

Nuclear Safeguards Framework

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and Control of Nuclear Materials**

**Panel on Nuclear Safety, Security and Safeguards
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Outlines

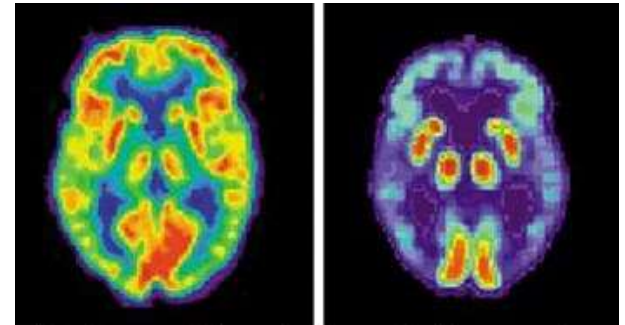
- The Nuclear Non-Proliferation Regime
- Objectives of Nuclear Safeguards
- Safeguards Legal Framework
- Awareness of Safeguards
- Differences to Security Culture

The Non-Proliferation Regime

All actions to avoid the proliferation of nuclear weapons



Allowing benefits of the nuclear energy applications

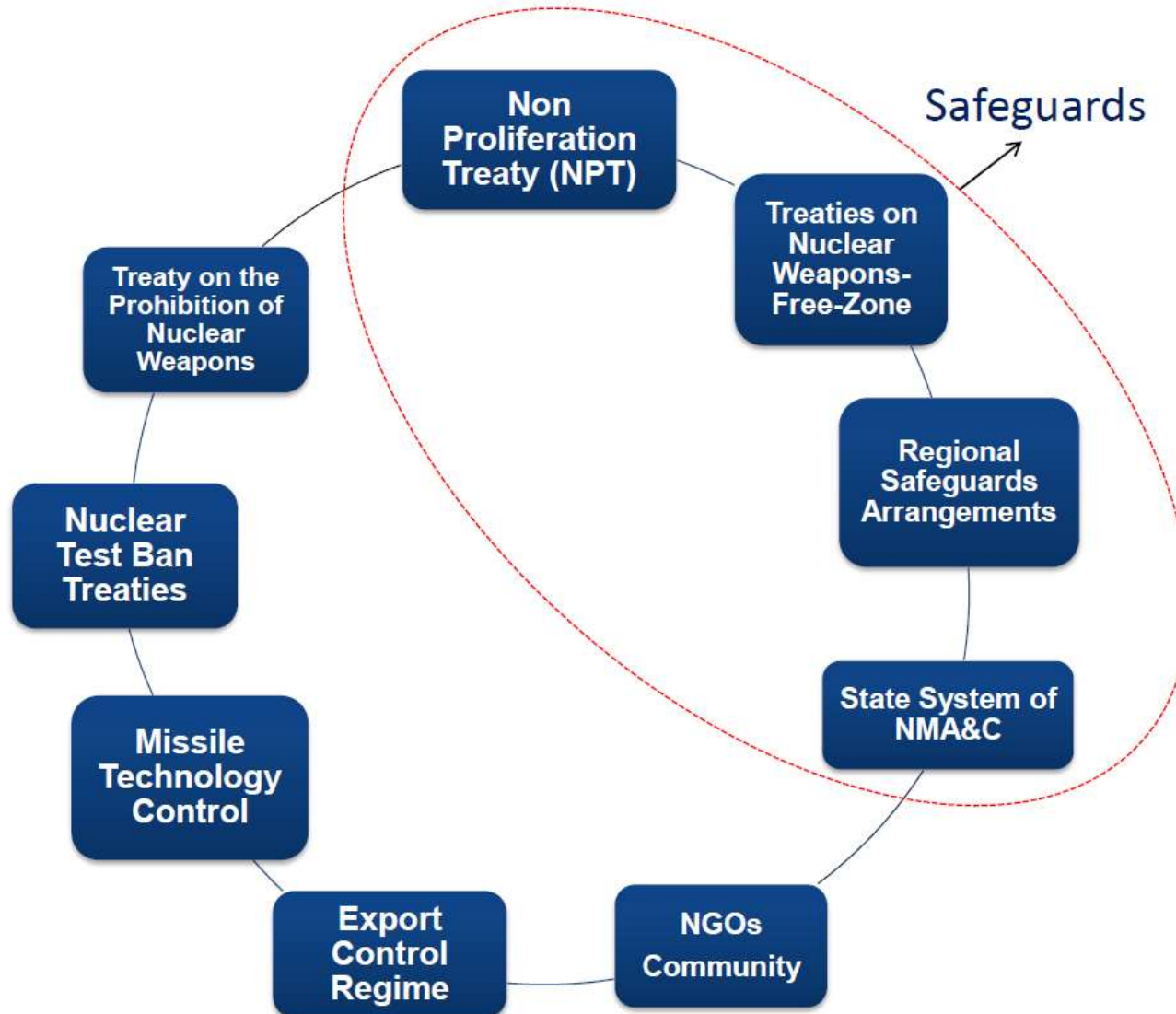


Essential part of the international security



Build trust to strengthen the cooperation among the countries

Non-Proliferation Regime



Non-Proliferation Regime Successful?

