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WEBINAR ON

Uses and benefits of the new national dose registry software

In collaboration with



 **11 April 2024**

 **11:00 CEST**



11 April 2024

Uses and benefits of the new national dose registry software

IAEA NS @IAEANS · 4h

Keeping a record of how much radiation a worker is exposed to is important for optimizing radiation protection in your country, across medicine, agriculture and other fields. 🙌 **Sign up to our webinar** and learn how the new national dose registry tool can help...

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WEBINAR

Uses and Benefits of the New National Dose Registry Software

Thursday, 11 April

11:00 Vienna time

Radiation Dose Records Centralized with New Tool

Keisuke Takada, IAEA Department of Nuclear Safety and Security

APR
9
2024



To help countries collect and analyse radiation exposure data and strengthen worker protection and safety, the IAEA has released a new state-of-the-art online National Dose Registry system.

Keeping a record of how much radiation a worker is exposed to is important for optimizing radiation protection in fields such as power generation, medicine, industry and agriculture, as well as for regulatory compliance with dose limits.

Many countries use a National Dose Registry (NDR), however, some countries, particularly in Africa and Asia and the Pacific, do not have their own central dose recording system yet.

"The new software enables the collection of personal, employment and dosimetric data for all occupationally exposed workers in a country, in support of national occupational radiation protection programmes," said Jizeng Ma, Head of the IAEA Occupational Radiation Protection Unit. "All countries that do not have a central National Dose Registry in place, or who wish to optimize their current system, may benefit from this new online system."

Related stories

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- IAEA Trains Next Generation of Reviewers for ORRAS Missions
- IAEA to Develop New Standards for Radiation Protection and Safety in Existing Exposure Situations
- New Regulatory Authority Information System (RAIS-) Now Available
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Related resources

- National Dose Registry software
- Nuclear safety and security webinars
- Radiation Safety and Monitoring Section
- Radiation in everyday life
- IAEA Safety Standards
- International Basic Safety Standards (ISBSS) (GSR Part 3)
- IAEA Department of Nuclear Safety and Security

Moderator: H. Burçin Okyar
Occupational Radiation Protection Unit
Section of Radiation Safety and Monitoring
Division of Radiation, Transport and Waste Safety
Department of Nuclear Safety and Security

WEBINAR on “Uses and benefits of the new national dose registry software”



17 December 2019

National Dose Registry - a central point for occupational dose records

National Dose Registry - a central point for occupational dose records

WEBINAR

17 December 2019

Recorded broadcast →

Presenter: Cameron Lawrence, Juliette Feuarden, Govert de With

Date of broadcast: 17 December 2019, 4:00 PM CET

About the webinar

Individual monitoring of workers exposed to radiation as a part of their job, and recording their radiation doses are important parts of national occupational radiation protection programmes. The IAEA General Safety Requirements on Governmental, Legal and Regulatory Framework for Safety (No. GSR Part 1 (Rev.1)) and Radiation Protection and Safety of Radiation Sources: International Basic Safety Standards (No. GSR Part 3) describe the characteristics of such programmes. GSR Part 3 includes requirements for the retention of workers' occupational exposure records by the regulatory body or a State registry, or by a relevant employer, registrant or licensee.

Related resources

- 🔗 Radiation protection for workers
- 🔗 Occupational Radiation Protection NETWORKS (ORPNET)
- 📄 Presentation: Australian national radiation dose register
- 📄 Presentation: The national occupational doses registry in France : SISERI
- 📄 Presentation: Overview of the Dutch dose registry

Webinars in occupational radiation protection

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 »

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Learning objectives

- To understand the IAEA safety recommendations on the establishment and maintenance of a national dose registry
- To understand the typical characteristics of an NDR
- To learn about the new on-line NDR tool, the information it records, as well as how to submit dose records and perform data analysis



