



IAEA

International Atomic Energy Agency
Atoms for Peace and Development



Occupational Radiation Protection Networks (ORPNET)

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Radiation Safety & Monitoring Section, NSRW

ORPNET

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Occupational Radiation Protection Network (ORPNET)

■ Networks

The Occupational Radiation Protection Network (ORPNET) is a web-based network that promotes the optimization of occupational radiation protection. It provides comprehensive information about worldwide, regional and national networks and systems related to the radiation protection of workers, and it enables participating networks to cooperate with each other. Information about upcoming meetings, new publications, joint projects, posters and other related news is also featured.

Through ORPNET, participants share good practices and facilitate the implementation of radiation protection measures that make exposure as low as reasonably achievable - a principle known by its abbreviation ALARA. The network also supports experience exchange and aims to enable users to ensure that activities at the national and international level complement each other.

Exposure of workers to radiation can occur as a result of various human activities, including work associated with the nuclear fuel cycle, the use of radioactive sources and X-ray machines in medicine, scientific research, agriculture and industry. Workers who handle materials containing enhanced concentrations of naturally occurring radionuclides also can be exposed. Adequate radiation protection of workers is essential.

ORPNET was established in 2010, as a result of an IAEA and International Labour Organization Action Plan that had been created following a request in a resolution adopted at the 2002 IAEA General Conference. The resolution took into account the findings and recommendations from the first International Conference on Occupational Radiation Protection, held in 2002.

Two worldwide networks, the International System on Occupational Exposures (ISOE) and the International System on Occupational Exposure in Medicine, Industry and Research (ISEMIR) are part of ORPNET, as are regional networks including the European ALARA Network (EAN), the European ALARA Network for Naturally Occurring Radioactive Materials (EAN NORM) and the European Medical ALARA Network (EMAN).

Other participants include regional networks originally set up by the IAEA, including Regional European and Central Asian ALARA Network, the Asian ALARA Network (ARAN) and the Network to Optimize Occupational Radiological Protection in Latin America (REPROLALAM).

ORPNET was further developed and adapted in line with discussions at the 2012 and 2014 International and Regional ALARA Networks Coordination Meetings, and at a side-event of the second International Conference on Occupational Radiation Protection, held in 2014.

Publications

7 April 2020
Occupational Radiation Protection in the Uranium Mining and Processing Industry

12 October 2018
Radiation Protection and Safety in Medical Uses of Ionizing Radiation

ORPNET What is ORPNET? Worldwide Networks Regional Networks Additional Resources Training

Home



News

New Vacancy Announcements

The Division of Radiation, Transport, and Waste Safety (NSRW) at IAEA is seeking the new Radiation Safety and Monitoring Programme Officers.

New vacancy announcement for the fixed term contract >>

New vacancy announcement for the short term contract >>

The 5th EURADOS webinar: Dosimetry for Workplace and Environmental Radiation Monitoring

The Webinar will provide an overview on the situation of passive dosimetry systems used for environmental radiation monitoring in Europe, covering the majority of the European countries. The results of the intercomparisons on the calibration methodologies will also be presented.

The webinar will take place on **9 June 2021 at 3.30 pm CET**.

Register here >>

IAEA publishes new TECDOC on Occupational Radiation Protection during the Decommissioning of Nuclear Installations

This IAEA technical publication entitled Occupational Radiation Protection during the Decommissioning of Nuclear Installations covers the main aspects of management, planning and conduct. It presents practical information on occupational radiation protection and examples with good practices from the nuclear industry on how to comply with the requirements established in IAEA Safety Standards Series No. GSR Part 3, Radiation Protection and Safety of Radiation Sources: International Basic Safety Standards, within the context of decommissioning activities.

Taking account of the fact that over 70% of the world's nuclear reactors are to be decommissioned by 2040, this publication can be used in the planning of new decommissioning projects and for improvements in the implementation of existing decommissioning projects. Useful input for licensing and supervision of decommissioning projects are also provided.

Read more >>

IAEA news: More than 300 users worldwide sign up across two new ORP online courses

More than 300 users worldwide have already signed up to two new e-learning courses on radiation protection of workers, recently launched by the IAEA. Occupational Radiation Protection based on General Safety Guide No. GSG-Tand Management and Control of Naturally Occurring Radioactive Material (NORM). The material focuses on how to further strengthen worker protection and occupational exposure control, and provides guidance on monitoring and recording methodologies.

"The courses contain practical examples drawn from occupational radiation protection related requirements of IAEA General Safety Requirements GSR Part 3 and are tailored to the needs of employers, licensors and registrants; management bodies and their specialist advisers and health and safety committees concerned with the radiation protection of workers," said Burcin Olayar, IAEA Radiation Safety Specialist and the Technical Officer responsible for the development of courses.

