REPROLAM
Red de Optimización de Protección Radiológica Ocupacional en LatinoAmerica y Caribe

NEWSLETTER

NUMBER 12, DECEMBER 2021

REPROLAM

REGIONAL DIRECTORY AVAILABLE ON EXTERNAL DOSIMETRY

The External Dosimetry Group (GDE) is pleased to announce that the "Regional Directory of External Dosimetry Services" is now completed and published on the REPROLAM website.

The Directory contains the information collected as a result of the survey applied by the GDE. The survey consisted of a questionnaire that covered general, infrastructure and technical information on dosimetry services. The application of the survey was disseminated through the REPROLAM Bulletin and via email to the countries of the region.

The questionnaire was completed online using the Google Forms application, divided into three modules:

- Module 1: General Data and Available Services.
- Module 2: Dosimetric specifications and technical requirements.
- Module 3: Degree of coverage.

The technical specifications and requirements included in the questionnaire were based on the principles and requirements of the IAEA, ISO and IEC international standards. Among others, data was requested about: infrastructure, type of services provided, type of dosimeters used, calibration methodology, traceability, type tests, uncertainties, quality management, approval and coverage levels.

The data collected through the survey allowed the creation of the Directory Database.

From these data, different reports can be generated to know the characteristics and capabilities of the external dosimetry services in the region.

Responses were received from 31 external dosimetry services in the region, of which 18 are public institutions and 13 private companies.

In the graph on the left you can see the number of service providers that responded to the survey for each country.

As a result of the data provided by the services and laboratories that completed the survey, it can be seen that:

- All provide the whole body service in terms of the magnitude Hp (10), but only 58% report the value of Hp (0.07).

- Limb and lens dosimetry is performed by only 60% of the services.

• Most of the Laboratories or Services use thermoluminescent dosimeters (93%), and 6% use the OSL method.
• Neutron and beta radiation dosimetry is performed by very few laboratories in the region.

• 50% of the Laboratories or Services have implemented a Quality Management System.

• Most services perform calibration in secondary laboratories, using Cs_{137} sources, with annual or biannual frequency.

Information is available on the standards used in type tests and the estimation of uncertainties.

Module 3 corresponding to the degree of coverage was completed by some laboratories or services.

Even though there are still countries and laboratories to join and complete the survey, having the Directory is a starting point to consolidate the work of the External Dosimetry Group. The Directory contributes to knowing the situation of the External Dosimetry Services in the region and therefore will allow planning REPROLAM activities aimed at strengthening and expanding the capacities of the services. The organization of intercomparisons and other actions for the harmonization of services is also facilitated.

The immediate challenges of the Board of Directors should be focused on:

• Get the missing services or laboratories in the region to complete the survey.
• Revise the elements of the questionnaire so that they are more comprehensible and cover all the requirements and capacities of interest.
• Define the mechanism for the periodic updating of the Board of Directors.

We thank all the institutions that have been kind enough to complete the survey. We invite the countries and institutions that have yet to answer the survey, whose contribution is important to give the Board a greater impact.

Our thanks to the Coordinators of the **External Dosimetry Group** (Patricia Mora from Costa Rica and Daniel Molina from Cuba) for the design, application, and compilation of the survey results.

A special recognition for **Marizury Valdés** (CPHR-Cuba) who was in charge of the design and preparation of the Database to record the Directory information, as well as the design and presentation of the Directory on the **REPROLAM** website.

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SAFETY FIRST

Space dedicated to common understanding and the promotion of Safety Culture through information, analysis, dissemination of experiences and related news.

CAN A CULTURE OF SAFETY BE IMPLEMENTED?

Many times we hear managers and personnel who work on safety and radiation protection issues request assistance or prepare plans to "implement the safety culture", but ... can a safety culture be implemented? The answer is no.

Safety culture, as a cultural phenomenon in itself, is a process that is generated and developed in organizations that work with risks, as part of their own organizational culture, following a series of patterns of basic assumptions. Consequently, an organization of this type will always have a culture of safety, even if it is minimal or at a very low level, since the instinct of protection will determine a certain degree of safe behavior, both in individuals and in the entire organization. Therefore, when you want to improve the safety culture, what you will do is take it to higher levels or excellence. From this perspective, it is not technically correct to use terms such as implement, implement, introduce the Safety Culture, but to refer to it in terms of improving, elevating and strengthening it.

An organization that intends to improve its safety culture, what it will face as a challenge is a process of cultural change. A process that begins with the definition and characterization of the existing culture and the desired culture, and that traces a path to evolve from one to the other. Figure 1 shows graphically all the elements that intervene in this cultural change.

