**ECRad Survey 2025**

**Questionnaire**

Ämilie L. Degenhardt1, Patrizia Kunert1, Viktoria Herzner2, Sehajpreet Gill3, Nazanin Love4,5, Jad Abuhamed6, Kim Sennhenn7, Warren A. John1 and Prabal Subedi1\*

1 Federal Office for Radiation Protection BfS, Ingolstädter Landstraße 1, 85764 Oberschleißheim, Germany

2 Austrian Agency for Health and Food Safety, Department for Technical Radiation Protection, Spargelfeldstraße 191, 1220 Vienna, Austria

3 Leibniz-Institut für Präventionsforschung und Epidemiologie BIPS, Achterstraße 30, 28359 Bremen, Germany

4 Research Group Environmental Economics, Center of Environmental Sciences, Hasselt University, 3590 Diepenbeek, Belgium

5 Belgian Nuclear Research Centre SCK CEN, 2400, Mol, Belgium

6 Tampere University, Kalevantie 4, 33100 Tampere, Finland

7 GSI Helmholtzzentrum für Schwerionenforschung GmbH, Planckstraße 1, 64291 Darmstadt, Germany

**\***corresponding author: psubedi@bfs.de

**Description of study**

Preserving competence in the field of radiation protection has been particularly challenging not just in Europe but throughout the world. As such, training, recruiting and maintaining personnel has led to frustration for both senior personnel, who incentivise careers in radiation protection, and for new recruits, who can find the field demanding or not as they expected.

To gauge opinion, an online survey was carried among early career scientists (including both researchers and professionals; ECRs) primarily but not limited to those employed in European radiation protection institutions. This was done to assess their level of engagement in various initiatives offered to ECRs and find out what motivates or hinders them to continue in radiation protection. The survey was carried out by members of the ECRad (Early Career in Radiation Protection) network, which is a network of ECRs in Europe established with the goal of expanding the professional horizons of ECRs by offering opportunities to connect with peers and experienced professionals from diverse backgrounds. ECRad also provides practical advice on career development, mentorship opportunities, and introductions to the various radiation protection networks active across Europe.

The survey was anonymous and therefore does not collect any personal information. However, where personal details are given by the respondents, the information has been redacted to maintain privacy. Furthermore, answers provided in the corresponding Excel spreadsheets have also been rearranged (i.e. not given in the order of submission) to avoid tracing back answers to any person or type of person. Responses were collected between 24February and 31 March 2025.

The survey starts out with gathering background knowledge of the respondent in the first three questions. Questions 4 through 8 gather insight on the respondent’s participation in various networks and initiatives for ECRs and asks for their evaluation of such initiatives. Questions 9 through 11 ask the respondent for their feedback on their career in radiation protection. Finally, questions 12 through 14 ask about their willingness to participate in a new network and their motivation and/or hindrance to doing so.

The survey design can be found below. The answers to each question can be found in the attached Excel files.

**Study Design**

Platform used: [www.tedme.com](http://www.tedme.com)

Duration of survey: 24.2.2025 – 31.3.2025

|  |
| --- |
| **General questions** |
| **Question 1** | **What is your line of work?** |
| Mandatory answer | Yes |
| Question type  | Single choice |
| Answer choices | Research / AcademiaIndustryMedical / ClinicalAuthority / RegulatorOther |
| Follow-up question 1 trigger | When “Other” is selected |
| Follow-up question 1 | **Please specify.** |
| Follow-up question 1 mandatory answer | No |
| Follow-up question 1 question type | Free-text |

|  |  |
| --- | --- |
| **Question 2** | **How old are you?** |
| Mandatory answer | Yes |
| Question type  | Single choice |
| Answer choices | Under 20 years old20 – 25 years old25 – 30 years old30 – 35 years oldOver 35 years old |
| Follow-up question | N/A |

|  |  |
| --- | --- |
| **Question 3** | **What is your level of experience?** |
| Prompt | Please select your current occupational level.  |
| Mandatory answer | Yes |
| Question type  | Single choice |
| Answer choices | Doing my BachelorsDoing my MastersPursuing a PhDJunior postdocSenior researcher / principal investigatorIndustry professionalOther |
| Follow-up question 1 trigger | When “Other” is selected |
| Follow-up question | **Please specify.** |
| Follow-up question 1 mandatory answer | No |
| Follow-up question 1 question type | Free-text |

|  |
| --- |
| **Initiatives in radiation protection field** |
| **Question 4** | **Are you part of any radiation protection network(s)?** |
| Prompt | E.g. EURADOS, ICRP, IRPA, MELODI, ALLIANCE, etc.  |
| Mandatory answer | Yes |
| Question type  | Single choice |
| Answer choices | YesNo |
| Follow-up question 1 trigger | When “Yes” is selected |
| Follow-up question 1 | **Please specify which one(s).** |
| Follow-up question 1 mandatory answer | Yes |
| Follow-up question 1 question type | Free-text |

