

**6-10 November 2023**

Philippines Nuclear Research Institute  
Manila, Philippines

# Strategic Approach to Capacity Building

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**Regulatory Activities Section**

# History and background

# History

## 2001: IAEA Strategic Approach to E&T

- nuclear safety
- radiation, transport and waste safety

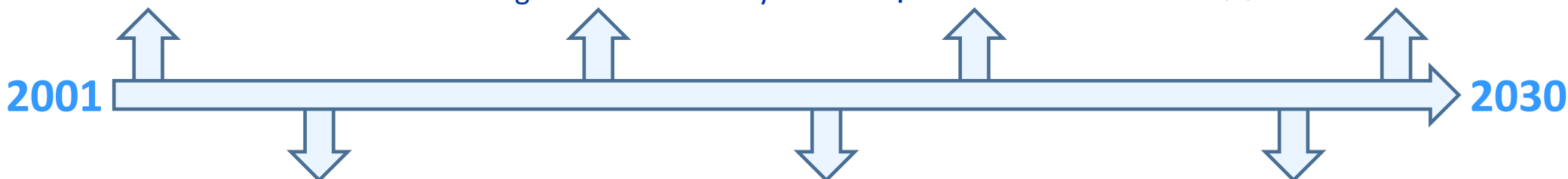
## 2012: Integrated concept of CB developed



## 2015: IAEA Report on Capacity Building for Nuclear Safety

## 2017: Mid-term assessment of implementation

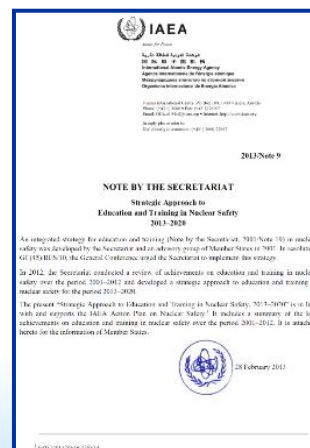
## 2022: Strategic Approach to CB in NSS



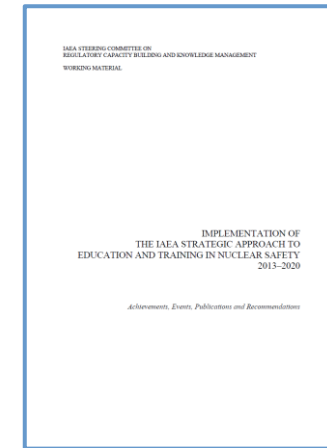
## 2009: Creation of a Steering Committee to advise the Agency on improving support to MSs in their E&T programmes in NS



## 2013: Strategic Approach to E&T in NS 2013-2020



## 2021: Implementation Report of SA 2013-2020



# Capacity building

Capacity building is a **systematic and integrated** approach includes

- education and training
- human resource development
- knowledge management and
- knowledge networks

to **develop, maintain and continuously improve**

- national
  - organizational and
  - individual
- competencies and capabilities



necessary for ensuring the

- **safe, secure and**
- **sustainable**

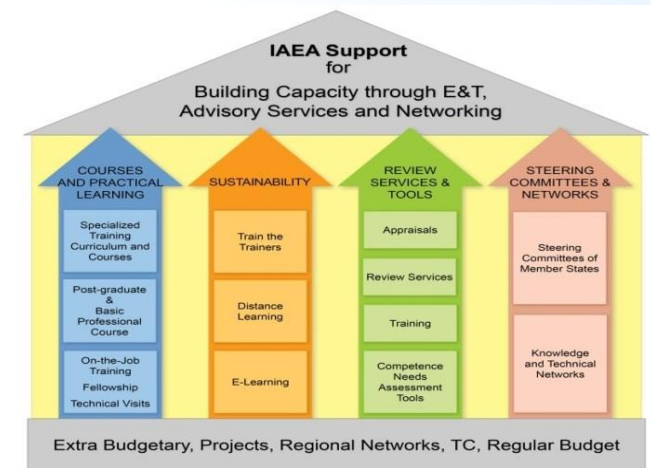
use of nuclear and radiation applications



