



# European Human Resources Observatory for the Nuclear Sector (EHRO-N)





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# EHRO-N Mission

The **European Human Resources Observatory for the Nuclear Sector (EHRO-N)** is driven by organisations representing major stakeholders in the European Civil Nuclear Sector and managed by the European Commission's Joint Research Centre (JRC).

EHRO-N mission is built on the strong mandate of the Council of the European Union in 2008:

*"It is essential to maintain in the European Union a high level of education and training in the nuclear field and, at the same time, preserve the skills that we already have."*

EHRO-N is collaborating with "**EURATOM Coordination and Support Actions**" on education and training such as ENEN2plus.

**ENEN2plus** is the largest and most integrative nuclear Education and Training effort up to date. It supports cross-border and cross-disciplinary mobility within and beyond the EU, in cooperation with DG JRC, OECD-NEA and international partners, including the United States, Korea and Japan.



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# EHRO-N Objectives



## **Develop methodologies and best practices for assessing national nuclear workforces**

Support the establishment of national nuclear workforce assessments and other aspects relevant to knowledge management of human resources in the nuclear field through addressing aspects such as common terminologies, job classification and modelling tools.



## **Analysis of human resources, education and knowledge management frameworks at EU level**

Collect data from national workforce assessments, knowledge management programmes, surveys and other relevant information; review demand and supply of human resources and competences in the European nuclear sector and identify gaps and deficiencies in education and training infrastructures; elaborate recommendations for remedial actions and optimisations.



## **Support harmonisation of education and training**

Support the implementation of European frameworks for nuclear qualifications and mutual recognition of education and training.



## **Direct line with stakeholders**

Communicate relevant data, analysis and findings to all the relevant stakeholders.



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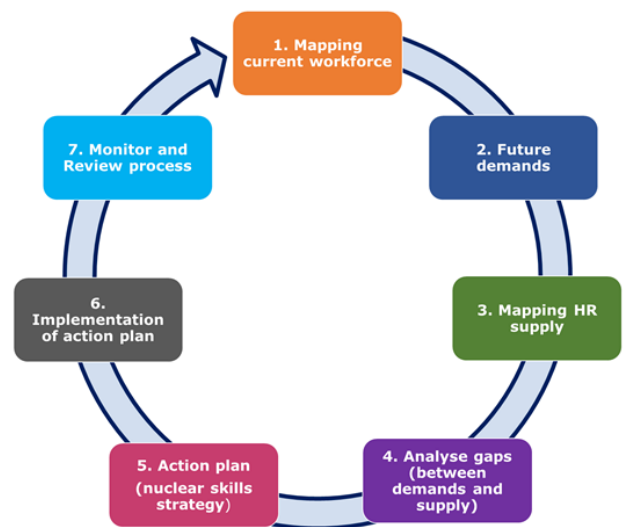
# Mapping the Nuclear Workforce

## National nuclear workforce assessments

A national nuclear workforce assessments (NWA) is an important process for ensuring sufficient and competent workforce is available for both the power and the non-power nuclear industries. A national NWA should be led and/or facilitated by the organisation(s) responsible for the nuclear programmes(s), e.g. at ministerial level, in order to assure that that all relevant stakeholders are part of the process. The main steps in a NWA is shown in the figure.

## Mapping the current workforce

The first step in the NWA is the mapping of the workforce, for which a job classification is needed. EHRO-N is putting forward a proposal for a harmonised job classification that would allow the establishment of workforce data from different Member States, which would facilitate coordinated support efforts at EU level.



## Mapping the nuclear workforce allows to analyse:



Job Function



Education Level



Competences & Skills






Demographics



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## Job Classification

A job classification is a useful instrument for Member States, providing support for conducting a national NWA. It should be:

-  Well-designed  
Simple to use
-  Flexible
-  Simple to use

## EHRO-N Tool

Today EHRO-N proposes a new tool: a job classification for mapping the nuclear workforce at national level. This is an essential tool to analyse human resources and competences in the nuclear sector.

[Click here to see the chart in full size](#)

EQF 7 & 8 (MSc + PhD)		EQF 6 (BSc)		EQF 5
Construction engineering	Materials science and engineering (nuclear facility materials, failures, component engineering, inspections and lifetime management)	Construction engineering	Materials science and engineering (nuclear facility materials, failures, component engineering, inspections and lifetime management)	Construction engineering
Electrical engineering	Nuclear and particle physics	Electrical engineering	Nuclear and particle physics	Electrical engineering
Instrumentation and control (automation)	Reactor physics and dynamics	Instrumentation and control (automation)	Reactor physics and dynamics	Instrumentation and control (automation)
Mechanics/mechanical engineering	Thermal hydraulics and coolants	Mechanics/mechanical engineering	Thermal hydraulics and coolants	Mechanics/mechanical engineering
Nuclear fuel cycle (R&D, front-end, reprocessing and back-end)	Risk analysis (incl. probabilistic risk assessments)	Nuclear fuel cycle (R&D, front-end, reprocessing and back-end)	Risk analysis (incl. probabilistic risk assessments)	Radiation protection
Process engineering	Safeguards	Process engineering	Safeguards	Safety and security (business security and fire safety)
Project management	Safety and security (business security and fire safety)	Project management	Safety and security (business security and fire safety)	Process engineering
Radiation protection	Severe accidents	Radiation protection	Severe accidents	Chemistry (water)
Reactor and "hot" lab operation	Nuclear waste management, decommissioning and dismantling (including R&D and planning)	Reactor and "hot" lab operation	Nuclear waste management, decommissioning and dismantling (including R&D and planning)	
Quality management and inspections	Radiochemistry	Quality management and inspections	Radiochemistry	
Organisational and human factors	Chemistry (water)	Organisational and human factors	Chemistry (water)	
Others: (support functions such as procurement, personnel admin., training duties, document management, technical sales support; procurement; management system; information security; fusion and plasma physics research; official duties; technical business expert duties; management duties; duties related to financial profitability; strategic planning; extensive licensing-related functions; legal duties; environmental control)		Others: (support functions such as procurement, personnel admin., training duties, document management, technical sales support; procurement; management system; information security; fusion and plasma physics research; official duties; technical business expert duties; management duties; duties related to financial profitability; strategic planning; extensive licensing-related functions; legal duties; environmental control)		Others: (support functions such as nuclear fuel treatment; maintenance duties; support functions; installation duties; operator duties; and technical documentation)



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## **EHRO-N Advisory Board**

The advisory board provides general and strategic guidance on conceptual issues, such as type of data, data quality, and required analysis, endorsement of major EHRO-N reports, preparation and execution of communication actions.

Current members of the advisory board are:

- ENS (European Nuclear Society)
- ENEN (European Nuclear Education Network)
- NUCLEAREUROPE (Trade Association for the Nuclear Energy Industry in Europe)
- ETSON (European Technical Safety Organisations Network)
- EUTERP (European Training and Education in Radiation Protection Foundation)
- FUSENET (European Fusion Education Network)
- IAEA (International Atomic Energy Agency)
- OECD-NEA (OECD - Nuclear Energy Agency)
- European Commission - DG RTD (DG for Research and Innovation)
- European Commission - JRC (Joint Research Centre)

## **Operating Agent**

The Joint Research Centre is the operating agent, which provides the necessary infrastructure and technical network support, analyses capabilities and long-term stability of the observatory.



**EU Science Hub**  
[joint-research-centre.ec.europa.eu](https://joint-research-centre.ec.europa.eu)

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