Resources

- Latest newsletter
- Workers in perspective
- How can workers be protected from natural radiation? (VIDEO)
- How can workers be protected from natural radiation? (PHOTO ESSAY)
- The Information System on Occupational Exposure in Medicine, Industry and Research (ISEMIR)
- Occupational Radiation Protection Appraisal Service (ORPAS)
- Publications
- Posters
- ORP Webinars
- Personal Online Dosimetry Using computational Methods (PODUM)
- Dose management system (DMS)

Register for ORPNET

Events & Meetings

IAEA Technical Meeting on the Assessment and Evaluation of the Occupational Radiation Protection Appraisal Service

25 YEARS OF NORM SYMPOSIUM
FUTURE: RESIDUES APPLIED IN A CIRCULAR ECONOMY

First announcement >>
Event flyer >>
Website >>

More events >>

<https://nucleus.iaea.org/sites/orpnet/home/SitePages/Home.aspx>

<https://www.iaea.org/services/networks/orpnet>

Occupational Radiation Protection Action Plan

- The first International Conference on Occupational Radiation Protection (2002) hosted by the Government of Switzerland, held in Geneva
- September 2002, IAEA General Conference, request for the IAEA's Director General, in co-operation with the ILO and other relevant bodies, to formulate and implement an Action Plan
- Steering Committee with the overall remit to advise on, monitor, and assist in the practical implementation of the Action Plan
- Participants: Representatives of a number of interested MSs and interested IOs including employers' and workers' organizations

Actions

- Actions for strengthening ORP worldwide are grouped according to nine areas that provide a logical division of tasks to be carried out:
 - Promoting and servicing the Radiation Protection Convention, 1960 (No. 115)
 - Co-operation between the IAEA and ILO in reaching developing countries
 - Establishment of occupational safety standards and development of supporting
 - Support for strengthening regulatory infrastructures
 - Peer review missions to appraise occupational radiation protection
 - Intercomparisons of monitoring methods for assessing occupational exposure
 - Promotion of information exchange
 - Exposure to enhanced natural radiation in the workplace
 - Promotion of a holistic approach to workplace safety
 - Formulation and application of standards for the protection of pregnant workers and their embryos and foetuses
 - Education and training

Initiation – web site

- As an outcome of the IAEA/ILO International Action Plan on Occupational Exposure, **the Occupational Radiation Protection Networks website** has been established in 2010 as a shared platform providing perspective for improving occupational radiation protection worldwide
- Development and progress of ORPNET was discussed during the International and Regional ALARA Networks Coordination Meetings, which were organized by the IAEA in 2012 and 2014 and contributed by the representatives of international and regional networks

ORPNET, in principal

- ORPNET is a web-based network with an ultimate goal to **promote optimization of the occupational radiation protection**.
- It acts as a **focal point** for the occupational radiation protection providing:
 - comprehensive knowledge about worldwide
 - regional and national networks and systems for radiation protection of workers
 - ORPNET spreads good practices, facilitates ALARA (optimization) implementation, supports experience exchange, and aims to prevent any overlap of activities at the national and international level



International Networks on Occupational Radiation Protection

Why are they important?

Networks on occupational radiation protection provide an effective forum for different sectors and regions, even those worldwide, for the exchange of valuable information and experiences. The objective of the current international networks on occupational radiation protection is to maintain, enhance and develop competences and skills in radiation protection, with special emphasis on the implementation of the 'as low as reasonably achievable' (ALARA) principle for occupational exposures in routine operations.

What do I need to know?

International networks on occupational radiation protection

ORPNET: Occupational Radiation Protection Networks

The IAEA launched a web site for Occupational Radiation Protection Networks (ORPNET) in 2010 to link the existing networks and to promote their achievements. ORPNET is a requested action under the IAEA-ILO International Action Plan on Occupational Exposure. It aims to provide a focal point for communication and an exchange of information on occupational radiation protection through networking.

ISOE: Information System on Occupational Exposure

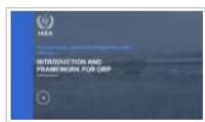
ISOE supports the optimization of worker radiological protection in nuclear power plants through a worldwide information and experience exchange network. The system covers more than 90% of the world's nuclear power plants. ISOE is jointly supported by OECD/NEA and IAEA. There are four technical centres: Europe, Asia, North America and the IAEA for the daily operation of this system.

ISEMIR: Information System on Occupational Exposure in Medicine, Industry and Research

The IAEA launched ISEMIR to improve occupational radiation protection in medicine, industry and research. ISEMIR contributes to minimizing the likelihood of accidents by identifying accident precursors and sharing user feedback and experiences. It assists the users in benchmarking their arrangements in radiation protection and safety, and hence in promoting the implementation of optimization of occupational radiation protection.

