



# Indonesia's Experiences for Supporting Effective Nuclear Security Culture

**BADAN PENGAWAS  
TENAGA NUKLIR**

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# Outline

## 01 INTRODUCTION

Nuclear Security Culture

## 02 Role and Responsibility

How can we support effective nuclear security culture?

## 03 Building up Nuclear Security Culture

Be sure to feel, think, and act based on security culture

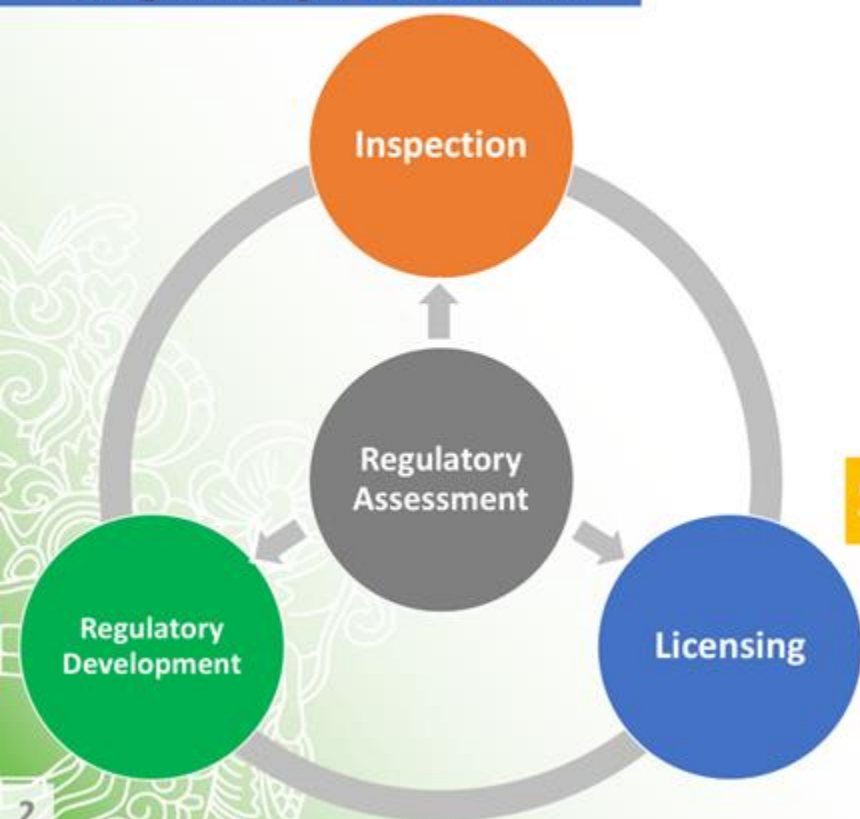
## 04 PLANNING AHEAD

Capacity Building as never ending process



# Introduction

## Regulatory Framework



Safety  
Security  
Safeguards

1104 industrial applications

2846 medical applications

3 research reactors

4 non-reactor nuclear installations  
3 high-risk facilities





# How do we maintain sustainable nuclear security culture

**01.** Enforcing regulation



**03.** Creating belief and implant them to the society that security is important



**02.** Sharing role and responsibility for the state, organizations, and communities



**04.** Encouraging the individuals to feel, think, and act for the security





# How do we maintain sustainable nuclear security culture

**05.** Threat assessments are conducted on national basis, regional basis, and facility basis

**06.** People need to think and understand that threats are real, attacks may take place at anytime, anywhere, by anyone