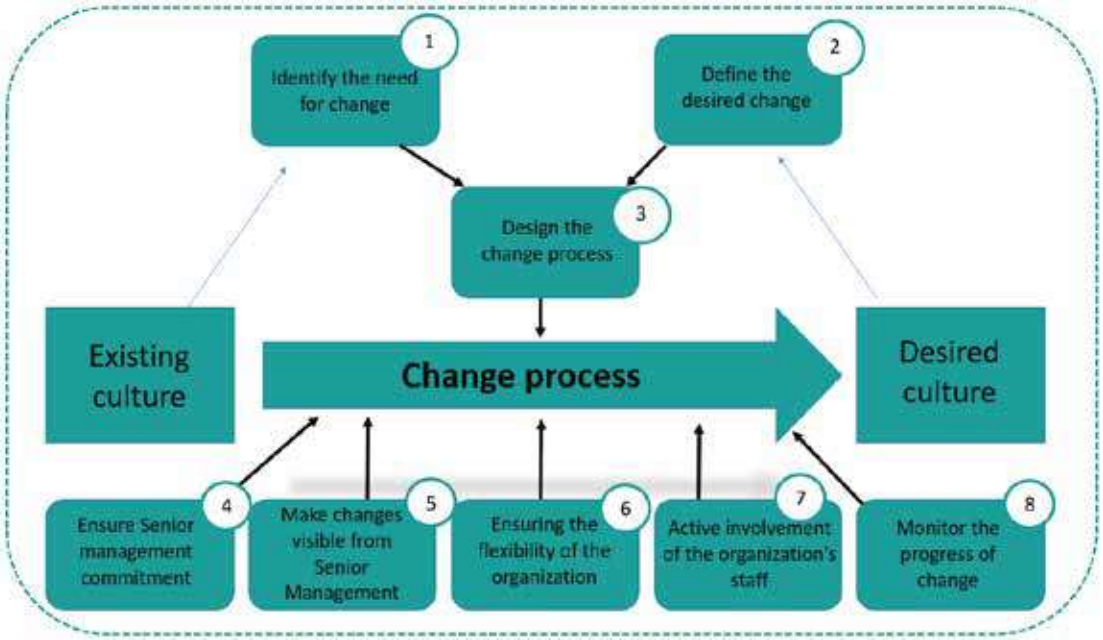

Fig. 1: Typical process of cultural change

And remember, if you want to improve the safety culture in your organization, be prepared to promote and produce a cultural change, which has rules and peculiarities that cannot be ignored. But we'll talk about that in future newsletters.

References used:

1. FORUM Guide on Safety Culture of Organizations, Facilities and Activities with ionizing radiation sources, 2015.

Rubén Ferro (Cuba) and Renán Ramírez (Perú)

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REPROLAM INTERNAL DOSIMETRY

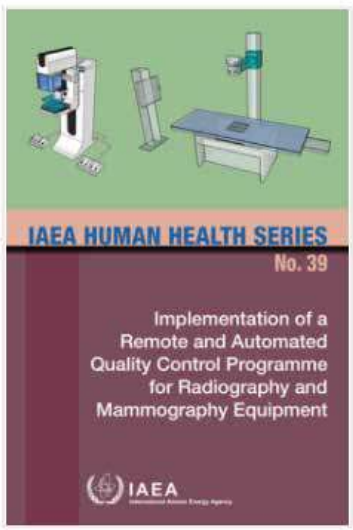
PILOT PLAN FOR ASSESSMENT OF INTERNAL EXPOSURE TO I-131 OF WORKERS OF NUCLEAR MEDICINE SERVICES

The Nuclear Medicine Services (NMS) may agree to participate in a pilot plan to measure and evaluate the dose for internal exposure to I-131 of its Occupationally Exposed Workers. Those who wish to participate will receive advice for the calibration of gamma cameras and I-131 detector probes, the distribution of videos of the course, Protocol and Interactive Guide, assistance for the implementation of on-site monitoring by the NMS staff and support in follow-up to evaluate the results of monitoring your Occupationally Exposed Workers.