<https://www.iaea.org/about/radiation-safety-and-monitoring-section>

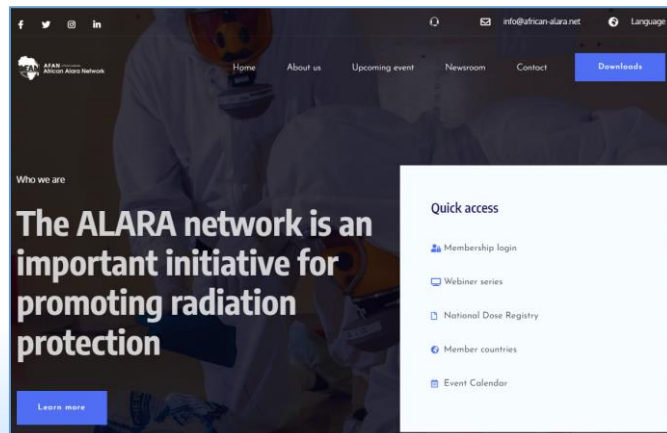


Miroslav Piňák
Head of Radiation Safety and Monitoring Section, NSRW/IAEA

Welcome notes



Eric Tetteh GLOVER (Ph.D)
AFAN Secretary



<https://african-alara.net/>



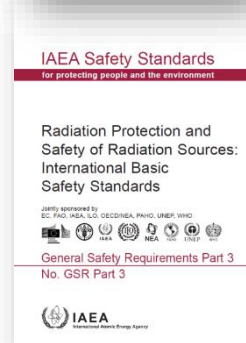
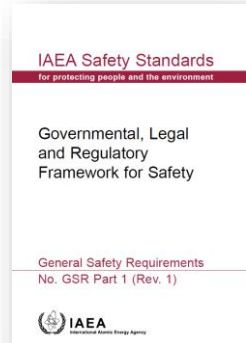
Qinjian CAO (Ph.D)
ARAN Secretary



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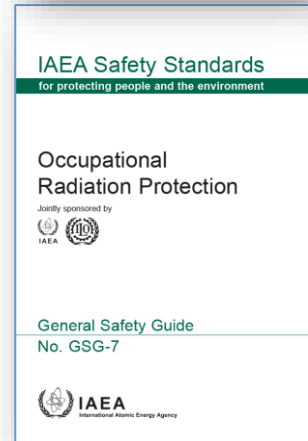
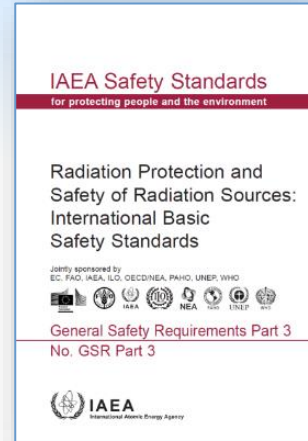
Records of occupational exposure

- Records of occupational exposure are also referred to as “**exposure records**” or “*dose records*”.
- **Employers, registrants and licensees** shall maintain records of occupational exposure for every worker for whom assessment of occupational exposure is required
- To be included
 - **Information on the general nature of the work** in which the worker was subject to occupational exposure;
 - **Information on dose assessments, exposures and intakes at or above the relevant recording levels specified by the regulatory body** and the data upon which the dose assessments were based;
 - When a worker is or has been exposed while in the employ of **more than one employer**, information on the dates of employment with each employer and on the doses, exposures and intakes in each such employment;
 - **Records of any assessments made of doses, exposures and intakes due to actions taken in an emergency or due to accidents or other incidents,**
- The RB should decide which parts of the records of occupational exposure should be maintained by the management for regulatory purposes, and it should specify retention periods for each of these parts of the records.



Record retention periods

- *“Records of occupational exposure for each worker shall be maintained during and after the worker’s working life, at least until the former worker attains or would have attained the age of 75 years, and for not less than 30 years after cessation of the work in which the worker was subject to occupational exposure.”*
- Retention of the calibration records for the personal monitoring equipment used for determining such occupational exposures.
- If employers, registrants and licensees cease to conduct activities in which workers are subject to occupational exposure, they shall make arrangements for the **retention of workers’ records of occupational exposure by the regulatory body or a State registry, or by a relevant employer, registrant or licensee, as appropriate.**



National Dose Registry



- **An important tool for radiation protection on implementing the radiation protection regime at the national level:**
 - Optimization of protection
 - Dose limitation
- **A tool for :**
 - Regulatory authority(ies)
 - End users / operators
 - Workers
 - Different stakeholders
- Maintaining of life-time dose data of workers is also necessary to ensure and review radiation safety of workers, certification, legal purposes and epidemiological studies.

Typical functions of the NDR

- **The National Dose Registry (NDR) contains the dose records of individuals (OEWs) who are monitored for occupational exposures to ionizing radiation.**
- **Contains personal, employment, and dosimetric data for all occupationally exposed workers in the country.**
 - Assist national authorities in controlling and safekeeping of the occupational doses and to allow statistical evaluations (e.g., dose trends to answer requests from regulators and others)
 - Assist in regulatory control by notifying regulatory authorities of overexposures within their jurisdiction & the licensee in their respective facility
 - Contribute to health research and to the scientific knowledge on risks from occupational exposure to ionizing radiation.
 - Provide dose histories to individual workers and organizations for work planning and for compensation and litigation cases.
 - All information provided by the NDR, including dose histories, may be subject to confidentiality requirements.

