



HERCA Working group on
Education and Training

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Information paper:
Analysis of Country Fact Sheets (CFS) on
the implementation of RPE and RPO
concepts in EU Member States

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Title: **Analysis of Country Fact Sheets (CFS) on the implementation of RPE and RPO concepts in EU Member States**

Abstract: The EU BSS introduced the concepts of the RPE and RPO and set specific requirements for their roles and responsibilities. Based on these requirements it is considered necessary for the RPEs and RPOs to receive appropriate education and training in order to develop the necessary competence to perform their duties adequately and efficiently.

The HERCA WG E&T in Radiation Protection collected information from member states on the implementation of the concepts of the RPEs and RPOs with the use of appropriate Country Fact Sheets (CFS) and/or questionnaires with similar content. A number of issues were addressed in these CFS/questionnaires, such as the types of RPEs and RPOs, the related education and training requirements, provisions for RPE recognition and RPO certification/approval, etc. This work presents the results of the analysis of the information collected from 29 Member States (MSs).

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HERCA Information Paper

Analysis of Country Fact Sheets (CFS) on the implementation of RPE and RPO concepts in EU Member States

1. Introduction

The *EU BSS Directive* [1] introduced, among others, the concepts of the Radiation Protection Expert (**RPE**) and the Radiation Protection Officer (**RPO**). The requirements concerning their roles and responsibilities are set in articles 82 and 84 of the BSS, respectively.

According to the definition provided, the RPE is an individual or, if provided for in the national legislation, a group of individuals having the knowledge, training and experience needed to give radiation protection advice in order to ensure the effective protection of individuals, and whose competence in this respect is recognised by the competent authority. In this respect, the RPE shall have a very good understanding of radiation protection principles and how they are applied and implemented in the workplace. The RPE should also have a comprehensive understanding of the relevant national legislation and be able to advise on the appropriate actions to be taken.

Furthermore, the EU BSS defines the RPO as an individual who is technically competent in radiation protection matters and relevant for a given type of practice to supervise or perform the implementation of the radiation protection arrangements. According to *ENETRAP III* [2], employees appointed to act as RPO will need to have an adequate level of understanding of concepts related to radiation protection and should also be acquainted with the safe and secure use of radiation sources as relevant to the application. The level of training required will be dependent on the complexity of the radiation application the RPO is responsible for, and the associated duties and radiation protection tasks that the RPO performs.

Based on the above points, the HERCA Working Group (WG) on E&T in radiation protection has already established a *guidance to support the Member States (MSs) in their efforts to implement the requirements for RPE and RPO in the EU BSS* [3]. Moreover, in accordance with its mandate, the HERCA WGET collected information from the MSs about the implementation of requirements concerning the education, training, and retraining as well as the related mechanisms for the recognition of the RPEs and where appropriate the RPOs. This work presents the results of the related analysis.

2. Materials and method

For the collection of information concerning the implementation of the RPE and RPO requirements set in the EU BSS, the HERCA WG on E&T in Radiation Protection prepared appropriate Country Fact Sheets (CFS) to be completed by the MSs' representatives. The type of information requested for the RPEs and RPOs respectively is presented in **Table 1**.

Table 1: Information collected with CFSs

| | A/a | Information |
|-----|-----|--|
| RPE | 1 | Implementation |
| | 2 | Related terminology |
| | 3 | Translation of the term |
| | 4 | Role |
| | 5 | Categories |
| | 6 | Recognition arrangements |
| | 7 | Initial recognition requirements |
| | 8 | Function covered by group of persons |
| RPO | 1 | Graded and/or practice specific approach in RPO assignment |
| | 2 | Company employee or external |
| | 3 | Training approved by PB/NA |
| | 4 | E&T requirements |

3. Results and Discussion

As of June 2023, information on RPE and RPO implementation has been collected from 29 HERCA MSs (out of 32) with the use of CFS/questionnaires. According to the information collected, the RPE and RPO training is application specific in the majority of MSs that submitted a completed CFS/questionnaires, but the number of associated categories/specialties varies to a great extent. In general, RPE recognition is granted by the competent authorities in 28 MS. In some of the MSs the implementation is based on the previously established system concerning the expertise in radiation protection while in 5 MSs the roles/functions of RPE and RPO are combined.

The number of RPE categories varies among the MSs as presented in **Table 2**.

Table 2: No of RPE categories in MS

| No of RPE categories | No of MS |
|----------------------|----------|
| 0 | 1 |
| 1 | 7 |
| 2 | 4 |
| 3 | 4 |
| 6 | 1 |
| 7 | 2 |
| 8 | 2 |
| 13 | 1 |

In 7 of the MSs there is only one RPE category. The medical field is considered as a separate RPE category in 9 MSs (**Figure 1**). In 1 MS, 7 of the RPE categories concern practice-type specific fields of expertise in the radiation practices of health care and veterinary medicine. In addition, 20 out of 29 MSs apply a graded approach in the establishment of the requirements for the RPE implementation.