- **In the 60s: experts expected ~30 countries with nuclear weapons in 20 - 30 years**

Non-proliferation commitments are mandatory and verifiable

NPT Framework

Great Adherence: 191 countries as of Jan 2017



UNITED NATIONS

193 Members



IAEA

168 Members



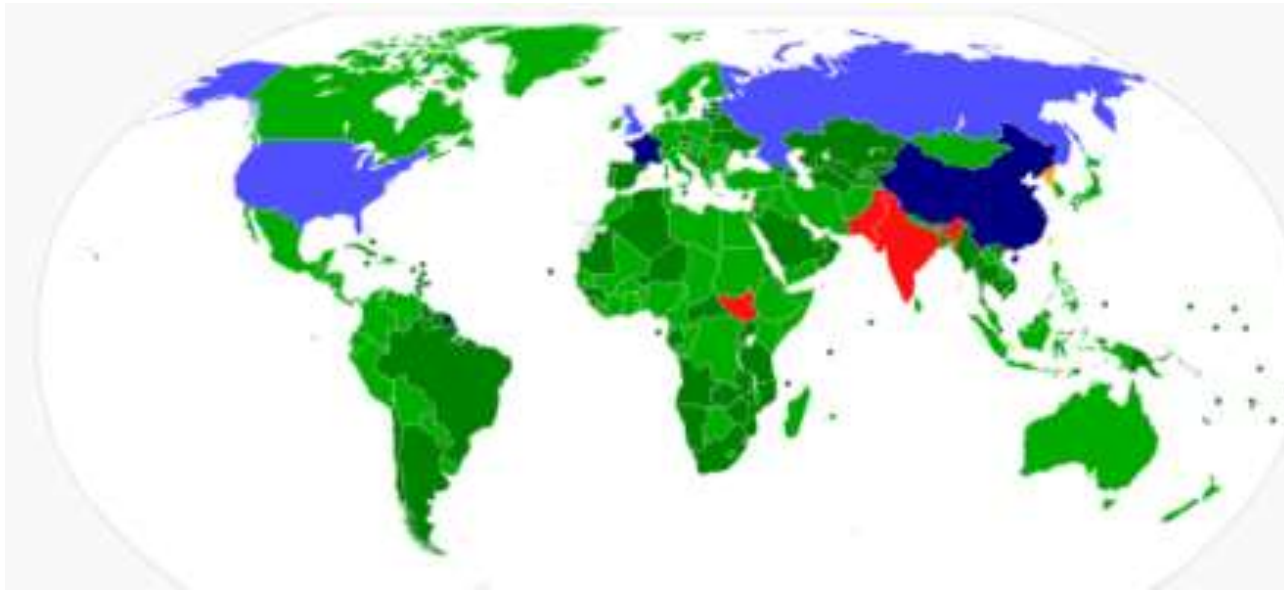
World Health Organization

194 Members



FIFA

211 Members



Safeguards Objectives

Nuclear Safeguards aim to avoid the proliferation of nuclear weapons by :

- timely detecting diversion of significant quantities of declared nuclear materials;
- confirming the operational status of nuclear facilities, and
- assuring the absence of undeclared nuclear materials and facilities.

The adversary is a State

Objective of Nuclear Security

“The **prevention, detection of, and response to**, theft, sabotage, unauthorized access, illegal transfer or other malicious acts involving nuclear material, other radioactive substances or their associated facilities”

Physical protection regime has been an essential element of the State's nuclear security regime

