

Initiatives for the enhancement of the regulatory and metrological infrastructures needed to ensure radiation safety in industrial activities involving NORM in TC Europe



K.L. Karfopoulos, D. Mitrakos K. Kehagia, C. Potiriadis
Environmental Radioactivity Monitoring Department
Greek Atomic Energy Commission (EEAE)
konstantinos.karfopoulos@eeae.gr

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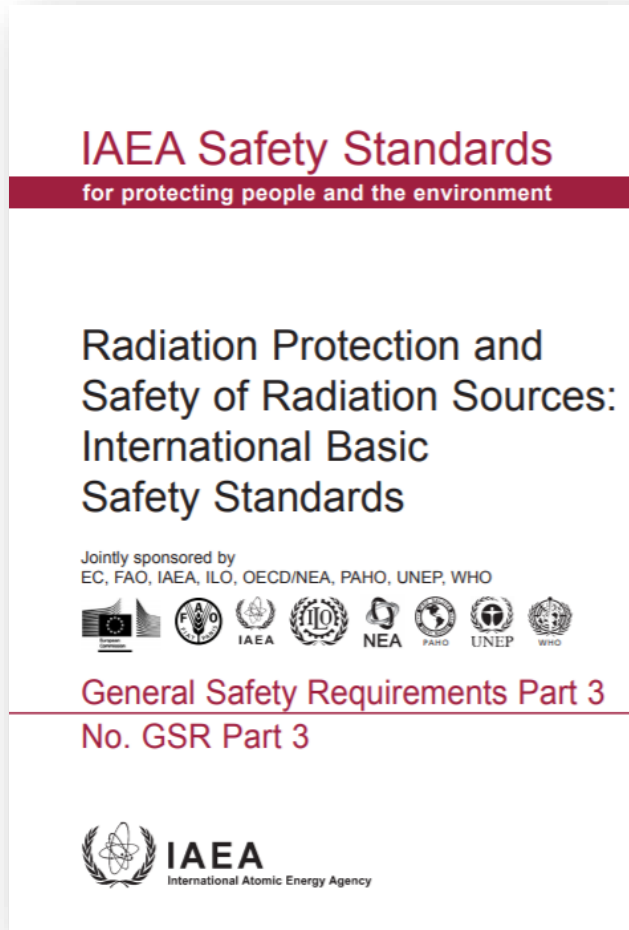


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Introduction

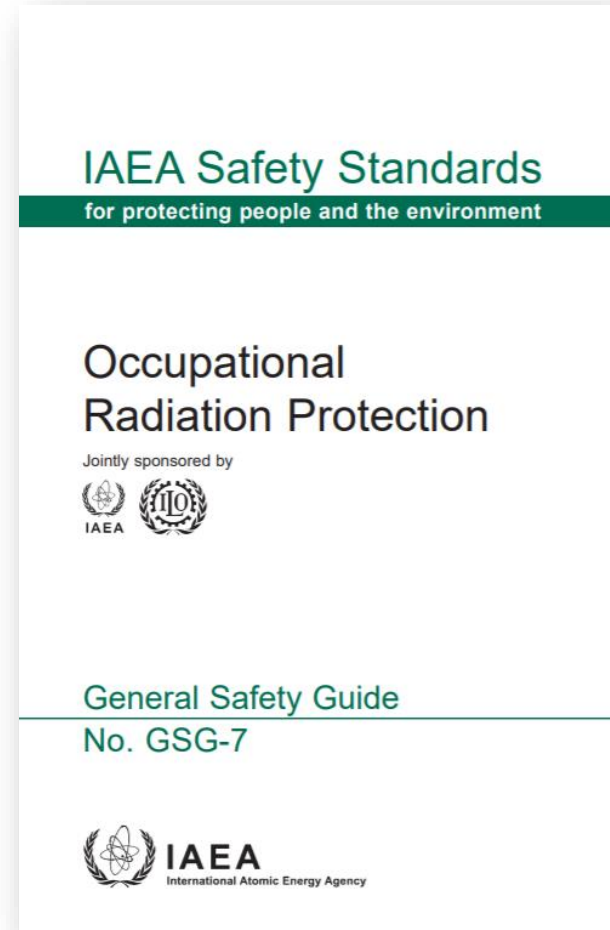
*Shall
statements*



2014

- Establishes **the requirements that must be met** to **ensure the protection** of people and the environment, both now and in the future