ORPU / ORPNET- New

IAEA launches new online training course in occupational radiation protection



The IAEA has released new training material on occupational radiation protection. The material is based on GSG-7, which provides general guidance on the development of occupational radiation protection programmes in accordance with the requirements of GSR Part 3, and addresses the sources of radiation likely to be encountered in workplaces.

The course is publicly available in English within the IAEA's learning management system.

[View the course >>](#)

Occupational Radiation Protection based on General Safety Guide No. GSG-7



The purpose of this course is to increase understanding of the occupational exposure control requirements contained in GSR Part 3 and how these safety standards fit within the IAEA Safety Standards hierarchy. Participants will learn how to fulfil the requirements of GSR Part 3 with respect to occupational exposure and GSG-7 recommendations relating to planned, existing and emergency exposure situations for occupational exposure.

The course contains 10 modules and covers:

- Framework for occupational radiation protection;
- Exposure of workers in different exposure situations;
- Monitoring and recording;
- Assessment of occupational exposures;
- Management system for service providers;
- Occupational exposure control measures;
- Protection of workers in special cases
- Workers' health surveillance.

This e-learning course was funded under the IAEA Regional Technical-Co-operation Project on Enhancing National Capabilities on Occupational Radiation Protection in Compliance with Requirements of the International Basic Safety Standards (RAS/9/080).

<https://elearning.iaea.org/m2/>

IAEA launches second online training course in occupational radiation protection



The course entitled Management and Control of Naturally Occurring Radioactive Material (NORM) provides guidance based on GSG-7 on fulfilling the requirements of GSR Part 3 with respect to worker protection in industrial processes/operations involving NORM. The course includes 15 modules, takes around 7 hours to complete and offers guidance on: regulatory control (focusing on the application of a graded approach); the characterization of NORM and the assessment of exposures; and the transport of NORM.

Before taking this course, participants are advised to complete the training on [Occupational Radiation Protection based on General Safety Guide No. GSG-7](#).

The course is publicly available in English within the IAEA's learning management system and offers a certificate of completion.

[View the course >>](#)



Home > Courses > Nuclear Safety & Security > Nuclear Safety > Occupational Radiation Protection > Management and Control of Naturally Occurring Radioactive Material (NORM)

Enrolment options

Management and Control of Naturally Occurring Radioactive Material (NORM)



Natural resources that are extracted from the ground such as coal, oil, natural gas and other mineral ores contain various amounts of natural radioactivity. When these resources are extracted and processed, their natural state can be modified which may result in the enhancement of the natural radioactivity content originally present. Such enhancements may be observed in the residues or the waste created and/or in the products or by-products and are sometimes high enough to pose a risk to workers, members of public and the environment if they are not controlled properly. Materials of this kind are commonly referred to as Naturally Occurring Radioactive Material or NORM.

The International Basic Safety Standards (GSR Part 3) establishes requirements for industrial activities involving NORM. For the application of the IAEA Safety requirements on NORM activities, consideration needs to be given to radiation protection of workers, the public and the environment for a wide range of industrial activities on a global basis.

This e-learning course provides guidance based on GSG-7 on fulfilling the requirements of GSR Part 3 with respect to worker protection in industrial processes/operations involving NORM.

The course includes 15 modules and covers:

- Overview of natural radionuclides and NORM;
- Overview of the industrial activities involving NORM and an indication of those that are most likely to require regulatory consideration;
- Guidance on regulatory control (focusing on the application of a graded approach);
- Radiation protection issues for workers and the public associated with materials containing NORM;
- Guidance on the characterization of NORM and the assessment of exposures;
- Guidance on the management of NORM residues and the disposal options for NORM wastes;
- Guidance on the transport of NORM.

This e-learning course was funded under the IAEA Regional Technical-Co-operation Project on Enhancing National Capabilities on Occupational Radiation Protection in Compliance with Requirements of the International Basic Safety Standards (RAS/9/080).

Before taking this course, participants are advised to complete the training on [Occupational Radiation Protection based on General Safety Guide No. GSG-7](#).

Development and release of the Dose Management system



- A new Dose Management System (DMS) for the Member States has been released by the IAEA and detailed information is available at ORPNET.
- The DMS provides a tool for dose information management in the dosimetry service laboratories.
- Member States can get the system through official channel after signing the Acceptance Form
- The DMS has been released to about 20 Member States.

ORPNET – house for global surveys

Occupational Radiation Protection NETWORKS

News

IAEA questionnaires on occupational exposures to NORM in the water supply and treatment industry



The Information System on Occupational Exposure in Medicine, Industry and Research has been developed by the International Atomic Energy Agency (IAEA) to enable the assessment of the impact of various radiation protection actions in different facilities and activities and forms a database containing detailed information on operational occupational doses for comparison and benchmarking of doses for specific occupations, functions and tasks and has been extended for industrial processes involving naturally occurring radioactive material (ISEMIR-N).

