ensti
EUROPEAN NUCLEAR SAFETY
TRAINING & TUTORING INSTITUTE

Experts for experts

Strengthening expertise in Nuclear Safety to support regulatory systems

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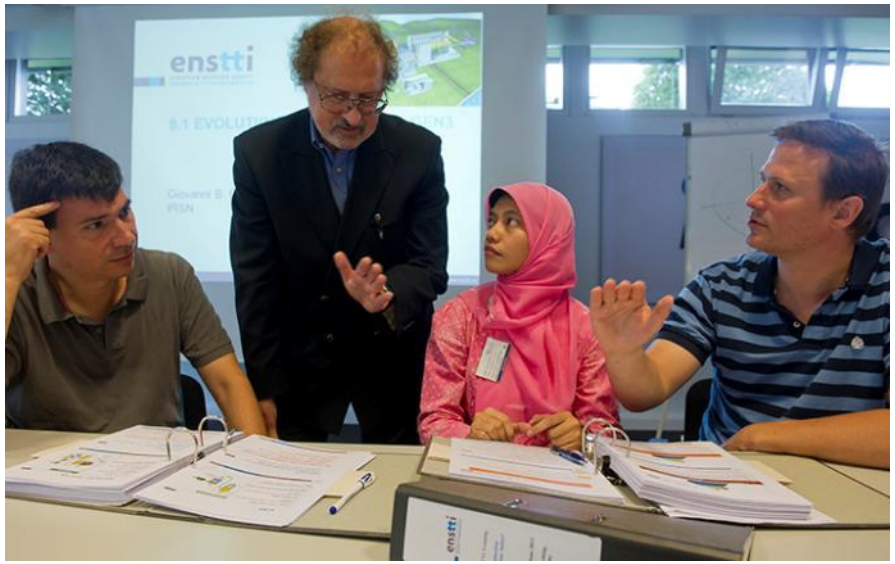


THE CHALLENGE

- Facilities & activities using ionizing radiation are complex
- expert judgments based on up-to-date research and assessment of highly specific technical issues within a holistic view of complete systems
- A know-how in assessment in nuclear safety, nuclear security and radiation protection to transfer over generations .
  - Through practical training and tutoring
  - Accompanying the harmonization of EU methodologies and practices
- A EU safety expert network to further develop and strengthen
- A non-economic activity (around 3500 experts in the EU)

ENSTTI BASICS

- A 2011 initiative of European Technical Safety Organizations to optimize the training of their professionals
- Vocational training and tutoring on assessment in nuclear security, nuclear safety and radiation protection
- Calls on European TSOs' expertise to maximize the transmission of knowledge, practical experience and culture
- A curriculum including Training and Tutoring

ENSTTI Headquarters
Fontenay-aux-Roses, France

ENSTTI – A TRAINING NETWORK

THE NUSHARE PROJECT
A EURATOM EDUCATION, TRAINING AND INFORMATION INITIATIVE OPEN TO ALL COUNTRIES

SEVENTH FRAMEWORK PROGRAMME

Project Coordinator ENEN

Objective

To develop and implement training schemes with the aim to share and grow safety culture, including security aspects based on existing training efforts.

Target Groups (TG) at higher education level

- TG1 Policy and decision makers: governments, emergency management teams, including international organizations; - **INSTN**
- TG2 Staff of Nuclear Regulatory Authorities (NRAs) and Technical Safety Organisations (TSOs) - **ENSTTI**
- TG3 Managers and operators in the nuclear industry, system suppliers and energy providers. - **TECHNATOM**

Qualification System – Mutual Recognition

- European Credit system for Vocational Education and Training (ECVET)