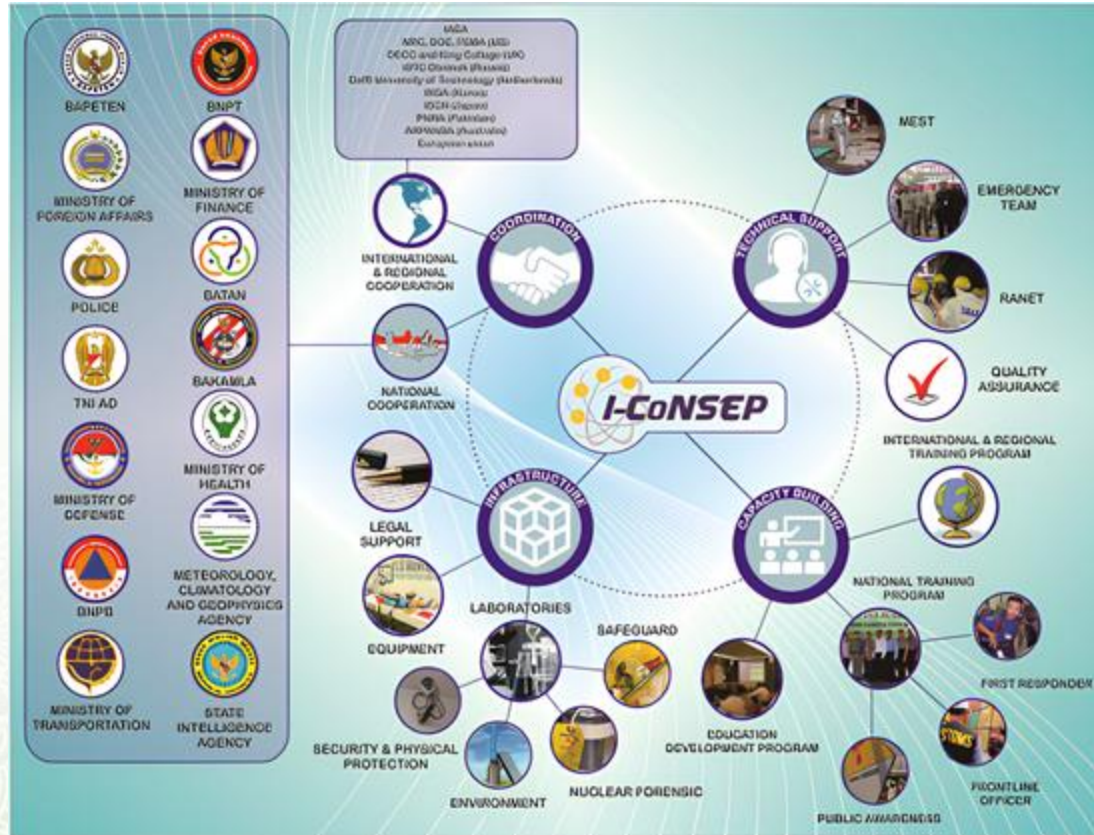
**07.** Cybersecurity should be taken into account in nuclear security culture



## 02 Role and Responsibility

How can we support in strengthening nuclear security culture?

# Establishing I-CoNSEP Indonesia Centre of Excellence on Nuclear Security and Emergency Preparedness





# There are four main roles of I-CoNSEP

Developing human  
resources

01

02

Providing legal,  
technical and  
scientific support  
services

Scientific Support  
Services

03

04

Mobile Expert  
Support Team  
(MEST)





# Role and responsibility of stakeholders nuclear security

Agencies	Roles/responsibility
Co-ordinating Ministry of Politics, Law and Security	<ul style="list-style-type: none"><li>• Advisory and coordination roles for nuclear security</li></ul>
Nuclear Energy Regulatory Agency (BAPETEN)	<ul style="list-style-type: none"><li>• Regulatory Body for nuclear security at facility level</li><li>• National Policy of Nuclear Security</li><li>• Planning of nuclear security capacity and capability</li><li>• Certification of human resources in nuclear security</li><li>• Accreditation of training provides</li><li>• PoC NSSC to the IAEA</li></ul>
National Police	<ul style="list-style-type: none"><li>• On scene commander for crisis control</li><li>• Advisory on threat assessment and risk mitigation</li><li>• Crime scene investigation</li><li>• Forensic support</li></ul>
Directorate General of Customs and Excise (DJBC), Ministry of Finance	<ul style="list-style-type: none"><li>• Border monitoring</li><li>• Export control</li></ul>
Ministry of Transport	<ul style="list-style-type: none"><li>• Transport regulator, including security requirements at seaports and airports</li><li>• Port Authorities</li></ul>
Port Operators	<ul style="list-style-type: none"><li>• Implementation of port security</li></ul>
Ministry of Defense	<ul style="list-style-type: none"><li>• Advisory on national security matters and strategy</li></ul>
Ministry of Law and Human Rights	<ul style="list-style-type: none"><li>• International and national laws advisory services</li></ul>
Ministry of Research and Technology	<ul style="list-style-type: none"><li>• Advisory on science and technology policy and development</li></ul>