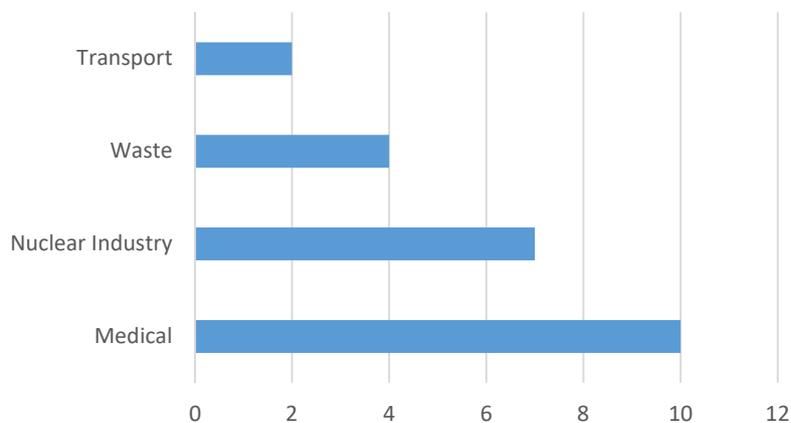


Figure 1: Specified RPE categories in MS

Only in 6 MSs the selection of the RPE is based on criteria concerning the specificities of each facility. Moreover, based on the related information provided by 28 MSs, 15 MSs stated that the role of the RPE can only be performed by an individual. However, 13 MSs stated that the role could be undertaken by an individual or a group of persons (**Figure 2**).

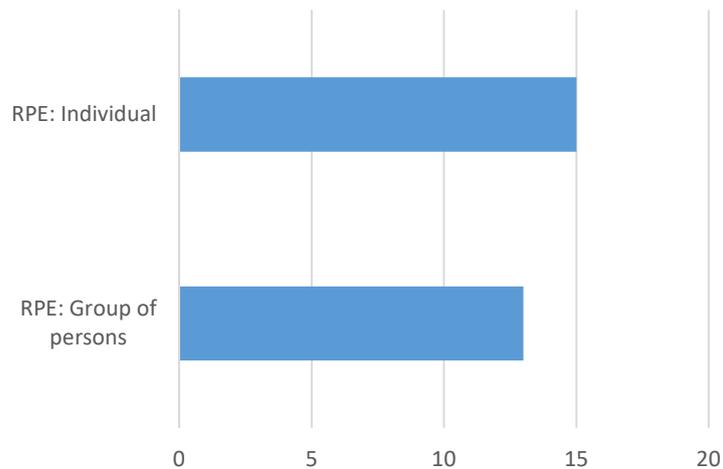


Figure 2: Number of MSs where the role of the RPE is performed by an individual or group of persons

Not all MSs provided detailed information on education and training requirements. Of those that did, regarding the educational background of the RPEs, a Baccalaureus Scientiæ or higher educational degree is required in 13 MSs, while an initial RPE specific training and/or training in radiation protection is obligatory in 19 HERCA MS. Additionally, specific RPE training and retraining requirements have been set in 10 MSs (**Figure 3**).

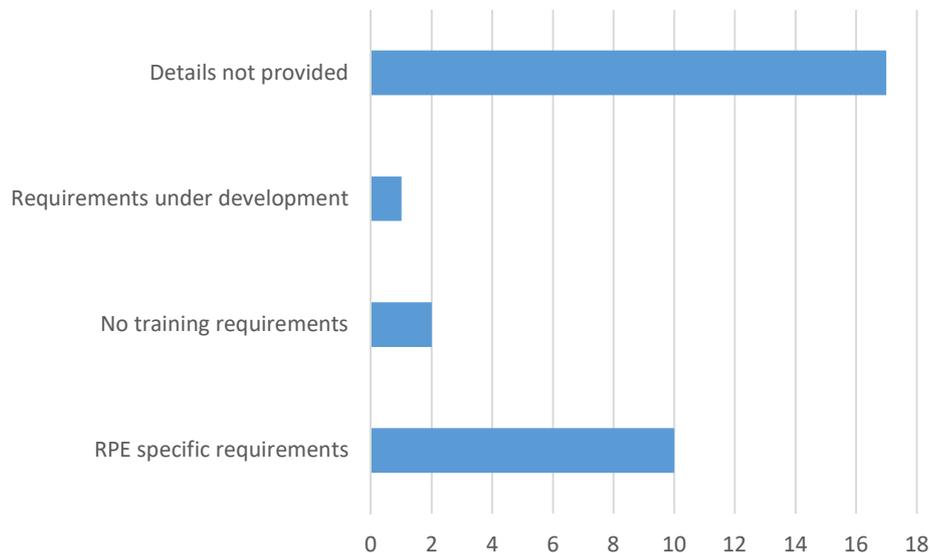


Figure 3: RPE training and re-training requirements in MSs

18 MSs require working experience for the (initial) recognition of the RPEs. More than 3 years of working experience is required in 9 MSs, while a shorter experience is required in 5 MSs.