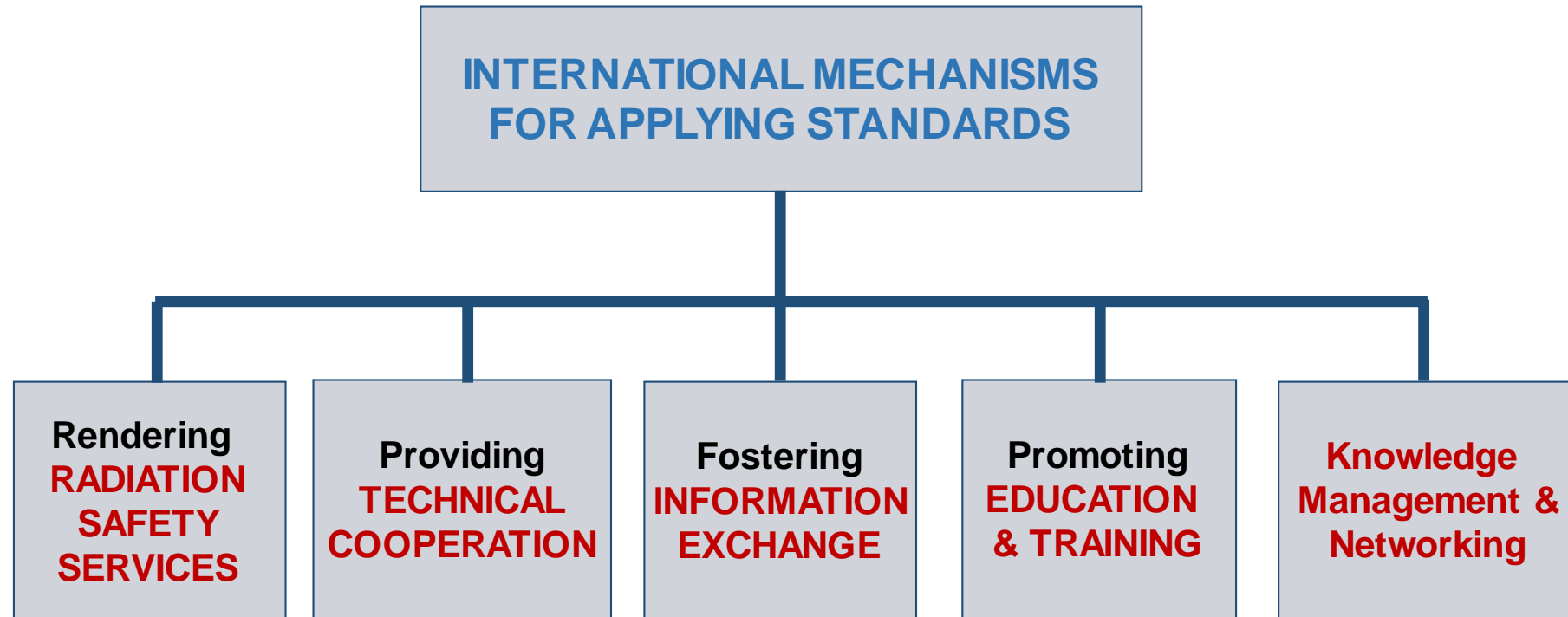
*Should
statements*



2018

- Provide **recommendations and guidance** on how to comply with the safety requirements,
- Present international **good practices**, and increasingly they **reflect best practices**, to help users striving to achieve high levels of safety.

Introduction



Setting the scene

- The publication of the revised International Basic Safety Standards brings new challenges to
 - the regulators,
 - operators and
 - workersin implementing the occupational radiation protection requirements in **different exposure situations**.
- It is commonly agreed that NORM regulations have **socio-economic consequences**
- **Differences in national and international NORM regulations and standards appear to be the result of differences in risk management policy** rather than differences in **underlying scientific information**

Setting the scene

B.1. Radiation Protection of Patients, Workers and the Public

Trends

There ***is an increasing awareness among MS*** of the need for **the protection of workers in different NORM industry sectors and the graded approach to optimize** the use of regulatory and operators resources for proper management of worker protection elaborated in the GSR Part 3.



