

ASSESSMENT OF RADIATION PROTECTION TRAINING NEEDS AND CAPABILITIES IN EUROPE: RESULTS OF THE ENETRAP SURVEY

^a M. Coeck, ^b P. Livolsi, ^d S. Möbius, ^c A. Schmitt-Hannig, ^e A. Luciani, ^g J. van der Steen, ^f M. Marco, ^j J. Stewart, ⁱ R. Thompson, ^h J. Balosso

^a SCK•CEN, Belgian Nuclear Research Centre, Belgium

^b CEA-INSTN, Belgium

^c BfS, Belgium

^d FZK-FTU, Belgium

^e ENEA, Belgium

^f CIEMAT, Belgium

^g NRG, Belgium

^h UJF, Belgium

ⁱ NHC, Belgium

^j HPA-RTD, Belgium

E-mail address of main author: mcoeck@sckcen.be

Maintaining a high level of competencies in the field of radiation protection is crucial for the future safe application of ionising radiation and to ensure the protection of workers, the public and the environment.

Although working with a variety of responsibilities and specific professional aims, practitioners dealing with applications of ionizing radiation have three common needs with regard to radiological protection:

- basic education and training providing the required level of understanding of artificial and natural radiation;
- a standard for the recognition of skills and experience; and
- an opportunity to fine-tune and test acquired knowledge on a regular basis.

The wide variety of the national approaches of the E&T programs in radiological protection in Europe hampers a common European methodology concerning these issues. This is particularly true for the Qualified Expert. Although, in this specific case, the fundamentals of the E&T programs are given by a European directive, the national differences in for instance, level, duration, subjects, practical and theoretical proportions in a program etc. create a barrier for the mutual recognition of this expert. The development of a common European radiation protection and safety culture and, based on that, the mutual recognition of radiation protection courses and the acquired competencies of radiation protection experts becomes crucial in a world of dynamic markets and increasing workers' mobility.

A sustainable Education and Training (E&T) infrastructure is an essential component to combat the decline in expertise and to ensure the continuation of the high level of radiation protection knowledge in the future. Such infrastructure has to be built in such a way that both the initial training ("Education") and the unceasing maintenance of the level of competencies ("Training") are available. In answer to the need to develop a common European radiation protection and safety culture and, based on that, the mutual recognition for radiation protection courses and the acquired competencies of Qualified Experts, the ENETRAP project is working on a European harmonized approach of E&T programs in radiation protection.

In a first phase of the ENETRAP project; a questionnaire was set up, the objective of this questionnaire being to elicit detailed information which will enable us to:

-
- assess the actual training needs in the EU Member States and Candidate States;
 - understand the various regulatory aspects and consequently propose minimum requirements for mutual recognition of RPEs and RPOs;
 - collate details of the various training and education activities available in the EU Member and Candidate States, and
 - review the content, structure and methods of these training and education activities.

Hereto, an extensive list of questions was set up addressing the following topics:

- numbers of RPEs;
- identification of practices;
- national capabilities for education and training in radiological protection;
- regulatory requirements and
- recognition.

This questionnaire was sent out to 31 countries, i.e. the European Member States, the Candidate States, and the Associated States Norway and Switzerland.

This paper will summarize the results of this questionnaire and the implementation these results into the construction of the E&T programmes, namely the European Master in Radiation Protection (EMRP – to start in September 2007) and the ENETRAP training scheme, being a revision of the Saclay based European Radiation Protection Course ERPC.

A preliminary programme of both initiatives uses a modular approach and puts forward 2 parts : a common basis, and a series of specialized modules on occupational radiation protection in nuclear power plants and fuel cycle industry, the medical sector, non-nuclear industry and research laboratories, waste and disposal sites, etc...

The EMRP and ENETRAP training scheme are planned to run (partly) in parallel, so that an overlap can be made between certain modules. This innovative construction allows close contact and enhances discussions between students and professionals.

The theoretical program needs to be extended by an on-the-job training (OJT) period and the possibility to follow (parts of) the modules via e-learning needs to be implemented. ENETRAP also strongly suggests to cooperate with expert networks such as EURADOS and the ALARA network who are willing to "foster" the chapters dealing with their specific competences.

The final program of the ENETRAP training scheme needs to be developed in such a way that it gives a common basis which meets as much as possible all national regulations and thus will receive a recognition from the participating European countries. Standardized material should be provided.

The results of the ENETRAP project will be transferred to the European umbrella organization EUTERP which could deal with issues such as recognition of courses and certification, mobility of students and teachers, sharing of teachers and teaching facilities etc...