The focus is a non-state actor



Prevention

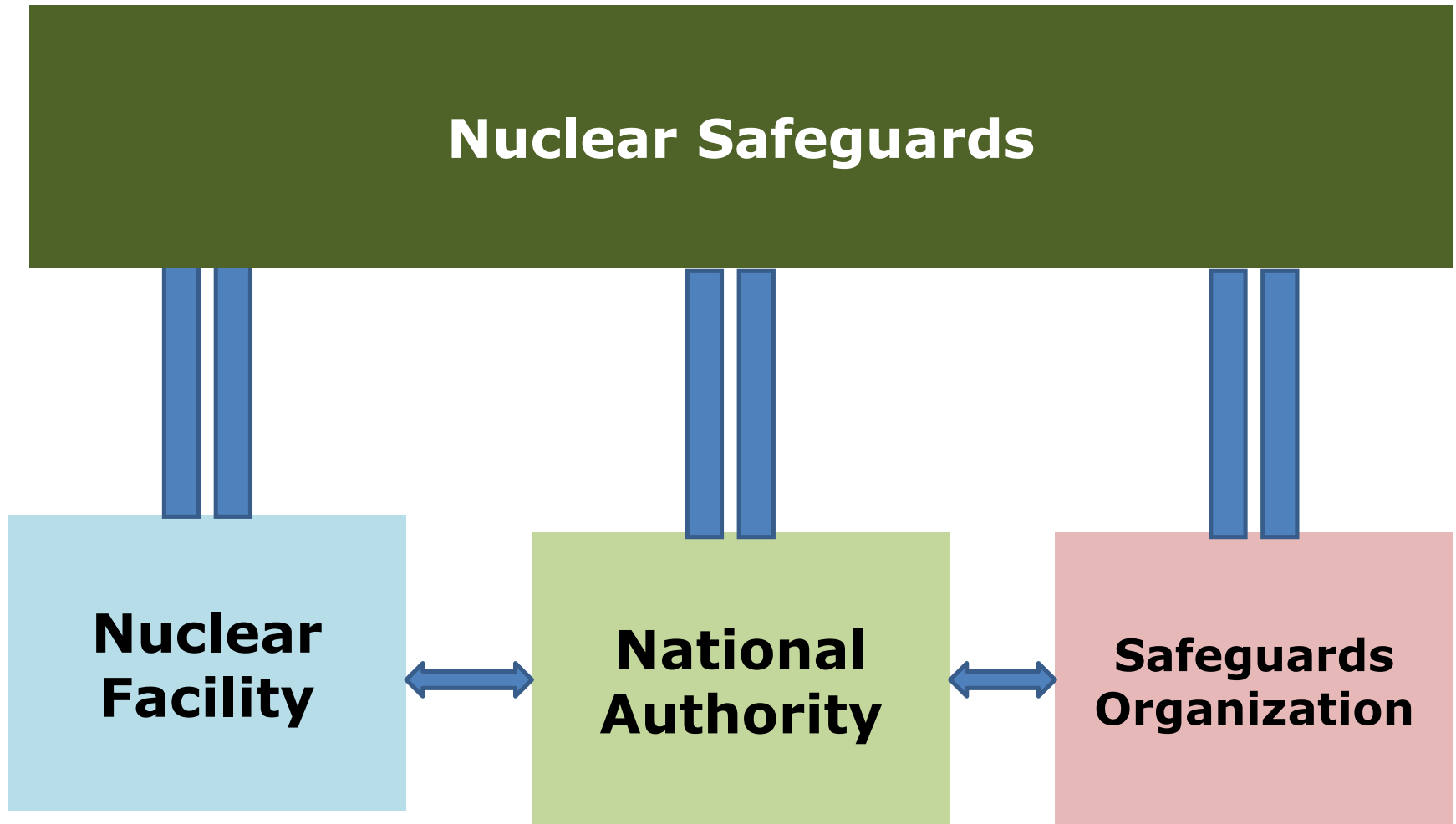


Detection



Response

The Safeguards System



Awareness of Safeguards

- Poor awareness of safeguards
- No tangible perception of risks
- General perception that safeguards is a government business
- Lack of education and training
- Safeguards training provided by the IAEA is still limited



Awareness of Safeguards



- Unlike Safety and Security, no associations or network of stakeholders in safeguards
- Currently the only Safeguards Network is the Asia Pacific Safeguards Network (2009)
- ESARDA, INMM, NGOs, Institutes
 - Not dedicated exclusively to safeguards
 - Not involving all stakeholders, in particular facility personal
 - More conceptual than operational

Safeguards: Differences to Security Culture (1)

- Mandatory regime: Agreements & Verification
- State oriented: No non-state actors
- Provision of information, including sensitive one: commercial, technological, R&D
- Perception of importance:
 - State x Public Perception

Safeguards: Differences to Security Culture (2)

- International guidance quite limited, in particular at facility level
- Interest in sharing information among stakeholders?
- Less influenced by human factor than security and safety
 - However poor human performance can degrade the effectiveness of safeguards systems

How (lack of) Culture affects the Quality of Safeguards Implementation

- Ignorance:
 - No awareness of the importance of safeguards
 - Lack of commitment
 - Weak safeguards hierarchy in the state system
- Lack of Continuity of Knowledge
 - Frequent change of players
 - No knowledge of agreements, arrangements, procedures

Thank you!



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ABACC
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