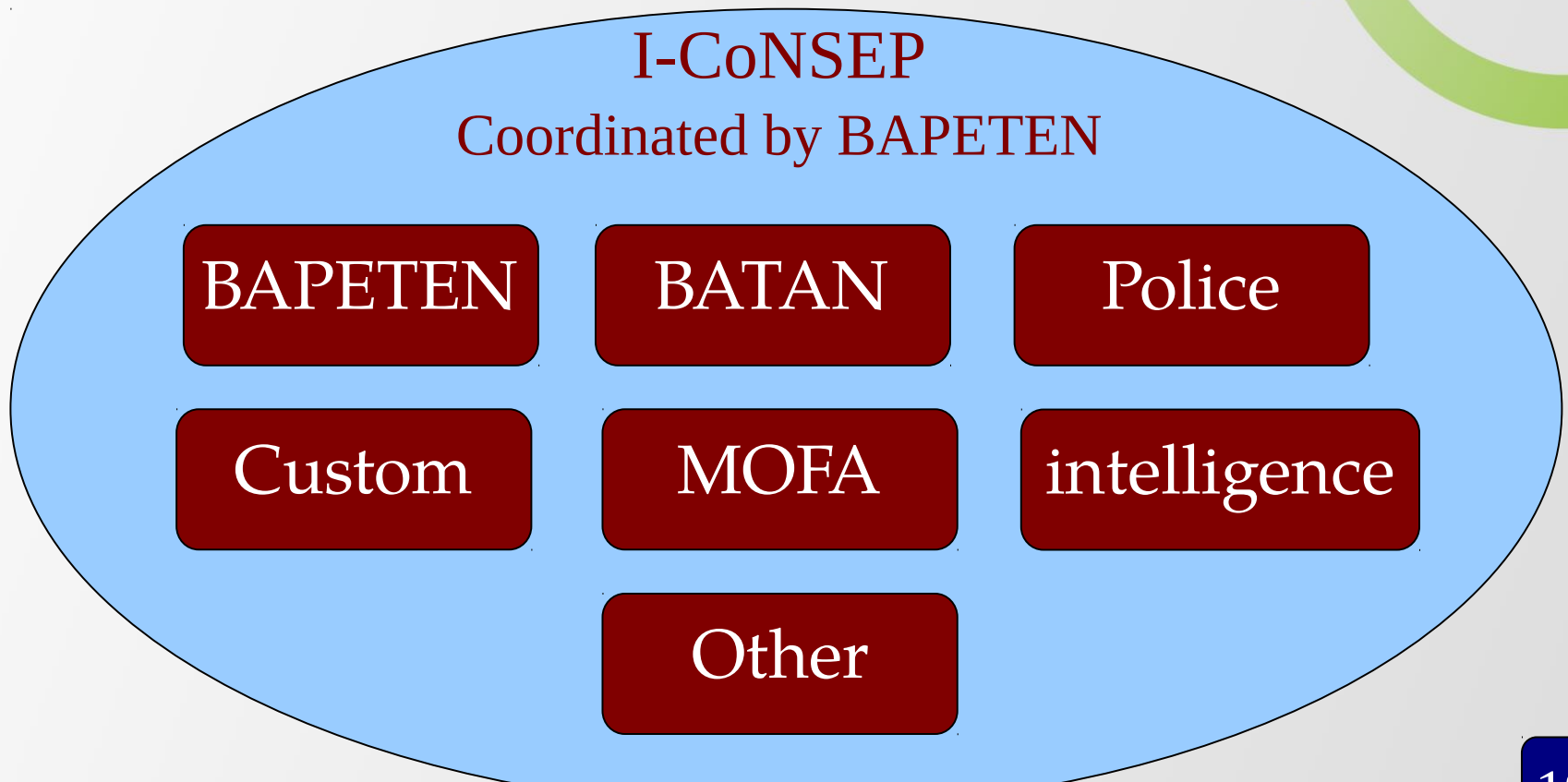
- Workshop on Nuclear Security Culture
- Workshop on Insider Threat

## UN:

Training course on Security of Export-Import

# BATAN: Nuclear Security Activities

Involved in the Indonesian Center of Excellence on Nuclear Security and Emergency Preparedness (I-Consep)





# NSSC in BAPETEN



# BAPETEN Trainings on Nuclear Security



- 1. Training Course on Security of Radioactive Source**
  - For inspectors
  - For facilities: Research reactors, Hospitals, Radiation Protection Officer
- 2. National training course on radioactive sources security officer**
  - For facilities
  - Related authorities: police, bomb squad, army, ministry of transportation, customs, ministry of foreign affair
- 3. Fundamental of Nuclear Security**
  - For facilities
  - Related authorities: police, bomb squad, army, ministry of transportation, customs, ministry of foreign affair
- 4. Training for First Responder (FLO):**
  - Related authorities: police, bomb squad, army, ministry of transportation, customs, ministry of foreign affair. Especially for officers who work at the border.