Previous on the job training or mentoring is required only in 4 MSs. Nevertheless, the competence of the RPEs to provide advice on radiation protection matters is assessed in 7 out of the 29 MSs that submitted a CFS/questionnaire.

The validity period of the RPE recognition among the MSs is presented in **Figure 4**. In 15 MSs the RPE recognition is valid for a maximum of 5 years. After this period a re-recognition is required which is usually related to a re-evaluation process.

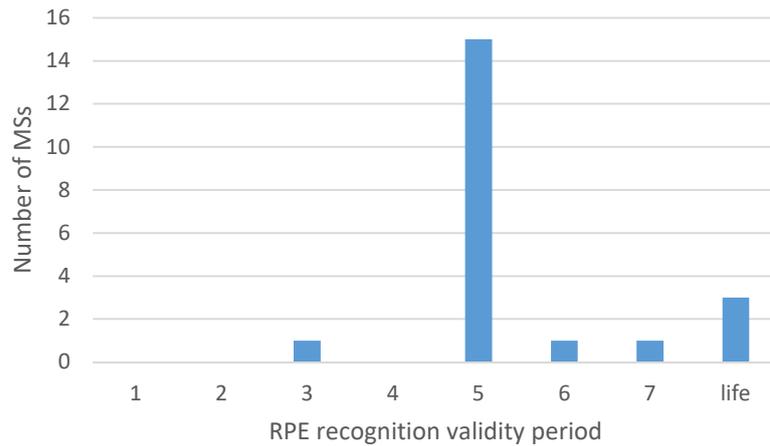


Figure 4: Validity period of RPE recognition in MSs

Finally, arrangements for the recognition of RPEs coming from other European countries are in place in 10 MSs (**Figure 5**).

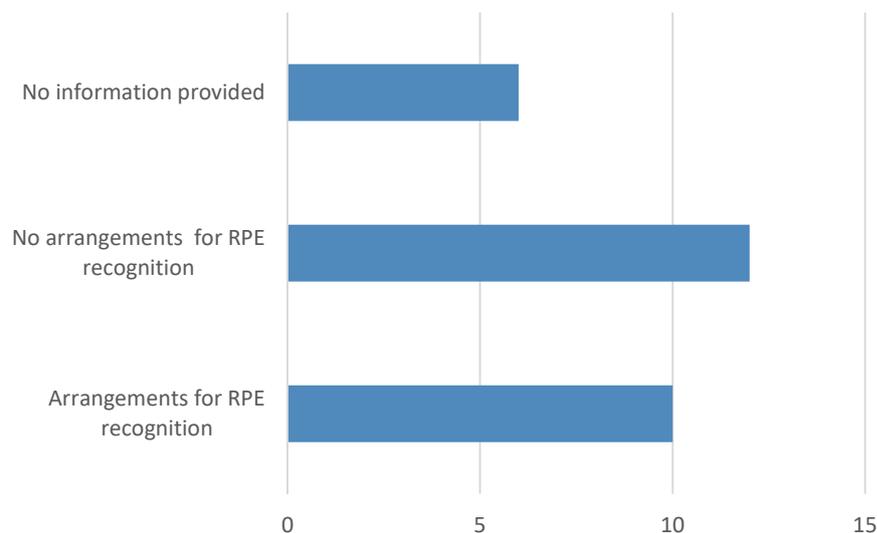


Figure 5: Number of MSs with arrangements for the recognition of RPEs from abroad

So far, the recognition of RPEs coming from other EU countries is not considered as a challenge by the MSs due to the limited number of relevant requests.

The number of RPO categories also varies among the MSs as presented in **Table 3**. In 10 of the MSs that submitted related information in the CFS/questionnaires there is only 1 RPO category, while the maximum number of RPO categories registered is 13.

Table 3: No of RPO categories in MS

| No of RPO categories | No of MS |
|----------------------|----------|
| 1 | 10 |
| 2 | 1 |
| 4 | 2 |
| 6 | 2 |
| 9 | 1 |
| 11 | 1 |
| 13 | 1 |

In 12 of the 29 MSs assignment of an RPO is based on a graded approach (**Figure 6**). That is, for very low/low risk applications the assignment of an RPO may not be required and thereafter the expected level of RPO involvement and required technical competence increases with increasing risk.

