



Meeting of Senior Representatives of Organisations in Formal Relations with ICRP on 2 June 2021

Role of the European ALARA Network in the revision of the System of Radiological Protection

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Introduction

ICRP has taken on the task to carry out an extensive review of the System of Radiological Protection, leading to the publication of the next fundamental recommendations. This decade-long process will require collaboration with several organisations to capture new science, new priorities, and new domains of radiological protection. In this context the organisations in formal relations with ICRP were contacted to identify what role they might play in the review and revision of the System of Radiological Protection.

The European ALARA Network (EAN) responds to this request in identifying its possible contribution in the review in the field of the practical implementation of the optimisation principle, reasonableness and acceptability.

The principle of optimisation is seen as the cornerstone for the practical implementation of the radiological protection system and states that exposures to ionising radiation must be kept as low as reasonably achievable (ALARA) taking into account societal and economic factors.

The EAN, created in 1996, and, now on the eve of its 25th anniversary, is a platform that promotes the implementation of the ALARA principle for occupational, public and patient exposure in all exposure situations. In its more than 24 successful years of operation the network has proven to be a sustainable and valuable organization contributing to the promotion and the practical implementation of ALARA through the exchange of practical experience in the different domains.

How can the European ALARA Network contribute?

As discussed in the introduction, the activities of the ALARA network involve the gathering and processing of international and national information from member countries on radiation protection and the practical implementation of the ALARA principle. This is done through the organisation of workshops, surveys and of course through networking with other organisations.

Working groups are another way of gathering and processing information on the practical implementation of the ALARA principle in certain subject areas. These working groups gather information and prepare deliverables in the form of recommendations, overview or guiding documents on the subject at hand. They

are created on requests from external organisations or on the initiatives of EAN members. Some examples are, for instance, the working group on radon who prepared a statement on radon to be discussed with ICRP. The working group on ALARA culture prepared a generic paper on the subject that was presented at the IRPA 13 congress in Glasgow in 2012. The same working group continued further to prepare an update of the book “ALARA from theory to practice”, entitled “Optimisation of radiation protection (ALARA): a practical guidebook” that is now available on the EAN website¹ gathering significant experience and views on ALARA in the different exposure situations.

In 2019-2020, a EAN working group investigated the topic of the “graded approach” at the workplace – a topic recently introduced in ICRP Publications (ex. Publication 126, Publication 132). The Working group results can be of support in the preparation of next ICRP General Recommendations.

Specific working groups could be established on topics proposed by ICRP in the review of the System of Radiological Protection.

ALARA Workshops

The EAN organises regular workshops in different subject areas regarding ALARA. The topics are chosen by the EAN steering group based on an evaluation of possible improvements of practical ALARA in these areas. These workshops, attended in general by 60 to 120 experts from different countries and different professional backgrounds with experience in radiological protection, are ideally suited to discuss practical issues with respect to the implementation of ALARA. **They can be a valuable source of information in the review of the System of Radiological Protection and its practical application.**

Surveys

Another tool at the disposal of the EAN are the surveys on current topics in radiological protection. EAN surveys have proven successful to assess the practical implementation of concept in the European context. It can also be reminded that the results of a EAN survey (about the exposure of aircraft crew) was used in ICRP Publication 132 to set the value of reference levels compliant with the real situation and to propose relevant and achievable radiation protection actions.

It is clear that this tool can also be of value in the review of the System of Radiation Protection, focussed on the ALARA principle, reasonableness and acceptability.

Newsletter

The EAN newsletter is also a tool available to disseminate information and discussion results to the stakeholders in optimization during the revision of the System of Radiological Protection.

¹ Optimization of Radiation Protection - ALARA: A Practical Guidebook (.pdf, 4.5 Mo), ISBN: 978-2_9569796-0-9 © 2019, The European ALARA Network Edition.



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New challenges

The EAN reflected on its activities and on the current RP-landscape to develop its strategic agenda for the coming years. This reflection has led the EAN to include the following key ALARA themes in the strategic agenda for 2021-2026.

In the medical field, attention will be given to interventional radiology, new imaging techniques and the production and safe use of new radiopharmaceuticals, with special attention to exposure situations involving alpha exposure.

In the nuclear industry, research and the medical field EAN will focus on a further harmonization of practices in the implementation of the ALARA principle. This will support the ongoing focus of maintaining and further developing knowledge and skills in these fields.

Attention will be given to the practical implementation of the ALARA principle in the context of the 'all hazards' approach in prevention and exposure management.

Conclusion

The EAN is prepared to support the ICRP in its review of the current System of Radiological Protection in the field of the practical implementation of the optimisation principle, reasonableness and acceptability and also help in the tuning of the next Recommendations, based on the data and experience from the field.

This can be done by activating the tools at the disposal of the network such as working groups, workshops, surveys, newsletters on specific topics proposed by, or in coordination with, ICRP. All in all, a privileged connexion with ICRP Committee 4 can be established.