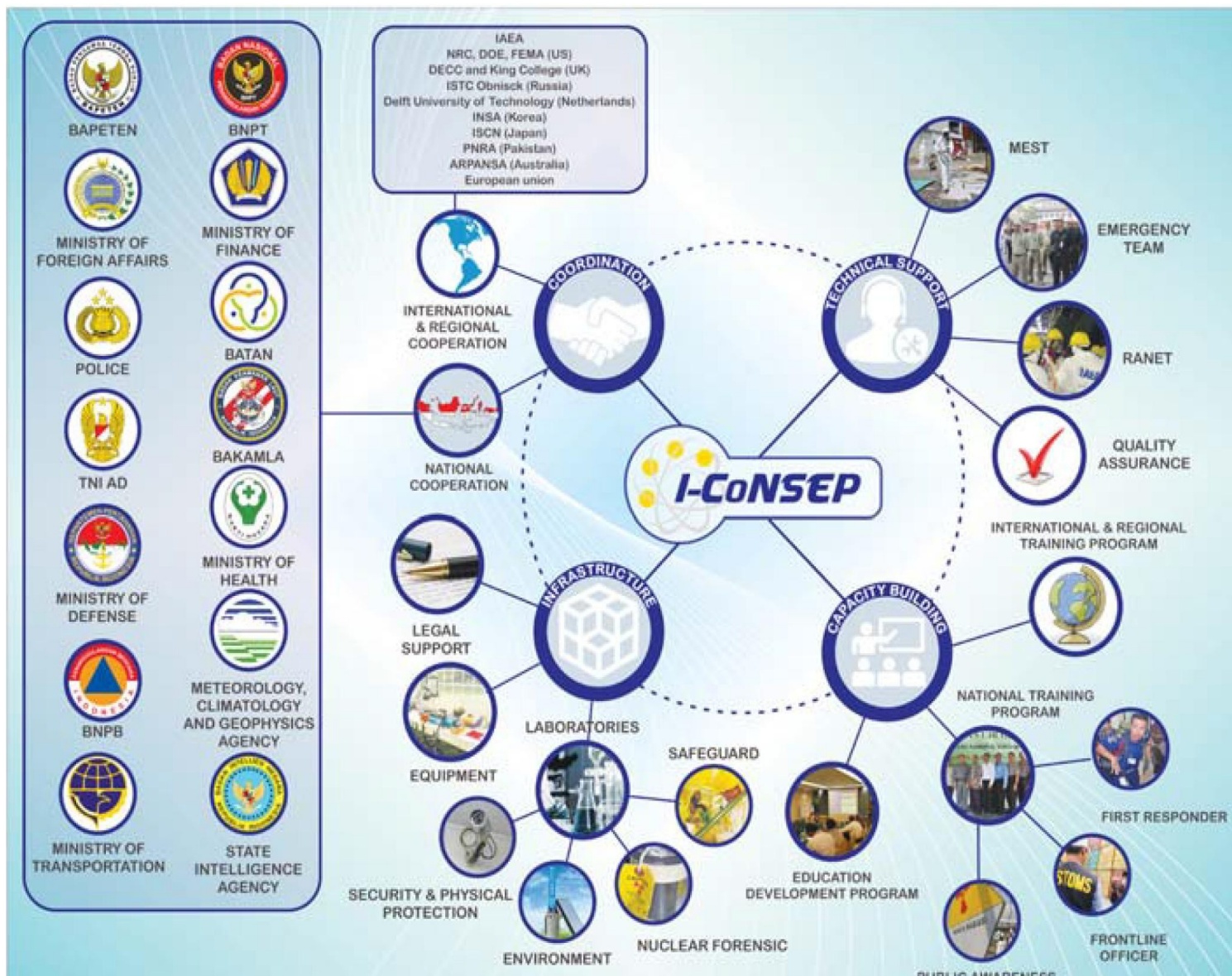


# BAPETEN TRAINING PROGRAM 2015

1	Transport Regulatory Review	Feb. 23	BAPETEN HQ	31 Person
2	Nuclear Security and Safeguards Regulatory Review	Apr. 02	BAPETEN HQ	23 Person
3	Emergency Regulatory Review	Apr. 06	BAPETEN HQ	17 Person
4	Radioactive Sources Security Officer for Licensee	Apr. 7-9	ETC-CISARUA	38 Person
5	Radioactive Sources Security Officer for BAPETEN	May 5–7	BAPETEN HQ	15 Person
6	BAPETEN Junior Inspector for Radiation Safety	May 18–june 8	ETC-CISARUA	26 Person
7	Technical Guidance For Front Line Officer (FLO)	10-14 Nov 2015	Batam, Riau Islands	20 Person
8	Contingency Plan	Sep	Serpong	40 Person
9	Table Top Exercise	17 Sep	Serpong	30 Person
10	Drill 2015 (BAKAMLA – BAPETEN)	Des	Ambon	40 Person