National Dose Registry

- Global benchmarking on occupational radiation protection
- At the user level , technical review level, country level , & international level
- Useful tool for the global occupational exposure data survey of UNSCEAR
- IAEA's ISOE and ISEMIR





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International Atomic Energy Agency
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Dr Jun DENG

Dr Deng is a research fellow and Head of the Information Centre of the National Institute for Radiological Protection (NIRP), Chinese Center for Disease Control and Prevention.

He has a PhD in radiation dosimetry and his research has focused on radiation protection and Monte Carlo simulations. Since 2015, he has been responsible for managing China's National Dose Registry (CRRW).

He has extensive experience in occupational dose collection, analysis and predictive modelling.



Terms and Conditions (Supporting documents)

TERMS AND CONDITIONS
for the Use of the National Dose Registry for Occupationally Exposed Workers (NDR)

The National Dose Registry for Occupationally Exposed Workers (NDR) is a software developed by the National Institute for Radiological Protection (NIRP), the Chinese Center for Disease Control and Prevention, in collaboration with the International Atomic Energy Agency (IAEA).

The NDR will be available to Member States at no cost. The NDR shall provide those organizations with a tool at national level for the management of dose information generated from the technical service providers (e.g., individual monitoring services) and in accordance with the international safety standards. The NDR has been developed based on the web-based Dose Registry System being operated in the NIRP, taking into account the request of IAEA Member States.

Organizations shall use the NDR in accordance with the following terms and conditions:

- By using the NDR, users acknowledge that they have read, understood, and agreed to these terms. The NIRP will grant a non-exclusive license to use the NDR in accordance with its intended purposes and functionality.
- The NDR has been tested by the NIRP and some volunteer organizations from Member States, however, the NIRP and the IAEA shall not be responsible for the results that are based on the use or output from the NDR.
- The NDR is provided by the NIRP "as is" and any express or implied warranties, including but not limited to, the implied warranties of merchantability, accuracy, quality and fitness for a particular purpose are disclaimed. The NIRP and the IAEA provide no guarantee, regarding the accuracy, completeness, reliability, stability or suitability of the NDR.
- The NDR is designed to maintain and manage data related to occupational exposure.

By signing below, I hereby acknowledge that I understand and accept the terms and conditions for the use of the NDR:

COUNTRY:

ORGANIZATION:

ADDRESS:

NAME (First name, Family name) and Position

Date: Signature:

Please include below a list of operational contact persons for the organization (managers for the operation of the NDR, etc.). This information will be used as a communication channel to provide technical assistance from the NIRP and the IAEA to the national dose registry Service in the Member State, as appropriate, for the operation of the NDR.

Title	
First Name *	
Family Name *	
Email address *	
Phone Number	
Organization *	

* Mandatory information

Organization Endorsement

Name of the manager of the organization:

Signature and stamp:

ACCEPTANCE
OF THE NDR TERMS AND CONDITIONS

In order to use the National Dose Registry for Occupationally Exposed Workers (NDR) the respective organizations must notify the NIRP and the IAEA of their acceptance of the NDR Terms and Conditions.

Please complete the following form and return it to the following address:

by email:

National Institute for Radiological Protection (NIRP), China CDC

2# Xinkang Street, Dewai, BEIJING 100088, China

Email: dengjun@nirp.chinacdc.cn

and copy to

Occupational Radiation Protection Unit
NSRW, International Atomic Energy Agency

Vienna International Centre
PO Box 100, 1400 Vienna, Austria

Email: occupational-protection-unit.contact-point@iaea.org

Deployment Instructions for online NDR

- Preface

This operation manual provides a detailed description of the process steps for deploying the online National Dose Registry (NDR) developed by National Institute for Radiological Protection, China CDC, with the support from IAEA, on a computer server, to release the system on the internet.
- Hardware preparation and operating system installation

a. Hardware inspection and preparation:

 - Ensure that the server hardware is complete, including processors, memory, hard drives, network adapters, etc.
 - Connect the server to the power supply and network.

b. Operating system installation:

 - Choose an operating system version that is suitable for the system requirements, such as Windows Server 2012 R2. Obtain and install the original installation files for Windows 2012 R2. You can purchase genuine CDs from Microsoft's official website or obtain them through other legal means.
 - Start the server using the installation media and enter the installation interface.
 - Choose the installation language, configure keyboard layout and time zone.
 - Configure disk partitions, create root directories, swap partitions, and necessary file systems.
 - Set the network configuration, including host name, IP address, subnet mask, default gateway, DNS server, etc.
 - Set passwords for administrator user or create other user accounts.
 - After completing the installation, restart the server.