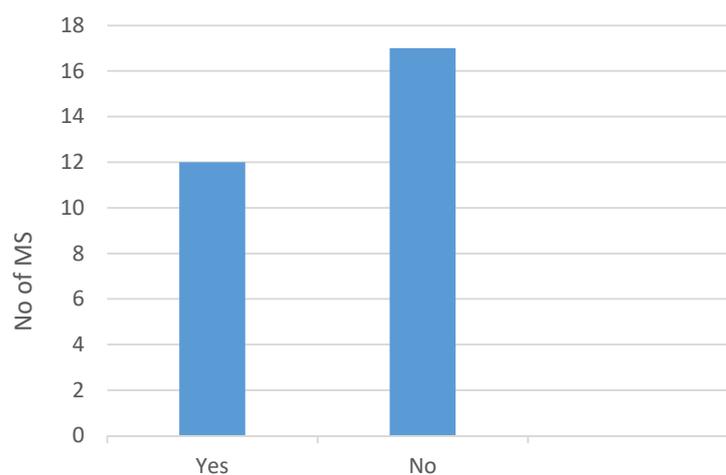


Figure 6: Number of MSs applying a graded approach in the RPO assignment

Additionally, the RPO shall be an employee of the organisation implementing practices with radiation sources in 15 MSs, while in 10 of them an external RPO may be used (**Figure 7**).

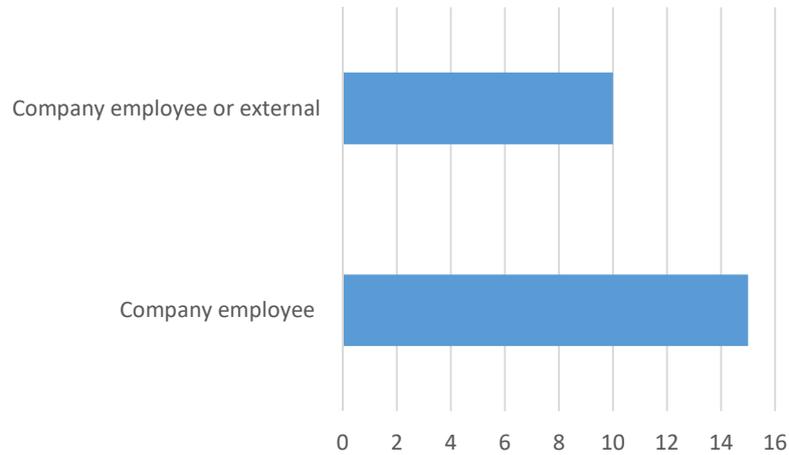


Figure 7: Type of RPO employment among MSs

Regarding the required RPO training and/or qualifications, a certification/approval scheme is in place in 18 out of 29 MSs. Moreover, the retraining of RPOs in a period of 5-7 years after certification/approval is a prerequisite for their re-certification/ approval in 10 MSs. In most of the MSs the training scheme should be approved by the national competent authority (**Figure 8**).

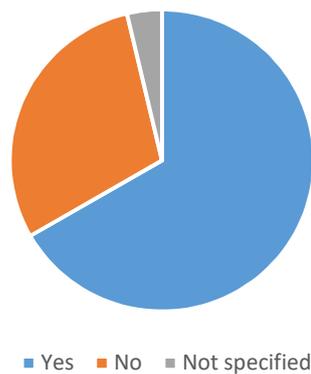


Figure 8: Requirements for RPO training approval in MSs

4. Conclusions

The concepts of RPE and RPO, as defined in the EU BSS, seem to be implemented in most of the European countries. Although, there are many similarities among MSs in the way the concepts are implemented, there are also areas where different approaches are followed (e.g. qualification, training requirements). A step forward might be to search for a common ground based on the competences of the RPEs and RPOs, since a harmonised recognition framework among MSs was proven difficult to achieve. Moreover, the HERCA WG E&T in Radiation Protection could develop a guidance document to assist MSs in their efforts for the mutual recognition of the RPEs and where appropriate the RPOs regardless of their approach in implementing these two concepts.

5. References

1. *European Commission. Council Directive 2013/59/Euratom of 5 December 2013 laying down basic safety standards for protection against the dangers arising from exposure to ionising radiation, and repealing Directives 89/618/Euratom, 90/641/Euratom, 96/29/Euratom, 97/43/Euratom and 2003/122/Euratom.*
2. *ENETRAP III. European Guidance on the Implementation of the Requirements of the Euratom BSS with respect to the Radiation Protection Expert and the Radiation Protection Officer, March 2016.*
3. *HERCA Working Group on Education and Training in Radiation Protection. HERCA Guidance, Implementation of Radiation Protection Expert (RPE) and Radiation Protection Officer (RPO) Requirements of Council Directive 2013/59/Euratom, November 2017.*