In response to the IAEA General Conference Resolution GC(64)/RES/9, requesting the Secretariat to strengthen their capabilities for the realistic assessment of radiological impacts of material containing enhanced levels of NORM, the IAEA has launched a global survey specific to the water supply and treatment industry as a part of ISEMIR-N.

The questionnaires are available for download in six languages and should be completed and returned by email to ISEMIR-N.Contact-Point@iaea.org. Online versions are available in English for [operators](#) and [regulatory bodies](#). Deadline: **15 March 2021**.

NORM questionnaires

IAEA global questionnaire on occupational exposures to NORM in the water supply and treatment industry. All operators and regulatory bodies are invited to submit their information by 15 March 2021.

Questionnaire for operators to download:

Arabic
Chinese
English (online version)
French
Russian
Spanish

Questionnaire for regulatory bodies to download:

[Letter to Head of Regulatory Authority >>](#)

Arabic
Chinese
English (online version)
French
Russian
Spanish



ORPNET – web-based networks – promotes optimization of occupational radiation protection. The newsletter brings you updates on radiation protection of workers from worldwide, regional and national networks and systems in this area.

News – April 2021



New IAEA online course on Occupational Radiation Protection

Training on the occupational exposure control requirements contained in IAEA International Basic Safety Standards (BSS Part 3)



New IAEA online course on Naturally Occurring Radioactive Material

Course based on IAEA General Safety Guide (No. GSG-7) on fulfilling the worker protection requirements of BSS Part 3



NORM X symposium 5–13 May 2022, Utrecht

The 11th International Symposium is entitled '20 years of NORM Symposium: Future: realising applied to a circular economy'



AFAN-IAEA webinars 14 and 26 April 2021, 9am GMT

Two good webinars on 'radiation protection optimization in industrial radiography' and 'collective dose practice in industrial radiography'



News: IAEA chairs Inter-Agency Committee on Radiation Safety

The committee will set out its main priorities for the next 18 months towards the harmonization of guidance on radiation safety

Newsletter

Upcoming events

IAEA Technical Meeting on the Assessment and Evaluation of the Occupational Radiation Protection Appraisal Service (ORPAS)

ORP Webinars

- Family member of RSM/NSRW Radiation Protection Webinars
 - Radiation Protection of the Public
 - Radiation Protection of Patients
 - **Radiation Protection of Workers**
- ORP Webinars
 - RP professionals, regulators, employers, operators, workers, worker representatives, qualified experts, licensees/registrants, technical service providers for protection and safety, industrial operators of processes involving NORM & national and local government representatives



Participate in our free webinars on occupational radiation protection topics. Leading experts in the field share their knowledge and expertise on the safe and acceptable use of radiation in a range of industries, medical institutions, educational and research establishments, and nuclear fuel cycle facilities to ensure adequate radiation protection of workers in a regular webinar series.

What is a webinar?

A webinar is a live interactive seminar transmitted over the Web, allowing for remote attendance of many participants using their own computers or mobile devices. In addition to the listening and viewing of the presentation, participants have the opportunity to submit their questions or comments in real time.

Recordings are available after every broadcast.

Who may attend?

Radiation protection professionals, operators, health care workers, technical service providers for protection and safety, industrial operators of processes involving naturally occurring radioactive material (NORM) and national and local government representatives are invited to join our free webinar series on occupational radiation protection.

How to attend?

Click on an upcoming webinar for more information and a registration link. See guidance on how to join webinars »

Search interface for ORP Webinars. Includes filters for Type, Year, and a search bar. Below are six featured webinar thumbnails with titles and dates:

Thumbnail	Title	Date
	Tips and tricks for the practice of internal dosimetry in occupational radiation protection	19 October 2020
	Artificial intelligence & virtual reality: How to enhance radiation protection of workers and the future of workplace safety	22 July 2020
	Individual monitoring with radiophotoluminescence (RPL) passive integrating dosimeters	24 June 2020
	Continuity in COVID-19 pandemic: How to run effective technical services for individual monitoring during a pandemic	27 May 2020
	COVID-19 and Health Workers: Radiation Protection	22 April 2020
	ISMERAR: Online database for radiation protection optimisation in industrial radiography	28 January 2020

<https://www.iaea.org/topics/radiation-safety/webinars>

COVID-19 and Health Workers: Radiation Protection

22 April 2020 - <https://www.iaea.org/resources/webinar/covid-19-and-health-workers-radiation-protection>

Technical Officer: Burçin Okyar, H.B.Okayar@iaea.org

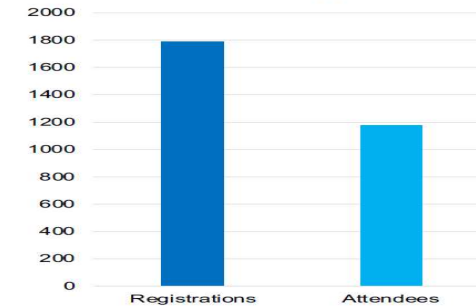


A healthcare worker in PPE. (Photo: Banu Atalar/Acibadem Maslak Hospital)