NATIONAL DOSE REGISTRY (NDR)

User Manual

December

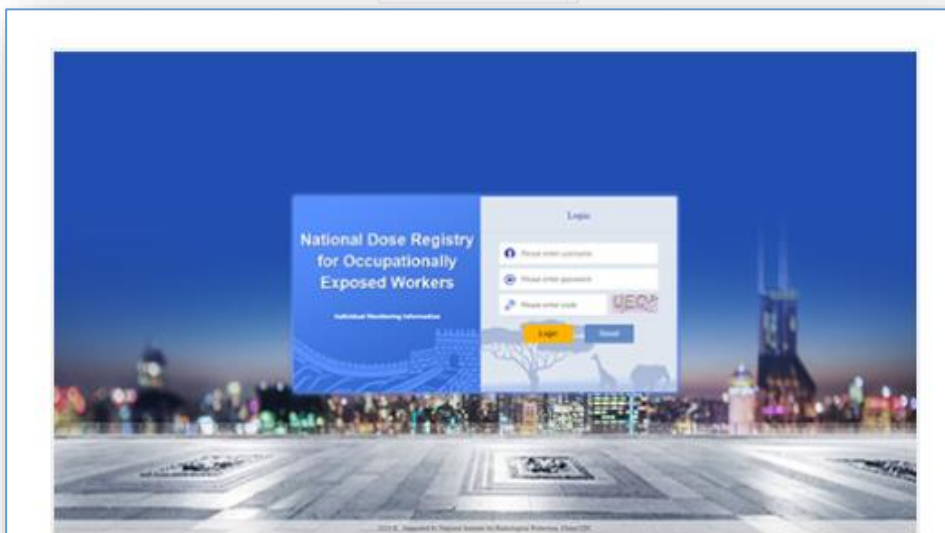
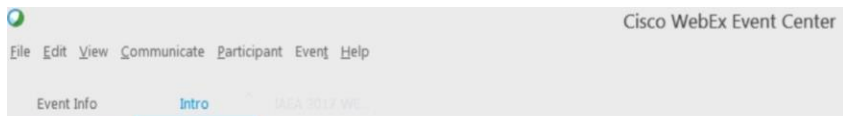
NATIONAL DOSE REGISTRY (NDR)

Training Manual

December 2023

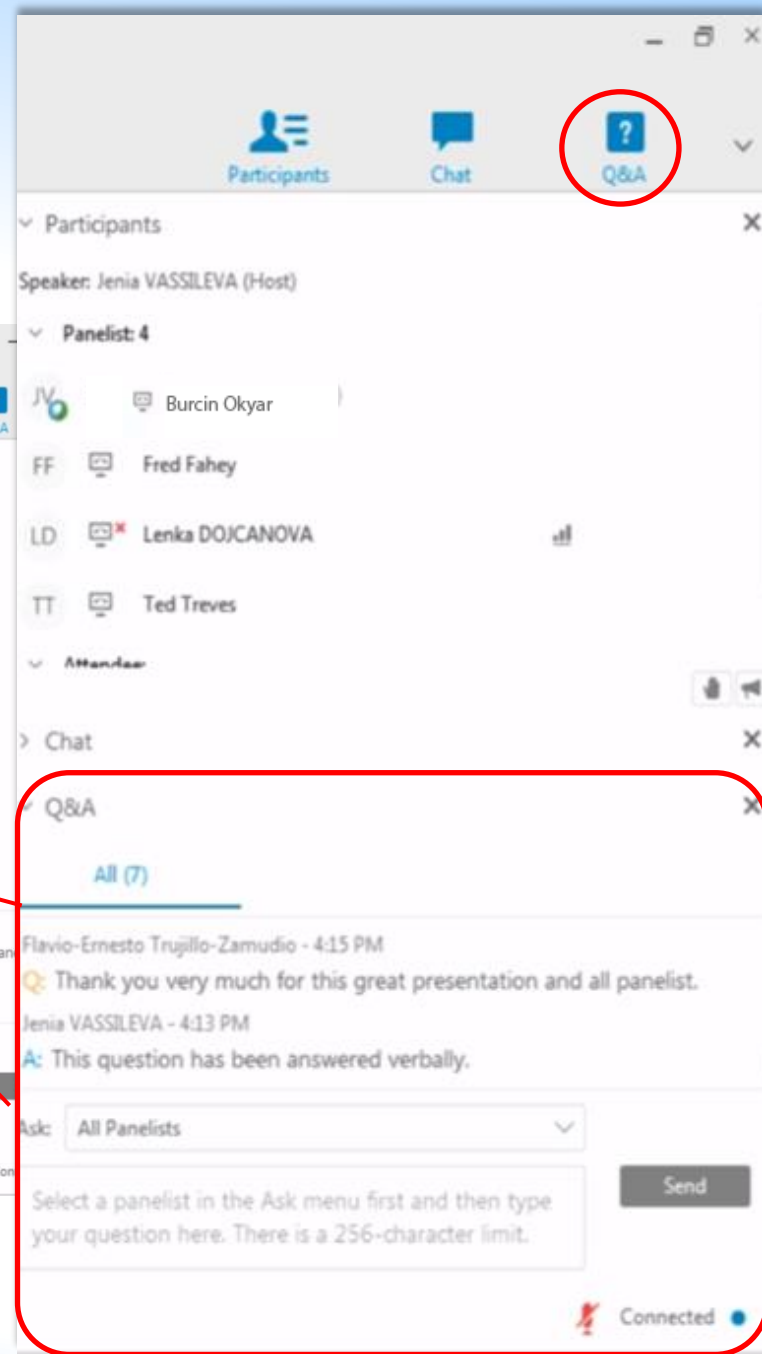
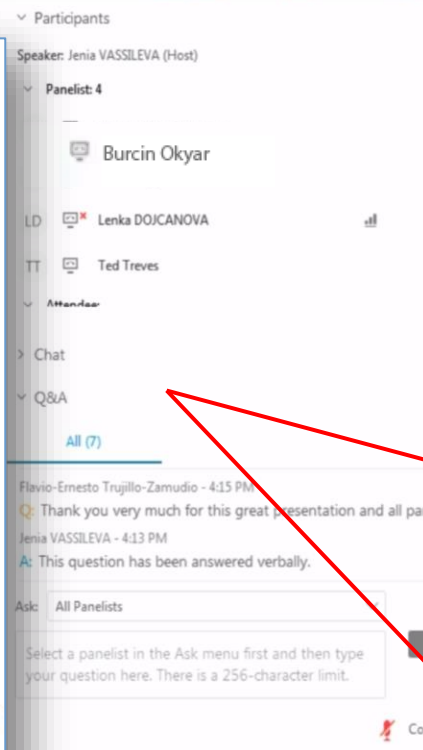