# Main topics

## 1. Strategies for capacity building

## 2. Capacity Building Mechanisms



## 3. Regional and international cooperation and networking



# Strategies for capacity building

**IAEA Strategic Approach to Capacity Building in Nuclear Safety and Security 2022-2030**

# IAEA Strategic Approach to CB in NSS 2022-2030



- Objective
  - support the implementation of capacity building activities of the Department of NS so that
    - MSs strengthen and sustain appropriate levels of nuclear safety and security, based on national needs and priorities
    - MSs apply IAEA safety standards and nuclear security guidance to ensure the safe and secure use of nuclear and radiation applications
  - aimed at fostering common principles of
    - ownership
    - partnership
    - sustainability
    - coordination

assistance to Member States  
in capacity building provided  
by the Department of NS



# IAEA Strategic Approach to CB in NSS

- Vision
  - Member States strengthen and sustain the safe and secure use of nuclear and radiation applications consistent with
    - IAEA Safety Standards and Nuclear Security Guidance
    - Agency's support in capacity building



# IAEA Strategic Approach to CB in NSS

- Scope

- The strategic approach cover the technical areas

- nuclear safety
    - radiation safety
    - nuclear security
    - EPR

} across the lifecycle stages of all facilities and activities

# IAEA Strategic Approach to CB in NSS

- Expected outcomes
  - strengthened nuclear safety and security
  - increased application of the Agency's safety standards and nuclear security guidance
  - adequate and sustained competence and experience in the fields of nuclear safety and security
  - systematic and coordinated departmental support in capacity building based on the needs of MSs

# IAEA Strategic Approach to CB in NSS

- Duration covers the period
  - 2022–2030
  - a mid-term assessment is foreseen
    - 2025–2026
    - to allow for adjustments based on experience from implementation of the approach

# Strategies for capacity building

## **National Strategies on Capacity Building for Safety**

a new publication in development

# National strategies on capacity building

A new publication in development to support MSs in establishing national strategies on capacity building

- present the concept of capacity building for safety
- describe benefits of national strategies on CB for safety
  - the integration with national nuclear energy policy
  - the roles and responsibilities of all relevant stakeholders
- provide guidance on national strategies for CB
  - elements of national strategies (content)
  - how to develop, implement and monitor (process)

# National strategies on capacity building

- Objectives
  - guidance on how
    - establish such national strategies
    - individual organizations' strategies to be linked to the national level
  - present experience gained in Member States to date in national strategies on capacity building for safety

# National strategies on capacity building

- Scope
  - Capacity building with IAEA “umbrella approach”
    - E&T, HRD, KM and KN
  - For all Member States with
    - nuclear power programmes
    - embarking on a nuclear power programme
    - having interest for nuclear safety
  - All organizations of the national nuclear safety framework
    - having or building capacity for safety
  - All nuclear facilities and activities



# Capacity Building Mechanisms

- **Needs assessment**
- **Filling the gap and sustainability**
- **Monitoring**

# Safety Reviews Services

Identifying needs, improvement areas at national/organisational level



- ETReS – Education and Training Review Service
  - a formal mission completed upto 2016
    - Indonesia, Malaysia, Philippines, Thailand and Pakistan
    - Pre-ETReS in Kenya
  - **ETReS is not in use anymore**
    - after PRASC\* initiative on evaluating IAEA review service missions