1790 Registrations
1181 Attendees
66% attendance rate

Registrations and Attendees



Learning Objectives:

- ✓ Strategies to work safely while under stress without jeopardizing radiation protection and safety
- ✓ Arrangements to protect health workers using radiation sources for COVID-19 infections
- ✓ Arrangements for facilities converted into pandemic hospitals
- ✓ Difficulties faced by health workers when using of personal protective equipment (PPE) to avoid COVID-19 infections and reuse of PPEs
- ✓ Projections for possible dose increase for workers due to an extended screening

COVID-19 and Health Workers: Radiation Protection

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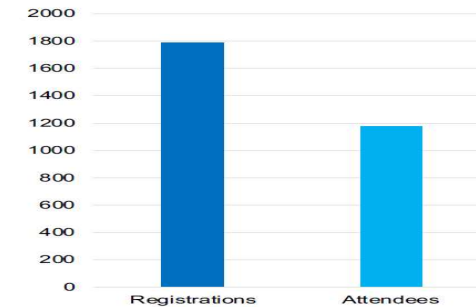


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Continuity in COVID-19 Pandemic: How to Run Effective Technical Services for Individual Monitoring During a Pandemic

27 May 2020 - <https://www.iaea.org/resources/webinar/continuity-in-covid-19-pandemic-how-to-run-effective-technical-services-for-individual-monitoring-during-a-pandemic>

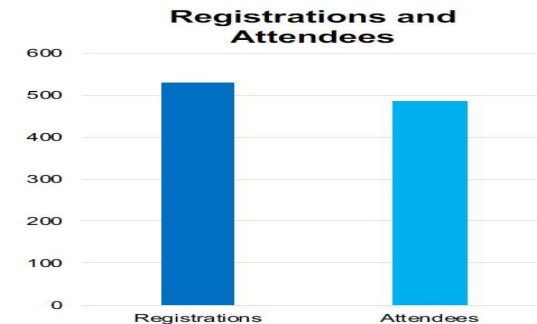
Technical Officer: Burçin Okyar, H.B.Okyar@iaea.org



A radiation dosimeter used for individual monitoring in IAEA laboratories. (Photo: D. Calma/IAEA)



530 Registrations
487 Attendees
92% attendance rate



Learning Objectives:

- ✓ Adoption of the IAEA GSR Part 3 requirements and GSG-7 guidance for technical service providers during the current COVID-19 pandemic
- ✓ The European Radiation Dosimetry Group (EURADOS) recommendations for technical service providers to deal with the COVID-19 pandemic
- ✓ Strategies for practical implementation by service providers
- ✓ Experience of the IAEA Radiation Safety Technical Services

Continuity in COVID-19 Pandemic: How to Run Effective Technical Services for Individual Monitoring During a Pandemic

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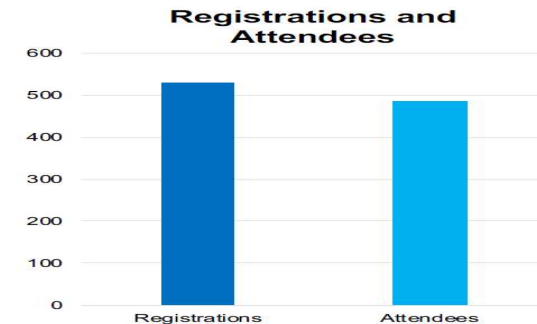
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A radiation dosimeter used for individual monitoring in IAEA laboratories. (Photo: D. Calma/IAEA)



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EAN in the ORPNET



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Search this site 

The European ALARA Network (EAN)

History

The European ALARA Network (EAN) was established in 1996 by the European Commission. In June 2005, after 9 years spent within the scope of the European Commission research programs, EAN became self-sustainable. It was registered as a legal entity under French law in July 2005 as a non-profit making association.

Objectives

- To promote a wider and more uniform implementation of the ALARA principle for the management of public, patient and worker's exposures.
- To provide a focus and a mechanism for the exchange and dissemination of information from practical ALARA experiences and good radiation protection practice.
- To identify and investigate topical issues of common interest to further improve the implementation of ALARA.

Management

EAN has a Steering Group consisting of organizations from 20 different European countries, which have signed the EAN "Terms and Conditions". The budget of the network is managed by an Administrative Board, composed of Members financially supporting EAN. The technical and administrative management of the network is organised by a Coordination Team, composed of CEPN (France) and HPA (UK) staff members.