# Mind Map I-CoNSEP





# Objective of I-CoNSEP

supporting and facilitating the development of sustainable human resources;

providing Support Services for lifecycle equipment management, the prevention, detection of, and response to nuclear security and emergency events;

fostering nuclear safety culture and nuclear security culture;

enhancing the national coordination and collaboration among the various competent authorities involved in the nuclear security matters and emergency preparedness and response;

becoming a centre for capacity building for Nuclear Security and Emergency Preparedness in the regional and international levels;

supporting regional and international information and experience sharing and co-operation in the fields of nuclear security and emergency preparedness; and

enhancing the national policy and diplomacy related to nuclear security and emergency preparedness.





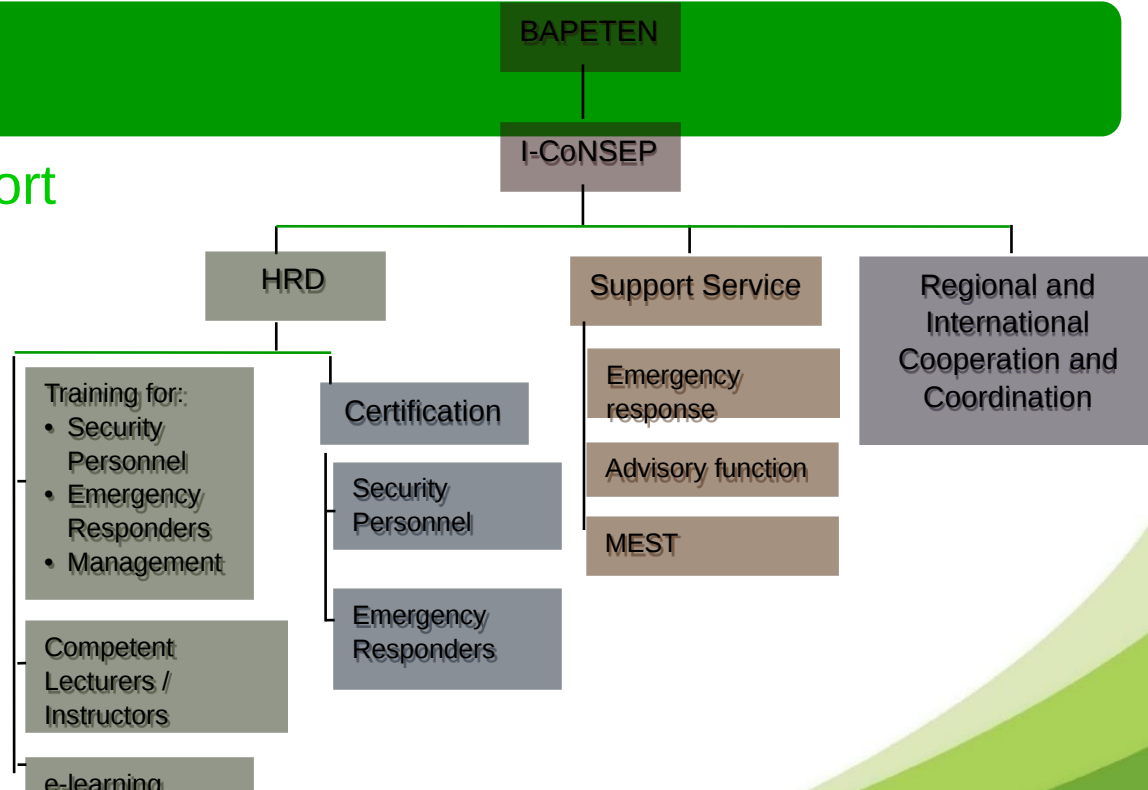
# Roles of I-CoNSEP

## Human resource development:

- National training programme;
- Training of Trainer, enhanced with certification; and
- Standardisation of syllabus on training courses.

## Support services

- Policy and legal support
- Technical Support
  - Installation
  - Calibration
  - Maintenance
- Scientific Support
  - Expert support
  - Laboratory analysis



# Expectation for Regional CoE

Development of personnel competencies for some levels

Development of training materials

ToT for intermediate/Advance levels

Development of nuclear security training laboratory

Conducting joint training workshop in Indonesia

# Thank You