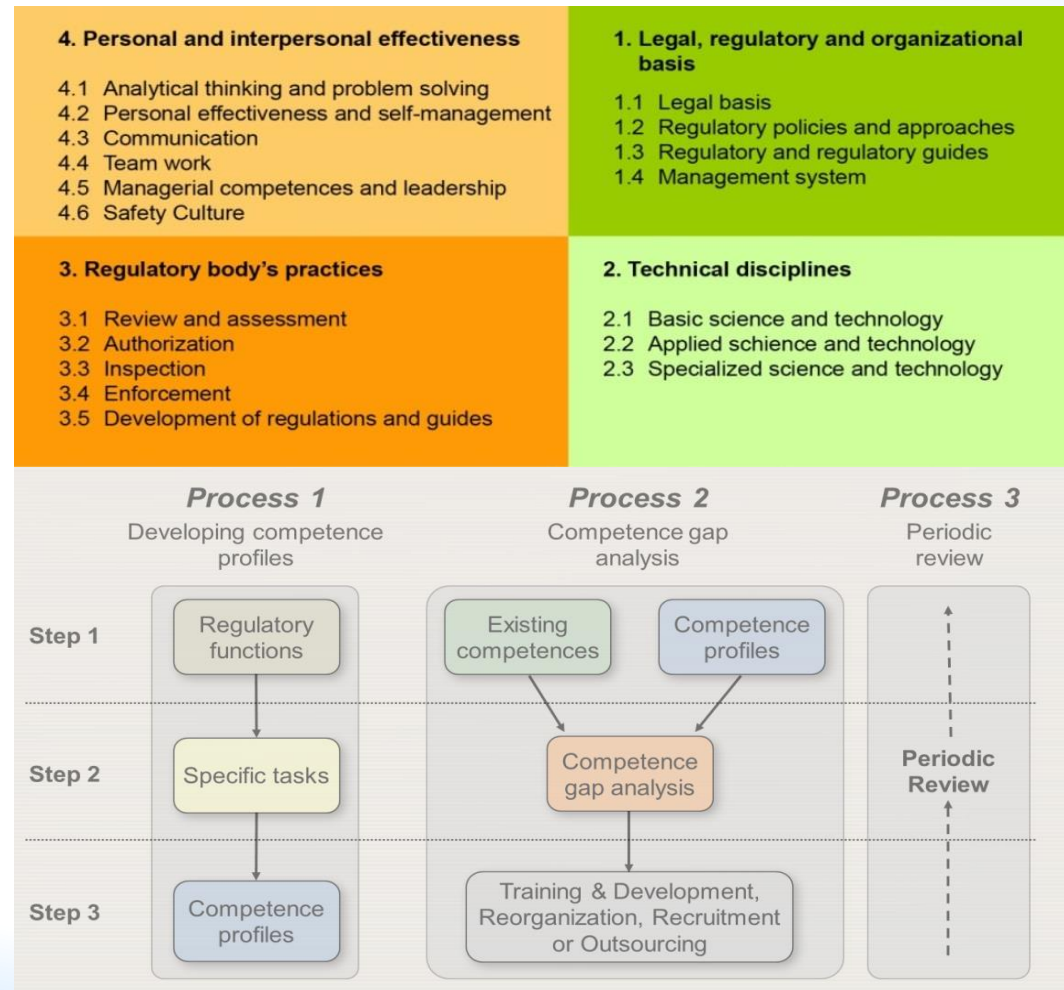
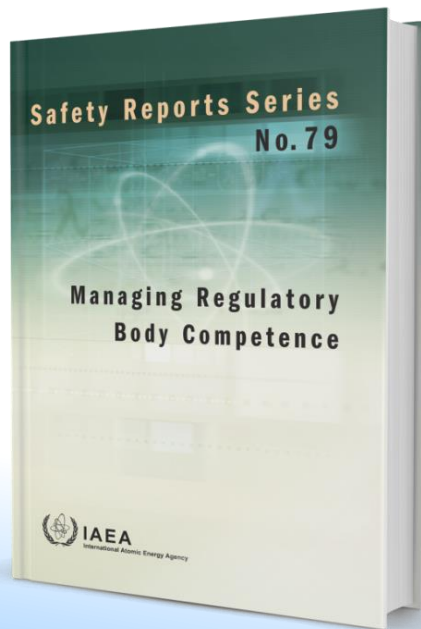
\* Peer Review and Advisory Services Committee

