A Strategic Approach to Capacity Building through Education & Training
ETRES Education and Training Review Service
Strategic Approach to Capacity building through E&T 2013-2020

- History and main components
- Systematic process and integrated approach
- Knowledge Framework

Mechanisms for Building Capacity: Examples

- Peer Reviews, Competency Frameworks, Training Needs Assessment
- Postgraduate Courses, Curricula, Nuclear Power Programme
- Specialised knowledge, materials for self study, e-learning
- Global and Knowledge Networks, Asian Nuclear Safety Network/CB and Education and Training Topical Groups

ETReS: Education and Training Review Service
THE STRATEGIC APPROACH

2001: IAEA STRATEGIC APPROACH to education and training produced with a focus on two areas: nuclear safety and the area of radiation transport and waste safety.

2009: Creation of a Steering Committee comprising experts from regulatory bodies and technical support organisations in Member States to advise the Agency on improving support to Member States in States’ education and training programmes in nuclear safety.


2014: A global approach to CB and KM. Focus on Regulators and TSOs. SC on CB and KM.


Capacity Building (CB)

THE STRATEGIC APPROACH

Objectives

- Maintenance and continual improvement of Member States’ capacity building in nuclear safety, consistent with the Agency’s safety standards and best practices.
- Development of an education and training support programme by the Agency in cooperation with Member States and, as appropriate, other international organizations to support Member States’ implementation of their education and training programmes at a national and regional level.
- Development by the Agency of a process for the effective and efficient implementation of the education and training support programme and ensuring the continuous improvement of its implementation.

“a systematic and integrated approach that includes education and training, human resource development, knowledge management and knowledge networks to develop and continuously improve the governmental, organizational and individual competencies and capabilities necessary for achieving a safe, secure and sustainable nuclear power Programme”
THE IAEA STRATEGIC APPROACH
Systematic Process
THE IAEA STRATEGIC APPROACH
Integrated Approach

Integrated: national, regional, global

Education and Training Complementary Approaches

GLOBAL APPROACH
IAEA: Defining policies, frameworks and providing materials and support for E&T

REGIONAL APPROACH
Supporting IAEA Regional Networks and Centres, providing E&T resources and expertise

NATIONAL APPROACH
Member States: Establishment and maintenance of HR and national E&T infrastructure

GLOBAL NETWORKING
Identifies end users, areas and level of knowledge
THE IAEA STRATEGIC APPROACH
The four component system

1. National strategies for capacity building

2. Capacity Building Mechanisms

3. Regional, International Cooperation and networking

4. Management systems, management of competence & knowledge management
THE IAEA STRATEGIC APPROACH
Capacity building mechanisms
THE IAEA STRATEGIC APPROACH
Review Services, Competence Needs Assessment
The objective is to assist Member States to develop an
strategy for maintaining a sustainable and adequate
Education and Training programme in nuclear safety
consistent with IAEA Safety Standards and international
good practices, with due
recognition to national
conditions.

This objective is expected to
be met by self-assessment of
needs, followed by an
international peer review of
the results and implementation
of an action plan to fulfill the
identified needs.
ANSN/ETTG requested a peers review on Education and Training fro the Asian Region (ETTG plenary meeting, Japan 2009)

**Objective:** to provide assistance in defining and implementing a national strategic plan for E&T, share experience benchmarking

Guidelines were developed in 2010 and improved in 2011 in order to align them with the NSAP and the Capacity Building concept

First ETRES mission held in 2012 in Indonesia

**ANSN/ETTG ETRES conducted in Malaysia 2014**

ANSN/ETTG 2 ETRES planned for 2015 Philippines and Thailand
ETRES, Self Assessment Approach

Diagram:
- **Actions**: What actions are needed?
- **Needs**: What is needed?
- **Gaps**: What is missing or needs improvement
- **Availability**: What is available?

Process:
1. Preparation
2. Conduct
3. Follow-up
ETRES within the frame of CB

1.- What is needed?
2.- What is available and adequate to meet the needs?
3.- What is not available or needs improvement in order to meet the needs?
4.- How can the deficiencies be remedied?