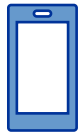
How to ask questions ?



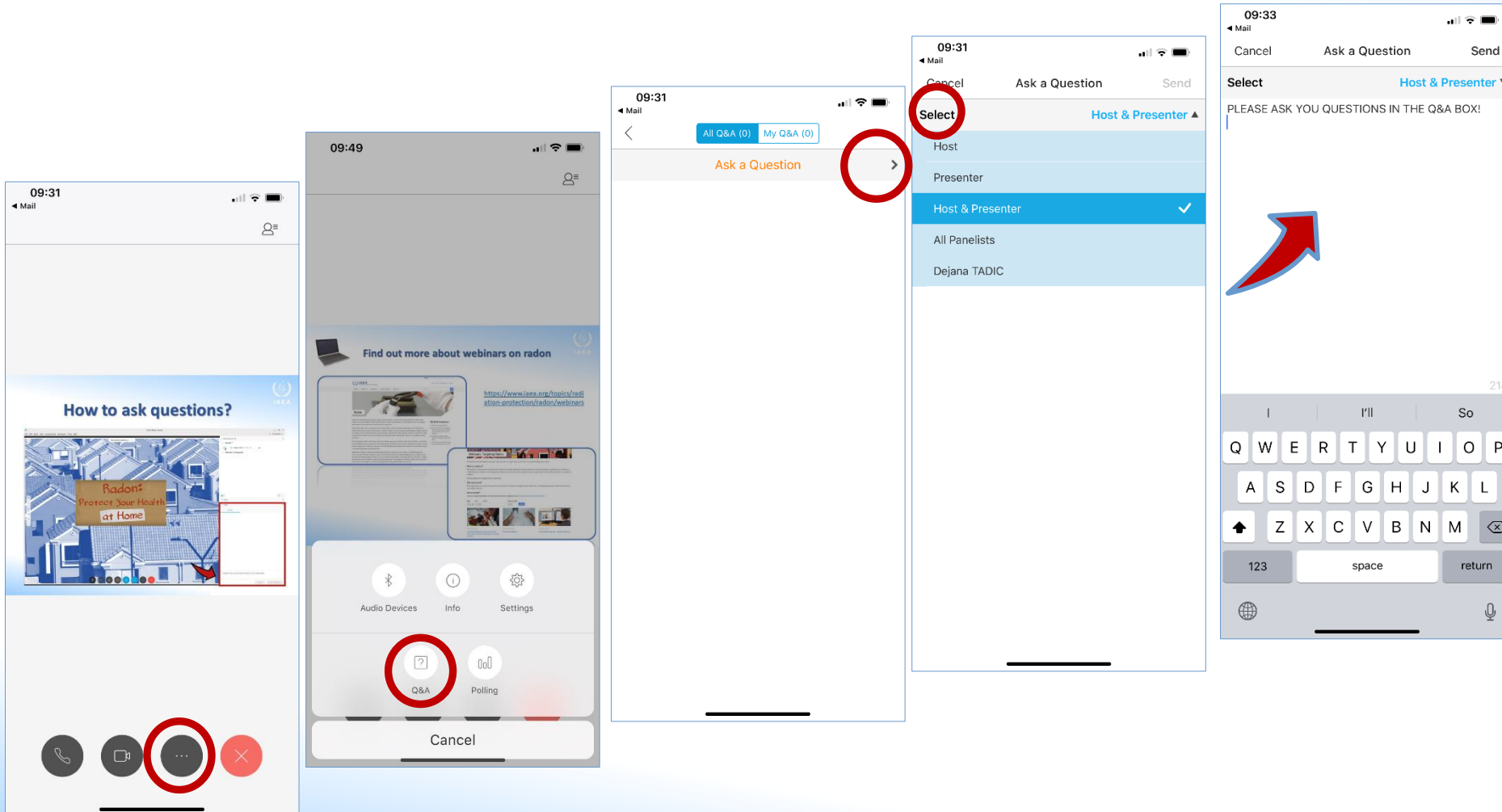
11 April 2024

Uses and benefits of the new national dose registry software





How to ask questions?



The image illustrates the process of asking a question through a mobile application, shown in five sequential screenshots:

- Home Screen:** Shows a presentation slide titled "How to ask questions?". At the bottom, a navigation bar contains icons for Phone, Home, a circled "More" (three dots) icon, and Close. A "Q&A" icon is also circled in red.
- Q&A Modal:** A modal window is displayed with "Q&A" and "Polling" options. The "Q&A" option is circled in red.
- Ask a Question Screen:** Shows a screen with "All Q&A (0)" and "My Q&A (0)" buttons. A right-pointing arrow next to the "Ask a Question" text is circled in red.
- Select Audience:** A selection menu is shown with options: Host, Presenter, Host & Presenter (selected with a checkmark), All Panelists, and Dejana TADIC. The "Select" button at the top is circled in red.
- Question Input:** A screen with a text input area and a keyboard. A red arrow points to the input area. The text "PLEASE ASK YOU QUESTIONS IN THE Q&A BOX!" is visible above the keyboard.



ORPNET- landing page



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Occupational Radiation Protection Networks (ORPNET)

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IAEA ORPNET

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IAEA webinar: Uses and benefits of the new national dose registry software

Soon a new online national dose registry tool will be released to help countries collect and analyse worker exposure data via a central system, and strengthen worker protection by enabling them to monitor individual exposure over a lifetime, review radiation safety practices and contribute to health research.

This webinar will introduce the new tool, its features and benefits, and how it enables the collection of personal, employment and dosimetric data for all occupationally exposed workers.

ICRP strategic priorities 2024-2028

The International Commission on Radiological Protection (ICRP) has summarized its goals for the next four years in one 'easy-to-read' resource available online.

Find an overview of the ICRP's strategic priorities and the key actions it intends to take between 2024 and 2026.

Read more >>

PIANOFORTE workshop on Artificial Intelligence and Radiation Protection