|  |  |
| --- | --- |
| **Question 5** | **Do(es) the network(s) you are part of have an initiative for early career scientists / professionals?** |
| Prompt | None |
| Mandatory answer | Yes |
| Question type  | Single choice |
| Answer choices | YesNo |
| Follow-up question 1 trigger | When “Yes” is selected |
| Follow-up question 1 | **Please specify which initiative(s).** |
| Follow-up question 1 mandatory answer | Yes |
| Follow-up question 1 question type | Free-text |

|  |  |
| --- | --- |
| **Question 6** | **What does this initiative provide?** |
| Prompt | Please select as many as possible.  |
| Mandatory answer | Yes |
| Question type  | Multiple choice |
| Answer choices | mentorshipnetworkingtraining courseswebinarspeer supportsocial eventstravel grants / supportexchange visitsnoneother |
| Follow-up question 1 trigger | When “other” is selected |
| Follow-up question 1 | **Please specify.** |
| Follow-up question 1 mandatory answer | Yes |
| Follow-up question 1 question type | Free-text |

|  |  |
| --- | --- |
| **Question 7** | **If you have made use of / participated in any of these activities, please say which.** |
| Prompt | Please select as many as applicable. |
| Mandatory answer | Yes |
| Question type  | Multiple choice |
| Answer choices | mentorshipnetworkingtraining courseswebinarspeer supportsocial eventstravel grants / supportexchange visitsnoneother |
| Follow-up question 1 trigger | When “other” is selected |
| Follow-up question 1 | **Please specify.** |
| Follow-up question 1 mandatory answer | Yes |
| Follow-up question 1 question type | Free-text |

|  |  |
| --- | --- |
| **Question 8** | **What does your network lack in terms of your personal needs / expectations?** |
| Prompt | None |
| Mandatory answer | No |
| Question type  | Free-text |

|  |
| --- |
| ***Future of radiation protection*** |
| **Question 9** | **How do you feel about the future of radiation protection as a career?** |
| Prompt | None |
| Mandatory answer | Yes |
| Question type  | Free-text |

|  |  |
| --- | --- |
| **Question 10** | **Regardless of circumstances, would you like to continue working in radiation protection?** |
| Prompt | None |
| Mandatory answer | No |
| Question type  | Tendency |
| Answer option | Choosing on a scale from -100 to +100-100: *Not at all*; +100: *Very much* |

|  |  |
| --- | --- |
| **Question 11** | **How likely are you to continue working in radiation protection?** |
| Prompt | None |
| Mandatory answer | Yes |
| Question type  | Tendency |
| Answer option | Choosing on a scale from -100 to +100-100: *Not at all*; +100: *Very much* |
| Follow-up question 1 trigger | If selected value is less than 10 |
| Follow-up question 1 | **What is hindering you from staying in the field of radiation protection?** |
| Follow-up question 1 question type | Multiple choice |
| Follow-up question 1 mandatory answer | Yes |
| Follow-up question 2 trigger | If “other” is selected in follow-up question 1. |
| Follow-up question 2 | **Please specify if possible.** |
| Follow-up question 2 mandatory answer | No |
| Follow-up question 2 question type | Free-text |
| Follow-up question 1 trigger | If selected value is more than 20 |
| Follow-up question 3 | **What incentives motivate you to stay in the field?** |
| Follow-up question 3 question type | Multiple choice |
| Follow-up question 3 mandatory answer | Yes |
| Follow-up question 4 mandatory answer | No |
| Follow-up question 4 trigger | If “other” is selected in follow-up question 3. |
| Follow-up question 4 | **Please specify.** |
| Follow-up question 4 mandatory answer | No |
| Follow-up question 4 question type | Free-text |

|  |
| --- |
| ***New Network*** |
| **Question 12** | **Do you think a new network is needed for early career scientists / professionals?** |
| Prompt | Please consider ECRad as a new network. |
| Mandatory answer | Yes |
| Question type  | Single choice |
| Answer choices | YesNoNot sure |
| Follow-up question 1 trigger | If “Yes” is selected in follow-up question 3. |
| Follow-up question 1 mandatory answer | No |
| Follow-up question 1 | **Why do you think so?** |
| Follow-up question 1 question type | Free-text |
| Follow-up question 2 trigger | If “No” is selected in follow-up question 3. |
| Follow-up question 2 mandatory answer | No |
| Follow-up question 2 question type | Free-text |

|  |  |
| --- | --- |
| **Question 13** | **What do you expect from a new Europe-wide radiation protection network for early career scientists / professionals?** |
| Prompt | None |
| Mandatory answer | No |
| Question type  | Free-text |

|  |  |
| --- | --- |
| **Question 14** | **If a new network such as ECRad were to be formed, how likely are you to be actively involved?** |
| Prompt | None |
| Mandatory answer | Yes |
| Question type  | Tendency |
| Answer option | Choosing on a scale from -100 to +100-100: *Very unlikely*; +100: *Very likely* |
| Follow-up question 1 trigger | If selected value is less than 40 |
| Follow-up question 1 mandatory answer | No |
| Follow-up question 1 | **Please say what hinders you from being involved.** |
| Follow-up question 1 question type | Free-text |