To enroll your service in the pilot plan, complete the following survey:
https://docs.google.com/forms/d/1UADG43SXy5GDGUcKDt3L-XM53dsH6tjOoHjtRHxD8sM/edit?usp=sharing

For more information contact Celeste Galarza: mcdlagalarza1985@gmail.com

RESOURCES AND DOWNLOADS



IMPLEMENTATION OF A REMOTE AND AUTOMATED QUALITY CONTROL PROGRAMME FOR RADIOGRAPHY AND MAMMOGRAPHY EQUIPMENT

This publication provides a framework for the quality control (QC) of radiographic and mammographic imaging systems using remote and automated tools. The methodology provided in this publication is designed to be easy to implement, in order to support initiation of remote/automated QC programmes. It is based on simple, inexpensive test objects and promotes collection of data in a uniform, harmonized manner allowing for intercomparison and benchmarking. These tests are not intended to replace the comprehensive performance evaluation of the radiographic systems by a CQMP. They can, however, detect deficiencies in system performance before they become clinically significant. Furthermore, frequent QC testing promotes a culture of quality in imaging

https://www.iaea.org/publications/13539/implementation-of-a-remote-and-automated-quality-control-programme-for-radiography-and-mammography-equipment

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XII REGIONAL CONGRESS OF RADIOLOGICAL AND NUCLEAR SECURITY
X REGIONAL IRPA CONGRESS
Radiation Protection: Adapting to new scenarios

From October 23 to 27, 2022
Santiago, Chile

Thematic areas

RADIOLOGICAL PROTECTION
-Occupational Radiation Protection in Medicine
- Occupational Radiation Protection in Industry
- Occupational Radiation Protection in Research
- Radiological protection of the patient
- Radiological Protection of the public
- Radiological protection of the environment
- Radiobiology
- Dosimetry and instrumentation
- Instrumentation
- Natural radiation, NORM and TENORM

INNOVATION AND TECHNOLOGY
- New technologies and approaches
- Artificial intelligence applied to Radiation Protection
- Non-ionizing radiation

SAFETY CULTURE
- Radiation and nuclear safety culture
- Perception of risk and communication with the public
- Ethics in the use of ionizing radiation
- Education and training in Radiation Protection

SECURITY
- Security in nuclear and radiological facilities
- Policies and Regulatory Framework in Radiological Protection
- Recommendations on Radiological Protection
- Radiological and nuclear emergencies
- Radioactive Waste Management
- Transport of Radioactive Material
- Quality Assurance and Control

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IMPORTANT DATES
- **Beginning of receipt of abstracts:** January 1, 2022.
- **Abstracts reception deadline:** April 30, 2022.
- **Registration**: From January 02, 2022 until the date of the Congress.
- **Date of receipt of works**: It will be communicated to each author

For more information: http://www.sochipra.cl/congreso-regional-santiago-de-chile-2022/

JOINT INTERNATIONAL RADIO CONFERENCE 2022
NEW REGULATORY FRAMEWORK: CHALLENGE OPPORTUNITIES.

Wells of Caldas - MG
August 14-17, 2022

The Brazilian Society for Radiation Protection (SBPR) in cooperation with the Brazilian Association for Inspection and Non-Destructive Testing (ABENDI) and the Portuguese Society for Radiation Protection (SPPCR) will celebrate from August 14 to 17, 2022, in the city of Poços. de Caldas, in the State of Minas Gerais, the RADIO 2022 International Joint Conference.

It is a Joint International Conference that, in addition to the VI Brazilian Congress on Radiological Protection, will bring together another edition of the Congress on Radiological Protection of the Community of Portuguese-Speaking Countries, held alternately in Portugal and Brazil, always in collaboration with the SPPCR, and the VIII International Congress of Industrial Radiological Protection, in cooperation with ABENDI. The event will also feature an International Radioprotection and Radiological Metrology Fair, which traditionally has the participation of several exhibitors.

The Brazilian Society for Radiation Protection - http://www.sbpr.org.br/, founded on 09/12/1986 at a general meeting held in the auditorium of the Brazilian Academy of Sciences in Rio de Janeiro, is a technician- non-profit scientific association affiliated with the Brazilian Society for the Advancement of Science (SBPC), the International Radiation Protection Association (IRPA) and the Federation of Radioprotection of Latin America and the Caribbean (FRALC). As a non-profit civil society organization, it groups together professionals who work in the areas of radiation protection and radiation and nuclear safety. Since 2013, the organization publishes the Brazilian Journal of Radiation Sciences (BJRS) - http://www.bjrs.org.br/ -, a scientific journal rated A2 in the Qualis-Periódico of CAPES in the interdisciplinary area.

It is important to emphasize the opportunity to hold the Conference, as a way to promote public acceptance of nuclear energy in different regions of the country, including through the simple presence of important scientists and researchers, transmitting confidence to the population and discussing the state of the art on issues related to radiation protection and nuclear safety. Undoubtedly, the event will serve as a stimulus for the technical-scientific training of students and professionals at a promising moment for the area of applications of nuclear and radiological techniques in the country.