Setting the scene ... in Europe

Council Directive
2013/59/Euratom



Basic safety standards for protection against the dangers arising from exposure to ionizing radiation

- Directive 96/29/Euratom, Basic Safety Standards
- Directive 97/43/Euratom, Medical Exposures
- Directive 89/618/Euratom, Public Information
- Directive 90/641/Euratom, Outside Workers
- Directive 2003/122/Euratom, Control of high-activity sealed radioactive sources and orphan sources
- Commission Recommendation 90/143/Euratom, Radon

A single coherent document for medical, industrial and environmental activities / facilities

Setting the scene ... in Europe

- Radiation protection **experience is lacking in many industrial sectors**, except uranium mining community.
- Radiological issues of NORM industries can be generally characterized, but radiological protection management **should be site and activity specific**.
- Need to develop a **common language** for engaging open and **transparent dialogues** with **stakeholders**.
- Need for a **structured and graded approach** to radiological **risk management**.
- The focus on **conventional worker health and safety** issues will assist in addressing radiation protection issues
- Building and/or maintaining **stakeholder trust** is a challenge

HERCA Workshop

NORM and Building Materials

BERGEN / 24-26 May 2016

REPORT on the HERCA Workshop

Organised by HERCA with the support of NRPA, CSN, ASN
in the framework of the HERCA Action Plan in relation to the transposition
and implementation of Directive 2013/59/Euratom (Euratom-BSS)



Message received...

Proposal for an

IAEA TC Regional Project

“Enhancing regulatory and metrological infrastructures needed to ensure radiation safety in industrial activities involving NORM” (RER2018026)

- 4 years starting from 2020

Scope

- the establishment and/or enhancement of **national legislative and regulatory frameworks** for the operation of the industries involving NORM and the management of the corresponding residuals; **harmonizing and strengthening national capabilities in Europe**
- the enhancement of the MS capabilities to perform **measurements on the basis of a radiation protection assessment** in industrial activities involving NORM.

IAEA Technical cooperation programme

- Technical cooperation seeks to **forge human and institutional capacity in Member States** to safely utilize nuclear technologies to address **local needs, global issues and contribute to national development**.
- The IAEA's technical cooperation programme is the primary mechanism for delivering the Agency's capacity-building services to its Member States.
- The programme supports the safe and secure application of nuclear technology for sustainable socioeconomic development in Member States.
- The TC programme is developed through a **consultative process with MS** to identify the priority development needs using a **results-based management approach**.

<https://www.iaea.org/services/technical-cooperation-programme>



IAEA Technical cooperation programme

- The programme team includes the:
 - National Liaison Officer,
 - Counterpart,
 - IAEA staff (Tos, PMOs etc.)
 - appropriate thematic institutions in MS,
 - and other partners.
- The national technical cooperation programme identifies stakeholders, end users and partners to ensure that the programme takes all possible participants into account.



IAEA Technical cooperation programme

- All Member States are eligible for support through technical cooperation projects

- Technical cooperation projects can be

- national
- **regional**
- interregional

Why?

- its main aim is to address common needs of the Member States
- provide a common understanding of the BSS requirements and recommendations in relation to NORM
- lead to a common and harmonized approach

TC Europe Region: (Eastern Europe and Central Asia)

Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Georgia, Greece, Hungary, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Malta, Montenegro, North Macedonia, Poland, Portugal, Republic of Moldova, Romania, Russian Federation, Serbia, Slovakia, Slovenia, Tajikistan, Turkey, Ukraine, Uzbekistan