The countries represented in EAN are the following: Austria, Belgium, Croatia, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, the Netherlands, Norway, Portugal, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

Main activities

Workshops

Topical ALARA Workshops are organised at least every 18 months on challenging ALARA issues. For example: "ALARA and decommissioning" (1st Workshop, 1997), "Industrial radiography: improvements in radiation protection" (5th Workshop, 2001), "Occupational exposure to natural radiation" (9th Workshop, 2005), "ALARA in safety and security of radioactive sources" (12th Workshop, 2009), "ALARA in the medical sector" (13th Workshop, 2011).

Newsletter

Since 1996, the European ALARA Newsletter has been published twice a year

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Newsletter

Since 1996, the European ALARA Newsletter has been published twice a year

Website

www.eu-alara.net

Forum

The EAN Forum is a mailing-list, which allows participants to post questions and requests for information, undertake reviews and surveys, and exchange information. Topics have included: the implementation of European BSS in national regulations; Diagnostics Reference Levels in Europe; and national policies to manage radon.

European sub-networks and working group

EAN sub-network on research reactors (2002 - not active at the moment)

ERPAN - European Radioprotection Authority Network: for regulatory authority inspectors (2005) EAN Working group on ALARA culture (2009)

For more information, please go to the EAN website

ARAN in the ORPNET

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Asia and the Pacific Regional ALARA Network (ARAN)

[African Alara Network \(AFAN\)](#)

[Asian Radiation Dosimetry Group \(ARADOS\)](#)

[Asian Network of Cardiologists in Radiation Protection](#)

[Asian Nuclear Safety Network \(ANSN\)](#)

[Asia and the Pacific Regional ALARA Network \(ARAN\)](#)

[Coordination of Regional Networks \(CoRPAR\)](#)

[The European ALARA Network \(EAN\)](#)

[The European NORM Association \(ENA\)](#)

[The European Medical](#)

History

The Asia Region ALARA Network (ARAN) was initiated by the IAEA in Daejeon, Republic of Korea in December 2007, to support the development of a sustainable regional network, which facilitates information, findings and data exchange and practical and cost effective implementation of the principle of optimisation of radiation protection in participating countries.

Objectives

To maintain, enhance and develop competence and skills in radiation protection, with special emphasis on the implementation of the ALARA principle for occupational exposures in routine operations, contribute to the harmonisation of objectives, standards and practices, particularly concerning ALARA, within participating countries and contribute to the effective use, exchange and integration of skills and expertise across Member States.

Management

ARAN is coordinated by Steering Committee, IAEA and Regional Cooperative Agreement (RCA), comprising representatives of 17 countries: Australia, Bangladesh, China, India, Indonesia, Japan, Rep of Korea, Malaysia, Mongolia, Myanmar, New Zealand, Pakistan, Philippines, Singapore, Sri Lanka, Thailand and Viet Nam.

Products

[Workshops](#)

Once a year; a few tens of participants; an exchange of experiences leading to sets of recommendations.

[Website](#)

[ARAN Website](#)

- VIRTUAL RECOORDINATION MEETING OF ASIA AND THE PACIFIC REGIONAL ALARA NETWORK, 6 May 2021
- CIRP leads
- Representatives from 16 MSs
- Invited networks: AFAN, ARADOS, RCA and EAN
- Draft TOR agreed
- Acting Steering Committee established
- Virtual Management Board meeting to be organized in 2021 (or 2022 in connection with regional projects)

The Regional East European and Central Asian ALARA Network (RECAN)

History

RECAN starts with history of Central and east European ALARA Network (CEEAN) initiated by IAEA 2002. CEEAN was an important stage in creation of RECAN for many reasons: it proved that networking might be living and useful, raised an interest to such kind of information exchange.

Objectives

The objectives of this RECAN was to support the development of a sustainable regional network, which facilitates information exchange and an integrated approach to practical and cost-effective implementation of the principle of optimization of radiation protection, the As Low As Reasonably Achievable (ALARA) principle, in participating Member States.

The main outputs of the RECAN will consist of the organization of workshops, publication of a Newsletter and exchange of information through a dedicated website. Links will be also provided to other networks covering many radiation protection areas

Management

RECAN operates under the control of a Steering Committee (RECAN SC) which consists of at least 6 members elected by the national representatives, the coordinator of RECAN, one representative of the IAEA, one representative of the EAN and the national representative from the host country of the next workshop. The network recently consists of more than 20 countries from Eastern and Central Europe and Central Asia.

Products

Workshops

Once a year, the RECAN Steering Committee organizes a Workshop with the support of IAEA.

Newsletter

Newsletter is published once a year with the idea to provide a link among all those concerned with ALARA in the region and elsewhere. It includes articles, expert viewpoints, ALARA information, comments and news.

Website

<http://recan.webplus.net/>

For more information, please go to the RECAN website

- No activity since 2015, registered in Lithuania

LOGO

RECAN

Program Mission Statement

The Regional European and Central Asian ALARA Network (RECAN) is supporting the countries of the region to facilitate information exchange and to promote integrated approach for practical and cost-effective implementation of the ALARA principle for the optimization of protection in the region.