# Expert Mission to evaluate regulatory CB

- Expert missions were requested in 2021 and 2022
  - based on a new draft TECDOC “Methodology for Self-Assessment of Capacity Building for safety”
- Covers
  - capacity building (and all pillars) for safety and security
  - government, RB, authorized parties, TSO + service providers
  - with focus on regulatory capacity building
- Follows IRRS methodology
  - self-assessment, SWOT analysis, Action Plan
  - review mission → R, S, GP
  - Expert Mission Report

# Identifying Competence Needs

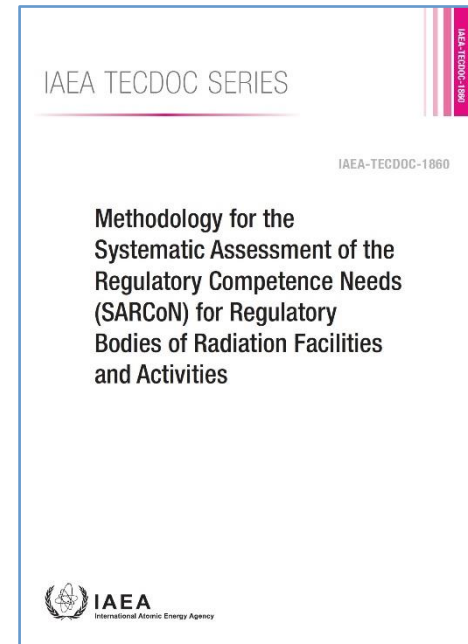
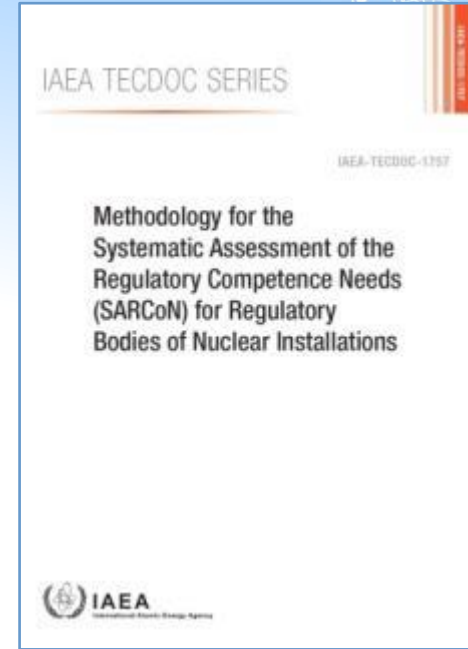
- Systematic Assessment of Regulatory Competence Needs (SARCoN)
  - at organizational and individual levels



# SARCoN

- Plans for revision of SARCoN IT tool
  - To consider widened scope
    - nuclear safety
    - radiation safety
    - nuclear security
    - EPR
- To make it applicable for interested parties
  - RB, TSO, OO, governmental organizations
- Updated IT platform

modular structure

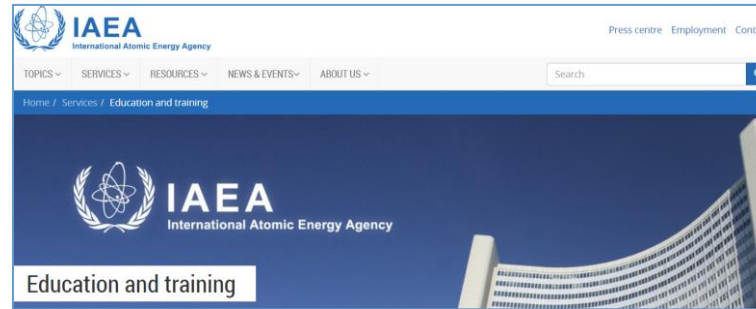


# Capacity Building Mechanisms

- Needs assessment
- **Filling the gap and sustainability**
- Monitoring

# Filling the gaps and sustainability

- Specialised courses, self-study, e-learning in all areas of safety & security



- The Global Education and Training Resource (GETR)
  - an easy-to-access knowledge base with information
    - nuclear safety training and education resources
    - by RB, TSO, research institutions and universities around the world