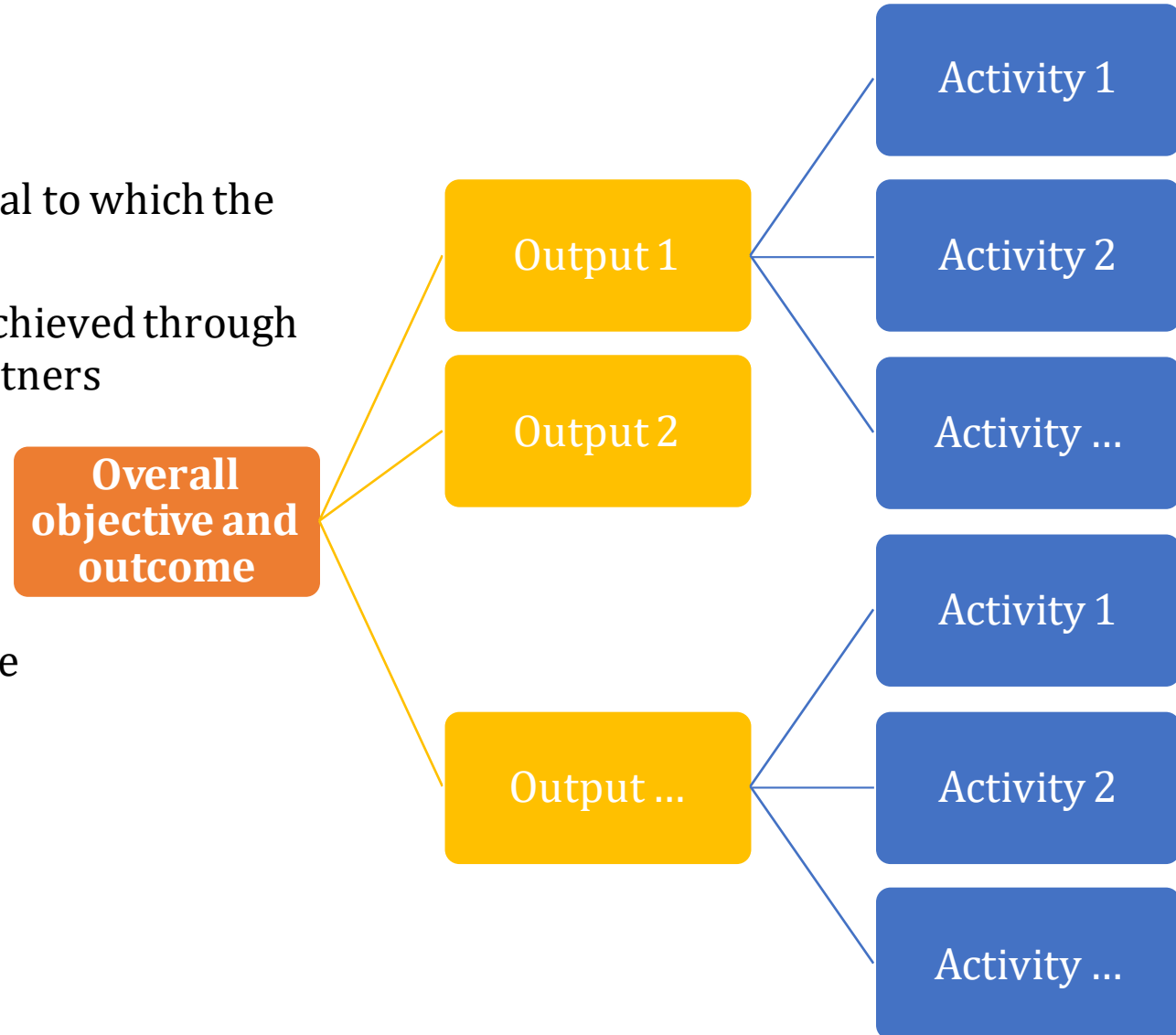
Design of the project on the basis of the IAEA Logical Framework Matrix (LFM)

Overall objective: reflects the long term goal to which the project contributes

Outcome: the planned result of a project, achieved through the collective effort of stakeholders and partners

Outputs: is the product that results from the completion of activities within a project

Activities: are actions taken or work performed to convert inputs into specific output



Design of the project on the basis of the IAEA Logical Framework Matrix (LFM)

Overall objective:

To enhance the MS regulatory and metrological infrastructures in reference to industries involving NORM ensuring the radiation protection of the workers and the environment in compliance with the IAEA BSS