The RECAN is a non-profit association and focusing on the:

- Maintenance, enhancement and development of competences in radiation protection with special emphasis on the implementation of the ALARA principle for occupational exposure both in routine operations and emergency situations,
- Contribution to the harmonization of radiation protection policies and practices, particularly concerning ALARA, both at regulatory and operational levels within the countries of the region, and
- Facilitation of information and experience exchange for an integrated approach to practical implementation of the ALARA principle.

RECAN Action Plan 2015/2016

Action	When	Who	Status
Final review of letter for Director of TC Europe	9 October 2015	IAEA	
Letter to Director of TC Europe	16 October 2015	J. Ziliukas	
Contact the Members of the current Steering Committee to clear their interest to continue their term in the SC	1 November 2015	J. Ziliukas	
Adressess	12 November 2015	B. Andonovski and all	
Draft of statement, pledge for RECAN and abstract	15 November 2015	O. Ciraj Bjelac	
RECAN leaflet early draft text	15 November 2015	G. Nabahtiani, B. Andonovski	
Comments and remarks on statement, pledge and abstract	22 November 2015	All	
Comments on RECAN leaflet	22 November 2015	All	
RECAN leaflet – final form	30 November 2015	G. Nabahtiani, B. Andonovski	
Final abstract, statement and pledge	30 November 2015	O. Ciraj Bjelac	
To establish link with the EAN, EURADOS and Radiation Protection and Nuclear Safety Unit of EURATOM (sending collaboration letters)	1 December 2015		
Circulate the invitation letter	1 December 2015	J. Ziliukas	
Working group (medicine)	30 December 2015	B. Andonovski, I. Ursulean	
Working group (industry)	30 December 2015	G. Nabahtiani	
Working group (TSO)	30 December 2015	O. Ciraj Bjelac	
Reminders	29 January 2016 (first) 26 February 2016 (second)	J. Ziliukas	
List of potential members	31 March 2016	J. Ziliukas	
Newsletter	After September 2016 WS	All	



	RECAN (>20 countries) SC- September 2015	EAN (20 MS)
1. Albania		
2. Armenia		
3. Austria		YES
4. Azerbaijan		
5. Belarus		
6. Bosnia and Herzegovina		
7. Bulgaria		
8. Croatia		YES
9. Cyprus	SC	
10. Czech Republic		YES
11. Estonia		
12. Georgia		
13. Greece	SC	YES
14. Hungary		
15. Kazakhstan		
16. Kyrgyzstan		
17. Latvia		
18. Lithuania	SC- Chair (Mr. Julius Ziliukas	
19. Malta		
20. Montenegro		
21. North Macedonia	SC	
22. Poland		
23. Portugal		YES
24. Republic of Moldova	SC	
25. Romania		
26. Russian Federation		
27. Serbia	SC	
28. Slovakia		
29. Slovenia		YES
30. Tajikistan		
31. Turkey		
32. Turkmenistan		
33. Ukraine		
34. Uzbekistan		

- Continent Europe Countries
- Extension for Central Asia
- The IAEA is ready for collaboration with EAN to support MSs in networking

2021 Technical Meetings



Technical Meeting on the Assessment and Evaluation of the Occupational Radiation Protection Appraisal Service (ORPAS)

Virtual Event

13 – 17 September 2021

Ref. No.: EVT2004313

Information Sheet

Introduction

The IAEA Occupational Radiation Protection Appraisal Service (ORPAS) was established to advise Member States on ways to strengthen and enhance the legislative and regulatory infrastructure for occupational radiation protection, technical services relating to protection and safety, such as services for personal dosimetry and the calibration of monitoring and measuring equipment, and practical implementation of Member States' arrangements for occupational radiation protection. The key objective of ORPAS review is to determine whether the host country has made adequate arrangements for occupational radiation protection and whether these arrangements are functioning to the extent that the practical provisions for occupational radiation protection are effective and generally optimized.

The IAEA safety standard in the area of radiation protection is Radiation Protection and Safety of Radiation Sources: International Basic Safety Standards, GSR Part 3. Review against GSR Part 3 is the core component of the ORPAS process. Other safety requirements such as Governmental, Legal and Regulatory Framework for Safety, GSR Part 1 (Rev. 1), Leadership and Management for Safety, GSR Part 2, and Safety Assessment for Facilities and Activities, GSR Part 4, are also used in an ORPAS review to cover all facilities and activities where occupational radiation protection is applied, as well as technical service providers and regulatory bodies.

During an ORPAS mission, recommendations and suggestions may be offered to the host country. Recommendations made are related to items of direct relevance to safety as referenced in IAEA Safety Requirements; suggestions made relate to items that, while not essential to ensure compatibility with IAEA Safety Requirements, may enhance the effectiveness of the national arrangements on occupational radiation protection against the guidance presented in IAEA Safety Guides. Good practices identified may also be documented for consideration by other States.