PIANOFORTE is organizing the workshop on "Artificial Intelligence and Radiation Protection" aiming at presenting and discussing current and future artificial intelligence in radiation protection, preparedness, response and recovery.

The workshop will take place on 18 and 19 April 2024 at the National Centre for Scientific Research (NCSR) "Demokritos", Agia Paraskevi, Attica, Greece. Participation is free of charge.

EURADOS Training Course (WG6): Monte Carlo modelling: basic concepts, available resources, and applications in radiological protection

Monte Carlo modelling is a very widely used technique in radiological protection that can determine the passage and effects of radiation through matter, with applications in many fields of radiation protection.

The upcoming EURADOS short course aims to address this, by providing introductory lectures that explain what the Monte Carlo method is, summarize some of the computational tools available, and discuss the applications of Monte Carlo modelling in radiological protection.

The course will be held on Friday, 12 April 2024, 09:00-13:00 as a side event to the EURADOS Annual Meeting in Oxford, United Kingdom.

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- International Conference on Occupational Radiation Protection: Enhancing the Protection of Workers - Gaps, Challenges and Developments, 1-5 December 2014
- International Conference on Occupational Radiation Protection: Protecting Workers Against Exposure to Ionizing Radiation, 26-30 August 2002
- Networks
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- Radiation protection
- Webinars in occupational radiation protection

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National Arrangements on Occupational Radiation Protection

National regulations are composed of the necessary legal, administrative, and organisational arrangements that are necessary for controlling, monitoring, and recording the exposure of workers to radiation. They are similar or identical across different Member States. Read more >>

Workers and Radiation at Workplaces

The use of radiation in the workplace is a normal and required part of many occupations. Read more >>

Worldwide Networks

Enhancing safety standards for workers across a range of industries requires engagement at the global level to promote a harmonised approach to occupational radiation protection. Read more >>