Output 1

Common understanding of the BSS requirements (GSR Part III) in relation to NORM obtained

Output 2

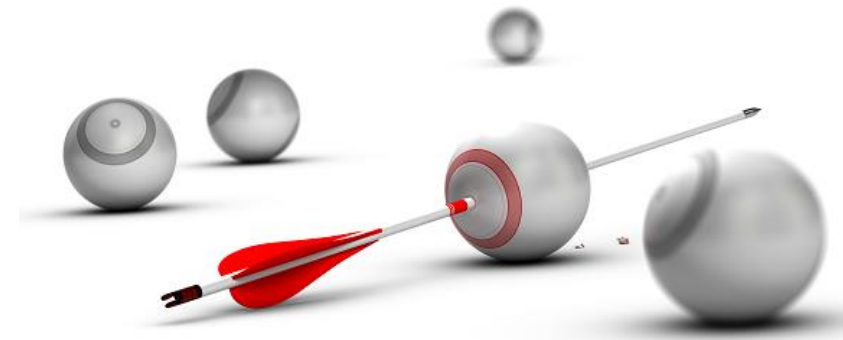
Regulatory guidance in NORM involving industries based on the graded approach and in compliance with the BSS requirements

Output 3

Measurements implemented within the framework of the national monitoring and surveillance strategies of the NORM industries

Outcome – Specific Objective:

To enhance the MS regulatory and metrological infrastructures in reference to industries involving NORM ensuring the radiation protection of the workers and the environment in compliance with the IAEA BSS



Project Activities

Output 1 – Common understanding

- **2 Regional Workshops** on sharing experience on occupational exposure in industrial activities involving NORM

Output 2 – Regulatory guidance

- **Regional Workshop** on sharing experience and report progress in developing regulatory guidance for the control of industrial activities involving NORM – Stakeholders involvement
- **Regional Workshop** on sharing experience on performing a prior radiological evaluation of possible exposures in industrial activities involving NORM

Output 3 – Measurements

- Training in nuclear analytical techniques within the framework of the monitoring of industrial activities involving NORM combined with an **Intercomparison for the radioanalytical analysis of NORM samples**
- Evaluating the results of the Intercomparison for the radioanalytical analysis of NORM samples

Action Plan

	Q1	Q2	Q3	Q4
2020	Regional Workshop – Output 1			Training course & Intercomparison – Output 3
2021		Regional Workshop – Output 2		
2022	Regional Workshop – Output 1			Intercomparison evaluation – Output 3
2023		Regional Workshop – Output 2		

Funding of the project: 450000 €
(participation of MS)

Other aspects taken into account

Physical infrastructure and human resources:

- Laboratories that are members of the **IAEA ALMERA network** able to support the metrological part of the project
- **2 IAEA Regional Training Centres**
 - ✓ Greek Atomic Energy Commission (EEAE), Greece (English)
 - ✓ International Sakharov Environmental Institute of the Belarus State University, Belarus (Russian)

Partnerships to be considered:

HERCA (Heads of Radiation Protection Authorities) association and more specifically the Natural Radiation Sources Working Group,

ENA (European NORM Association),

EEAC (The European Environment and Sustainable Development Advisory Councils)

Project Evaluation

Indicators

- # MS following an harmonized approach regarding the control of industrial activities involving NORM
- # MS participating the workshops
- # MS participating and reporting for the intercomparison exercise

Data Collection

- RASIMS I and/or II
- ORPAS missions

Means of verification

- **Project Progress Annual Reports (PPARs)**
- Reports, Guidance papers, TECDOCs, Conference papers produced by the MS in the framework of the partnership.
- Regular workshops and training courses
- Intercomparison exercise



Summary

- Implementing the occupational radiation protection requirements in industrial activities involving NORM is challenging.
- A IAEA TC Regional Project was proposed and approved to be funded in order to assist MS to enhance the MS regulatory and metrological infrastructures
- The project will last 4 years and consists of
 - Workshops / Training Courses
 - Intercomparison
 - Evaluation and Monitoring Mechanisms



Thank you very much!



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