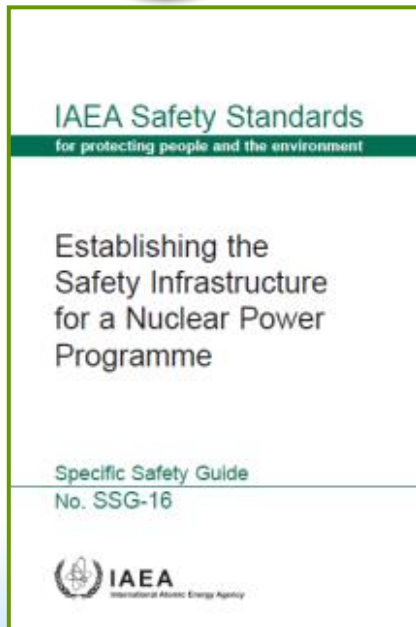


# Specialised courses and standardized workshops



# WS Modules based on SSG-16

## Topics covered



- #1 Developing National Infrastructure including Governmental, Legal and Regulatory Infrastructure for Safe Implementation of Nuclear Power Programme
- #2 Regulatory Framework
- #3 Safety Regulations
- #4 Licensing Process
- #5 Regulatory Review and Assessment
- #6 Regulatory Inspection and Enforcement
- #7 Interactions with the Public and Other Interested Parties in Regulatory Activities
- #8 Leadership and Management System for the RB
- #9 Human Resource Management of the RB

# Capacity Building Mechanisms

- Needs assessment
- Filling the gap and sustainability
- **Monitoring**

# Purpose of PROMIS

- To monitor progress in implementing the Strategic Approach to Capacity Building in Nuclear Safety
  - on the proposal of the Steering Committee in 2017
  - development was started in 2018
- A tool to tailor Agency's assistance in capacity building in the area of nuclear installation safety

# PROMIS Member States

- Member States
  - with nuclear facilities and activities
  - embarking for a nuclear power programme
  - with focus on capacity building in nuclear safety
- National Contact Points and their Alternates
  - Note Verbal for designation was sent out

# PROMIS Member States (cont.)



Algeria	Ghana	Philippines
Argentina	Hungary	Poland
Armenia	India	Romania
Bangladesh	Indonesia	Russian Federation
Belarus	Iran, Islamic Republic of	Saudi Arabia
Belgium	Japan	Slovakia
Brazil	Jordan	Slovenia
Bulgaria	Korea	South Africa
Canada	Lithuania	Spain
China	Malaysia	Thailand
Czech Republic	Mexico	Türkiye
Egypt	Morocco	UAE
Finland	Nigeria	Ukraine
France	Norway	USA
Germany	Pakistan	Viet Nam

# PROMIS Member States (cont.)



Algeria	Ghana	Philippines
Argentina	Hungary	Poland
Armenia	India	Romania
Bangladesh	Indonesia	Russian Federation
Belarus	Iran, Islamic Republic of	Saudi Arabia
Belgium	Japan	Slovakia
Brazil	Jordan	Slovenia
Bulgaria	Korea	South Africa
Canada	Lithuania	Spain
China	Malaysia	Thailand
Czech Republic	Mexico	Türkiye
Egypt	Morocco	UAE
Finland	Nigeria	Ukraine
France	Norway	USA
Germany	Pakistan	Viet Nam



# PROMIS Guidelines

## Progress Monitoring System for Nuclear Safety Capacity Building (PROMIS) Guidelines

Vienna, December 2022

IAEA Service Series XX

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# **Regional and international cooperation and networking**

# Global and regional networking

- Global Nuclear Safety and Security Network (GNSSN)
- Geographical regions
  - Arab Network for Nuclear Regulators (ANNuR)
  - Asian Nuclear Safety Network (ANSN)
  - European and Central Asia Safety Network (EuCAS)
- Reactor type
  - WWER Forum
  - CANDU Senior Regulators
- Status of embarkment
  - Regulatory Cooperation Forum