Regional Networks

Through the local exchange of information on operations, the IAEA encourages the creation of regional networks to spread good practices on the application of optimisation via graded approach. Read more >>

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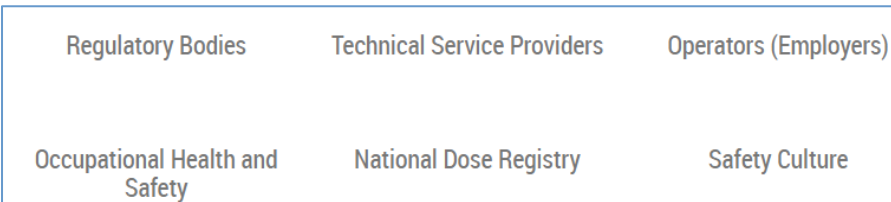
Dynamic

National Arrangements on Occupational Radiation Protection



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ORPNET- pages



Workers and Radiation at Workplaces



The use of radiation in the workplace is a normal and required part of many occupations. [Read more →](#)



Workers and Radiation at Workplaces



State/National Dose Registry

The typical National Dose Registry (NDR) contains the dose records of individuals who are monitored for occupational exposures to ionizing radiation.

What do I need to know?

Individual monitoring of workers exposed to radiation as a part of their job and recording their radiation doses are important parts of national occupational radiation protection programmes. The IAEA General Safety Requirements on Governmental, Legal and Regulatory Framework for Safety (No. GSR Part 1 (Rev.1)) and Radiation Protection and Safety of Radiation Sources: International Basic Safety Standards (No. GSR Part 3) describe the specific characteristics of such programmes. GSR Part 3 includes requirements for the retention of workers' occupational exposure records by the regulatory body or a State registry, or by a relevant employer, registrant, or licensee.

National Dose Registries enable the optimization of protection and help ensure compliance with the dose limits at the national level. The IAEA General Safety Guide Occupational Radiation Protection (No. GSG-7) notes that a typical registry contains personal, employment and dosimetric data for all occupationally exposed workers in the country.

Characteristics of a typical NDR

Consideration should be given to the establishment of a national dose registry as a central point for the collection and maintenance of dose records. The storage of information at the National Dose Registry should be tailored to allow workers, during and after their working life, to retrieve information on the doses they received while occupationally exposed.

Long term storage of such information in a NDR also serves the following purposes:

1. It prevents the loss of data on individual doses in the event that the registrant or licensee ceases its activities in the State concerned.
2. It allows periodic analysis of all data collected on exposures in order to characterize the situation at the national level with regard to occupational exposure.

References

- Fundamental Safety Principles, IAEA Safety Stanards Series No. SF-1, IAEA, Vienna (2006)
- Radiation Protection and Safety of Radiation Sources: International

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Workers in Industrial Processes Involving NORM

Occupational Radiation Protection Networks (ORPNET)

- › National Arrangements on Occupational Radiation Protection
- › Workers and Radiation at Workplaces
 - › Workers in Medical Institutions (Medicine, Dental, Veterinary)
 - › Workers in Nuclear Installations (Nuclear Fuel Cycle)
 - › Workers in Research and Training
 - › Workers in Industrial Processes Involving NORM
 - › Workers in Industrial Applications
 - › Workers Using Nuclear Gauges
 - › Internal Dosimetry
 - › Optimization
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 - › Emergency Workers
 - › Female Workers During and After Pregnancy
 - › Itenerant Workers
- › Worldwide Networks
- › Regional Networks
- › ORPNET Training material

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 if they are not controlled properly. Materials of this kind are commonly referred to as Naturally Occurring Radioactive Material or NORM.

What are the examples of activities associated with NORM?

The following industrial activities associated with NORM are, or may be, subject to Regulations:

- Mining and processing of uranium ore.
- Extraction of rare earth elements.
- Production and use of thorium and its compounds.
- Production of niobium and ferro-niobium.
- Mining of ores other than uranium ore.
- Production of oil and gas.
- Manufacture of titanium dioxide pigments.
- Activities in the phosphate industry.
- Activities in the zircon and zirconia industries.
- Production of tin, copper, aluminium, zinc, lead and iron and steel.
- Combustion of coal.
- Water treatment.

What do I need to know?

Workers involved in the industrial processes involving NORM are occupationally exposed to radiation. Not all industrial processes produce NORM. The volumes and concentrations of NORM vary according to the natural abundance of radionuclides in the materials that are employed or treated. Current exposures to NORM in industrial processes are low; however regulations, controls and monitoring are required to optimize the radiation exposures.