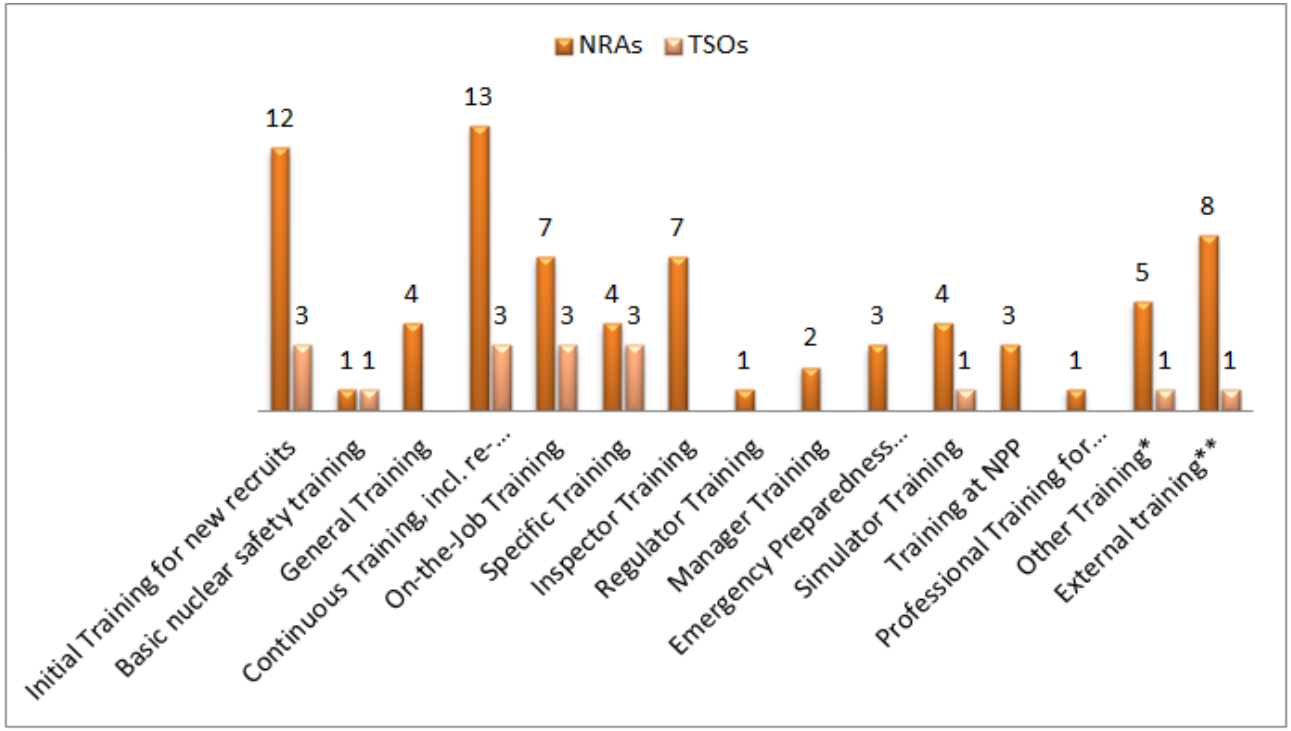
Workforce Mobility

- “Personal Transcripts“ or “Training Passport”

Time Frame

- 2013-2016

TRAINING APPROACH FOR EU NUCLEAR SAFETY EXPERTS



* Other training such as self-study, congresses, meetings, seminars, etc.

** External training such as provided by other national institutions (such as US NRC), at the regional level, e.g. by ENSTTI, or by other international institutions, e.g. IAEA;

16 EU countries with nuclear power

- Belgium
- Bulgaria
- Czech Republic
- Finland
- France
- Germany
- Hungary
- Lithuania
- The Netherlands
- Romania
- Slovakia
- Slovenia
- Spain
- Sweden
- Switzerland
- UK

Working Package 3:
PRELIMINARY TRAINING SCHEME FOR NUCLEAR REGULATORY AUTHORITIES (NRAs) AND TECHNICAL SAFETY ORGANIZATIONS (TSOs)

SEVENTH FRAMEWORK PROGRAMME

- **Target Group 2 (TG2)**
  - Professionals at NRAs and TSOs.
  - Professionals involved in the licensing from the nuclear cycle to the use of radioactive material in medicine and industry.
- **Training Programme**
  - Comprehensive and harmonized training to support the development of young professionals and qualified staff who start working or plan to make a career at NRAs and TSOs.
- **Main Objectives**
  - To **complement training efforts at the national level.**
  - To familiarize NRAs and TSOs with the **EU and international dimension** and to support the **harmonization of regulatory excellence in the EU-28 and beyond.**
  - To support **exchange of experience and best practices.**
  - To foster a common **nuclear safety culture.**

MACRO LEARNING OUTCOMES NUSHARE WP3

After the successful completion of the Basic Training Scheme, the learner will be able to:

1. Demonstrate a systemic vision of nuclear safety by understanding the explicit and implicit connections among technological, social, human and organizational features.
2. Explain the fundamental principles that form the system for the protection of human and their environment from ionizing radiation.
3. Discuss the legal basis and regulatory process that empower the NRA to govern its operation.
4. Describe the fundamentals of safety culture.
5. Explain the basics of regulatory oversight of licenses including the management of safety culture and to compare the different oversight approaches.
6. Identify the different steps of the safety culture oversight process and to differentiate between nuclear safety and nuclear security culture.
7. Discuss the basic, applied and advanced technical disciplines related to the regulatory control of facilities and activities using ionizing radiation.
8. Describe and discuss regulatory practices such as assessment and inspections technologies, investigation and auditing.
9. Demonstrate soft skills necessary to carry out regulatory functions.

NUSHARE WP3 – 1ST STEP
BASIC TRAINING PROGRAMME FOR NRAs & TSOs

4 Modules over a period of 12 months

- **Module I:** Legal and Regulatory Frameworks & Functions (1 week)
- **Module II:** Technical Concepts (4 weeks)
  - Technical Concepts governing Nuclear Safety, Nuclear Security and Radiation Protection
- **Module III:** Regulatory Oversight of Safety Culture (1 week)
- **Module IV:** Structured Tutoring (min. 3 months in 'home organization')

In Progress

SYSTEMATIC APPROACH TO BUILD-UP AND STRENGTHEN COMPETENCES

Focus on FUNCTIONS as set out in the IAEA GSR Part 1 "Governmental, Legal and Regulatory Framework for Safety" & SARCON,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