# IAEA Steering Committee on Regulatory Capacity Building

## Objectives

- exchange information and knowledge
- advise IAEA's activities in support the MS' capacity building programmes

**Members:** Regulators of MSs operating and expanding a NP Programme and those actively pursuing their first NP Programme

**Observers:** Training Institutions, EC, OECD/NEA

**Terms of References and Work Programme**

**Annual Plenary meeting**

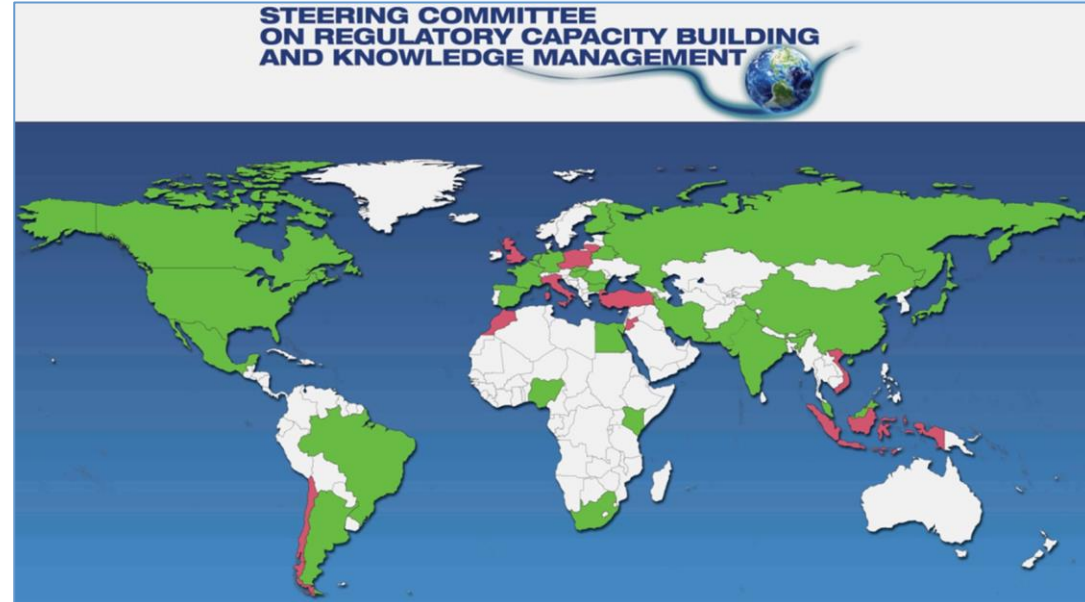
**Bureau –** Limited number of SC members; meets 1-2 per year to assess and contribute to the WP



# IAEA Steering Committee on Regulatory Capacity Building



Participating MSs in the meetings of Steering Committee



Algeria	Argentina	Armenia	Bangladesh	Belarus	Belgium	Brazil	Bulgaria	Canada
China	Czech Republic	Egypt	Finland	France	Germany	Ghana	Hungary	India
Indonesia	Iran, Islamic Republic of	Japan	Jordan	Korea	Lithuania	Malaysia	Mexico	Morocco
Nigeria	Norway	Pakistan	Philippines	Poland	Romania	Russian Federation	Saudi Arabia	Slovakia
Slovenia	South Africa	Spain	Thailand	Türkiye	UAE	Ukraine	USA	Viet Nam

# Conclusions

# Conclusions

- Strategic Approach provides concept and principles for promoting systematic process and integrated approach
- IAEA efforts on implementing the Strategic Approach
  - in all main components
- IAEA supports Member States in building and sustaining capacity in nuclear safety



ANSN ETTG Regional Workshop on  
**Management of Training Systems for Nuclear and Radiological Safety**

**6-10 November 2023**

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*Thank you!*