According to the GSR Part 3, occupational exposure due to natural sources is, in general, subject to the requirements for existing exposure situations. In the case of occupational exposure due to radionuclides of natural origin in materials other than these everyday commodities and due to radionuclides in residues in the environment, the applicable requirements depend on the radionuclide activity concentrations, as follows:

- if in any process material, the activity concentration of any radionuclide in the ²³⁸U decay series or the ²³²Th decay series exceeds 1 Bq/g, or if the activity concentration of ²¹⁰Pb exceeds 10 Bq/g, the industrial activity is regarded as a practice and the requirements for planned exposure situations apply.
- if in every process material, the activity concentrations of all radionuclides in the ²³⁸U decay series and the ²³²Th decay series are 1 Bq/g or less and the activity concentration of ²¹⁰Pb is 10 Bq/g or less, the material is not regarded as naturally occurring radioactive material; the industrial activity is not regarded as a practice and the

Pages: Worldwide & Regional Networks

Worldwide Networks



Enhancing safety standards for workers across a range of industries requires engagement at the global level to promote a harmonised approach to occupational radiation protection. [Read more →](#)

Worldwide Networks

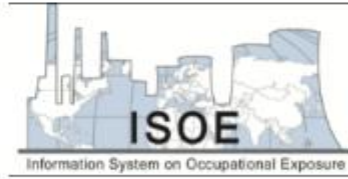
Information System on Uranium Mining Exposures



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



Information System on Occupational Exposure (ISOE)



Regional Networks

African Alara Network (AFAN)	Asian Radiation Dosimetry Group (ARADOS)	Asian Network of Cardiologists in Radiation Protection
Asian Nuclear Safety Network (ANSN)	Asia and Pacific Regional ALARA Network (ARAN)	Coordination of Regional Networks (CoRPAR)
European ALARA Network (EAN)	European NORM Association (ENA)	European Medical ALARA Network (EMAN)
European Radiation Protection Authorities Network (ERPAN)	European Platform for Occupational Radiation Exposure (ESOREX)	European Radiation Dosimetry Group (EURADOS)
European Training and Education in Radiation Protection Platform (EUTERP)	OTHEA/RELIR	Latin America Occupational Radiation Protection Optimization Network (REPROLAM)

Regional Networks



Through the local exchange of information on operations, the IAEA encourages the creation of regional networks to spread good practices on the application of optimisation via graded approach. [Read more →](#)



News — March 2024



IAEA webinar: Uses and benefits of new national dose registry
This webinar on 11 April will introduce a new online national dose registry tool to help countries collect and analyse worker exposure data for radiation safety. [Read more](#)



16th International Congress of IRPA in cooperation with IAEA
Eleven topics on radiation protection will be covered following the theme 'Radiation Harmonization: Standing United for Protection', 7–12 July, Orlando, FL, USA. [Read more](#)



Artificial intelligence and radiation protection workshop
This PIANOFORTE workshop will present current and future artificial intelligence implementations in radiation protection, 19 April, Attica, Greece. [Read more](#)



3rd European NORM Association workshop
This workshop aims to facilitate discussions on techniques and solutions for radiation protection problems and compare regulatory approaches, 15–17 May, Rome, Italy. [Read more](#)

Newsletter

Other features

News



21 November 2023

Botswana is Committed to Radiation Protection of Workers, says IAEA



14 November 2022

ORPAS Follow-Up Mission to UAE Marks Strong Country Commitment to Radiation Protection of Workers, Including Space Crews



25 October 2022

ORPAS Mission to Philippines Highlights Efforts to Enhance Radiation Protection of Workers



13 September 2022

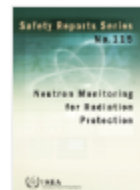
Tailored Approaches Key to Optimizing Occupational Radiation Protection

Publications



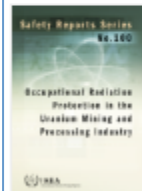
14 November 2023

Application of the Concept of Exemption



9 November 2023

Neutron Monitoring for Radiation Protection



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

[More publications →](#)

Register for

ORPNET

Access

ORPNET
collaboration platform

Resources

Training

ORPAS

Conference Materials

Events and Meetings

Webinars, Posters and Leaflets

Newsletters

Related resources

- Conference Proceedings from the International Conference on Occupational Radiation Protection 5-9 September 2022
- International Conference on Occupational Radiation Protection: Enhancing the Protection of Workers – Gaps, Challenges and Developments, 1-5 December 2014
- International Conference on Occupational Radiation Protection - Protecting Workers Against Exposure to Ionizing Radiation, 26-30 August 2002
- Networks
- Occupational radiation protection call for action
- Radiation protection
- Webinars in occupational radiation protection



IAEA

International Atomic Energy Agency
Atoms for Peace and Development



Occupational Radiation Protection Networks (ORPNET)

Thank you for your participation

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

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