# Role and responsibility of stakeholders nuclear security

Agencies	Roles/responsibility
National Counter Terrorism Agency (BNPT)	<ul style="list-style-type: none"><li>• Advisory on counter-terrorism matters and strategy</li></ul>
State Intelligence Agency (BIN)	<ul style="list-style-type: none"><li>• Advisory and provide intelligence on nuclear security</li></ul>
Maritime Security Co-ordination Agency (BAKAMILA)	<ul style="list-style-type: none"><li>• Advisory and coordination on maritime security</li></ul>
Gajah Mada University (UGM) and Defense University	<ul style="list-style-type: none"><li>• Partner university for nuclear security</li><li>• Members of the International Nuclear Security Education Network (INSEN)</li></ul>
National Nuclear Energy Agency (BATAN) (now BRIN)	<ul style="list-style-type: none"><li>• National nuclear research and development institute</li><li>• Scientific support</li><li>• Maintenance of equipment</li><li>• Training Centre</li><li>• Forensic support</li></ul>
Directorate of International Security and Disarmament (KIPS), Ministry of Foreign Affairs (MoFA)	<ul style="list-style-type: none"><li>• Advisory on nuclear security and international laws</li></ul>
Port Health Office–Ministry of Health	<ul style="list-style-type: none"><li>• To Perform radiation monitoring on personnels and the environment on the ships and/or airplanes which are going to dock at the seaport and/or airport</li></ul>



# Activities in collaborations for sustaining nuclear security culture conducted by BAPETEN

- Field Exercise with the Maritime Security Agency
- Periodic TFT (training for trainers) for Front Liners in Customs and Excise Directorate
- General Field Exercise with BRIN etc for Physical Protection







# Activities in collaborations for sustaining nuclear security culture conducted by BAPETEN

- Supporting national product of radiation portal monitoring for providing infrastructure in nuclear security detection







# Activities in collaborations for sustaining nuclear security culture conducted by BAPETEN

- In collaboration with other agencies for ensuring security in national and international events in Indonesia





# 03 Building Up Nuclear Security Culture

Be sure to feel, think, and act based on nuclear security culture



# Challenges in Supporting Nuclear Security Culture

Nuclear energy in Indonesia is not yet well known

Nuclear security culture needs to be included in law

Limited budget allocation

Small number in capable human resources



# Collaboration in Sinergy for Nuclear Security Culture

01

Government



02

Regulators



03

Operators/Licensees



04

Workers and Community







# 04 Planning Ahead

Capacity Building, Evaluation, and Assessment





# Capacity Building

In real world nuclear security can not be maintained by only a stand-alone agency

There is always a need to provide sufficient information to other related agencies:

- Trainings
- Workshops
- Training for Trainers

Human resources in Nuclear Security should be considered as valuable assets



# Strategic Plans

1

Propose a national priority program in enhancing nuclear security culture

2

Strengthen coordination and collaboration with other national and international agencies

3

Ensure to get adequate budget



# Threat Assessment for Composing National Design Basis Threat



Threat Informed Analysis



In coordination with National Intelligence Agency, National Counter Terrorism Agency, Military



Taking into account the police reports of National Police (Criminal Investigation Agency)



Implemented for further analysis in nuclear security detection architecture





# Me, myself and my presentation

## Professional Experiences

1. Nuclear Regulatory Officer in BAPETEN - Indonesia
2. Lecturer in Universitas Islam Indonesia - Yogyakarta
3. Data Manager for PADCO Washington on Yogyakarta Strategic Action Plan
4. Drilling Services Engineer in Schlumberger (North South America Region)



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## I attended these schools:

1. Doctorate Program in Computer Science (Cybersecurity for Nuclear Security)
2. Master in Nuclear Quantum Engineering (KAIST - South Korea)
3. Bachelor in Electrical Engineering (Universitas Gadjah Mada)



**Thank You**  
**Questions are welcome for further discussion**