More information will be published soon.

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INTERNATIONAL CONFERENCE ON CHALLENGES FACED BY TECHNICAL AND SCIENTIFIC SUPPORT ORGANIZATIONS (TSO) IN ENHANCING NUCLEAR SAFETY AND SECURITY:

Enhancing Science and Adaptability in a Changing World and Creating Perspective for a Young Generation

IAEA
International Atomic Energy Agency
Atoms for Peace and Development

10–13 October 2022
Saint Petersburg, Russian Federation

The International Conference on the Challenges faced by Technical and Scientific Support Organizations (TSO) in Enhancing Nuclear Safety and Security: Enhancing science and adaptability in a changing world and creating perspective for a young generation to be held in Saint Petersburg, Russian Federation, from 10-13 October 2022 will continue the tradition established by the four preceding conferences on this subject, which were held, respectively in Brussels, Belgium (2018), Beijing, China (2014), in Tokyo, Japan (2010) and in Aix-en-Provence, France (2007). Like these earlier conferences, the forthcoming one will play a vital part in the national and international efforts made to ensure the effectiveness of nuclear and radiation safety and security regulatory systems and will focus, in particular, on development and strengthening of technical and scientific capabilities to achieve enhanced nuclear and radiation safety and security of facilities and activities, including legacy and emerging challenges as well as exchange and transfer of best practices with embarking countries.

It was already recognized that nuclear safety and security are to a great extent scientific in nature and that a regulatory body with responsibilities for nuclear facilities and other licensed activities involving radioactive material needs to have continuous access to technical and scientific expertise supporting regulatory functions. One of the main conclusions of the last conference in 2018 concerned the need to assist Member States in their strategies to develop their TSO capacities in order to promote TSO's potential contribution to the independence and sustainable effectiveness of the national nuclear safety and security regulatory infrastructures. This fifth conference on TSOs will, in particular, present achievements that address the recommendations from the previous TSO conferences.

The purpose of the conference is to consider how to develop and strengthen technical and scientific capabilities to achieve enhanced nuclear and radiation safety and security of facilities and activities, including legacy and emerging challenges as well as the exchange and transfer of best practices with embarking countries.

The conference will highlight the importance of scientific and technical capabilities to support regulatory decision-making for enhanced nuclear and radiation safety and security. While addressing challenges to the development, maintenance and enhancement of such capacities, the conference will:

- Enhance regulatory infrastructure for safety of existing nuclear facilities;
- Exchange of best practices with embarking countries;
- Enhance technology, science and adaptability in a changing world;
- Promote involvement of young generation in the TSO activities.

Deadline to present research papers: FEBRUARY 11, 2022

More information: https://www.iaea.org/events/evt2006108

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RETROSPECTIVE 2021

The end of the year 2021 is approaching and we want to make a small retrospective of the activities developed by **REPROLAM** throughout this year. The following webinars and activities were held:

1) Safety Assessments of Facilities and activities. Towards a Comprehensive Safety Assessment - 01/15/2021
2) Experiences of the implementation of the National Dose Registry for Latin America and Spain - 3/11/2021
3) Bases for Internal Occupational Dosimetry and Current Challenges in the Latin American Region- 11/31/2021
4) Quality and Radiological Protection of the Patient in Latin America: Actions in progress- 8/26/2021
5) Use of Computational Dosimetry in support of radiological emergencies- 06/30/2021
6) Toolkit for the implementation of the 10 Actions of the Bonn Call - 10/28/2021
7) Status of Radiation Protection in NORM industries - 11/25/2021
8) Support, through the IAEA_ RLA 9088 project, to 18 personal dosimetry services for participation in the Eurados intercomparison exercise in terms of Hp (10).

COURSES

1) Virtual Training Course in the Application of the Different Cytogenetic Assays in Occupational Overlay Scenarios - May 20 and 21, 2021

2) Virtual course for on-site control of internal exposure to I-131 in nuclear medicine services aimed at end users- 11/30 and 12/3/2021

Much has been achieved by all Reprolam thematic area coordinators and we are planning more activities for next year, with the aim of strengthening radiological protection in the Latin American and Caribbean region. We thank everyone who contributed to these activities.

We wish a Merry Christmas and 2022 full of blessings and peace.

Visit our website for more information:http://www.reprolam.com/
How to contact: reprolam2020@gmail.com