ORGANISATIONAL
Area I Education and Training Operator, Regulator, TSO

LEVELS of Self Evaluation
NATIONAL
Government, Ministry

ORGANISATIONAL
Operator, Regulator, TSO

INDIVIDUAL
Trainees

Thematic Areas
- Nuclear Installations safety
- Radiation, Transport and Waste Safety
- Emergency Preparedness and Response
- Nuclear Security
ETRES provides detailed guidance, including documental basis, methodology and extended set of questions and assessment criteria.

Modular approach, the scope can be tailored (5 modules, Educational and Training Institutions, RB, TSO, RR, NPPs)

5 Tables with More than 130 questions can be considered during the self assessment.

The questions and the assessment criteria are linked to the IAEA safety standards and documents.

ETRES should be conducted to support, amongst others:

1. Development of Education and Training Strategies at a national/or organisational level and implementation of Action Plans in line with the IAEA strategy
2. Improvement and development plans for National and regional Training Centers
3. Improvement and development plans for the organisations, i.e. Regulatory Body
THE IAEA STRATEGIC APPROACH
Knowledge Management

1. Legal, regulatory and organizational basis
   1.1 Legal basis
   1.2 Regulatory policies and approaches
   1.3 Regulatory and regulatory guides
   1.4 Management system

2. Technical disciplines
   2.1 Basic science and technology
   2.2 Applied science and technology
   2.3 Specialized science and technology

3. Regulatory body’s practices
   3.1 Review and assessment
   3.2 Authorization
   3.3 Inspection
   3.4 Enforcement
   3.5 Development of regulations and guides

4. Personal and interpersonal effectiveness
   4.1 Analytical thinking and problem solving
   4.2 Personal effectiveness and self-management
   4.3 Communication
   4.4 Team work
   4.5 Managerial competences and leadership
   4.6 Safety Culture

Guidelines for the Systematic Assessment of the Competence Needs of the staff of a Regulatory Body

SARCoN

IAEA
Identifying Training Needs Assessment
Systematic Assessment of Competence Needs (SARCoN)

**Process 1**
Developing competence profiles

- Regulatory functions
- Specific tasks
- Competence profiles

**Process 2**
Competence gap analysis

- Existing competences
- Competence profiles

- Training & Development, Reorganization, Recruitment or Outsourcing

**Process 3**
Periodic review

- Periodic Review
THE IAEA STRATEGIC APPROACH

Post graduate courses
THE IAEA STRATEGIC APPROACH
Basic postgraduate and professional training Courses on nuclear safety & regulatory control
THE IAEA STRATEGIC APPROACH
specialised courses in line with the IAEA safety standards
THE IAEA STRATEGIC APPROACH
Specialised modules based on the IAEA safety standards: Focus on embarking countries

Core material
- thematic and based on IAEA SS

Application
- examples of practices in MS

Exercises
- tailored to specific needs of MS with outlook on milestones of future activities

Duration: typically 1 week
Target: SSG-16 actions relevant to phases 1-3
Material: Exemplary set of presentations and talking points
THE IAEA STRATEGIC APPROACH
Knowledge Networks
THE IAEA STRATEGIC APPROACH
Knowledge Networks

Capacity Building for establishing Safety Infrastructure for Nuclear Power Programmes

Introduction

The establishment of sustainable education and training programmes is a key component of the IAEA Strategic Approach. This involves providing training to professionals in the field of nuclear safety, ensuring they have the knowledge and skills necessary to safely operate nuclear facilities.

Education and Training

Introduction

Welcome to the Global Safety Assessment Network (GSAN)

Mr. Paul Woodhouse
Head of the Safety and Security Coordination Section, IAEA

Past and Future Meetings

Welcome to the Technical and Scientific Support Organization Forum (TSOF)

Background

The International Conference on Challenges Faced by Technical and Scientific Support Organizations (TSO) Enhancing Nuclear Safety and Security, which was held in Tokyo, Japan from 25 to 29 October 2010, concluded that "The IAEA should foster the establishment of a forum dedicated to nuclear safety infrastructure development issues related to scientific and technical support. Such a TSO Forum would meet regularly in between international TSO conferences, establish close working relationships with the Regulatory Cooperation Forum (RCF), collaborate with regional and inter-regional nuclear safety organizations, and facilitate knowledge exchange among all parties involved in nuclear safety infrastructure development." The recent event at the Fukushima NPS and the subsequent Ministerial Conference at IAEA further highlighted the need of a TSO Forum. The IAEA, as Secretariat of this forum, will facilitate
THANK YOU FOR YOUR ATTENTION