Technical Meeting on the Establishment of a Web-based Information Exchange for Occupational Radiation Protection in Industries involving NORM (ISEMIR-N)

Virtual Event

22 – 26 November 2021

Ref. No.: EVT1903979

Information Sheet

Introduction

Many industrial processes involving naturally occurring radioactive material (NORM) follow a common cycle with several stages from the extraction of materials to the fabrication and the use of products and by-products, including the generation of discharges, residues and waste. One of the pillar activities of such a work programme is the worker protection in different industrial processes which is generally multi-hazards situations and radiological risk generally is not always dominant. An integrated approach to safety and protection is recommended by the IAEA through its Occupational Radiation Protection Programme, bearing in mind that the radiation protection system is not necessarily the driving force and development of such an integrated approach requires involvement of combination of expertise.

Majority of Member States has not well-established regulatory systems (or even approaches) for the proper radiation protection of workers in industrial operations involving NORM. GSR Part 3 requires an integrated and graded approach for protection of workers where consideration of non-radiological hazards is integrated with radiological hazards, and the approach to protection is optimised (graded) so that the use of various radiation protection programme elements is consistent with the hazards while not imposing unnecessary burdens. Major criteria for such evaluation (even for regulatory decision making) require realistic dose assessment including different exposure scenarios. For workers, the approach starts with characterisation of the exposure situation, and integration, as necessary, of specific radiation protective actions to complement the protection strategy already in place and in this regard, ISEMIR-N is expected to play a crucial role, in the form of a database, to provide some sort of guidance to Member States. The ISEMIR-N has been developed a part of ISEMIR Platform, incorporated into an online web tool for information exchange for regular collection and maintenance of data on occupational exposure, and to

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Technical Meeting on Artificial Intelligence for Nuclear Technology and Applications

Virtual Event

25–29 October 2021

Ref. No.: EVT2004304

Information Sheet

Introduction

Artificial Intelligence (AI) refers to a collection of technologies that combine numerical data, algorithms and continuously increasing computing power to develop systems capable of tracking complex problems in ways similar to human logic and reasoning. AI technologies can analyse large amounts of data to learn how to complete a particular task, a technique called machine learning.

AI is advancing exponentially and can already sort and interpret massive amounts of data from various sources to carry out a wide range of tasks, and help tackle many of the world's most urgent challenges.

For example, AI's ability to recognize data patterns and analyse high-resolution images from satellites, drones or medical scans can improve responses to humanitarian emergencies, signal drought or floods by detecting global hydro-climatic changes, help doctors identify cancers and other diseases, increase agricultural productivity, track animal and marine migrations. In fact, AI will be an integral part of the Agency's new ZODIAC project helping to identify and contain future zoonotic disease outbreaks.

In addition, AI is used in the nuclear industry to augment automation, for refuelling and maintenance planning, to train nuclear personnel for normal and abnormal operation, for in-service inspections, evaluation and characterization of cracks and flaws, in reactor design, safety, security, real-time risk assessment, long term operation/lifetime applications, to enhance workplace safety and for on-line dosimetry based on computer simulations. However, the transformative power of AI also comes with challenges, including issues of transparency, trust and security, and other ethical concerns.

The IAEA, as the global focal point for nuclear cooperation, is backing AI and its enormous potential to help accelerate the safe, secure and peaceful uses of nuclear technologies and aid progress towards the United Nations' Sustainable Development Goals.

NORM X Symposium

- 25 years of NORM Symposia. Future: residues applied in a circular economy
- Utrecht / the Netherlands
- **9-13 May 2022**
- Cooperation agreement with the Dutch Society for Radiation Protection (NVS)- 23 Feb 2021



25 YEARS OF NORM SYMPOSIA

FUTURE: RESIDUES APPLIED
IN A CIRCULAR ECONOMY

10th International Symposium on
Naturally Occurring Radioactive Material
Utrecht, The Netherlands, May 9 - 13, 2022
www.normx2022.com



<https://normx2022.com/>

International NORM X Symposium: first announcement released



Under the auspices of the Dutch Society for Radiation Protection (NVS), the Dutch foundation Radiation Protection Symposium North-West Europe is organizing the 10th international symposium on NORM to take place 9–13 May, 2022, in Utrecht, Netherlands. The theme will be '25 years of NORM Symposia. Future: residues applied in a circular economy'.

[First announcement >>](#)

[Event flyer >>](#)

[Website >>](#)



FIRST ANNOUNCEMENT



Occupational Radiation Protection **NET**works

Thank you

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IAEA ORPNET: <https://nucleus.iaea.org/sites/orpnet/home/SitePages/Home.aspx>