



IAEA ORPNET WEBINAR

26TH February 2025

International NORM XI Symposium

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Scientific Secretary NORM XI

Ghana Atomic Energy Commission





NORM XI

- Previous NORM Symposia: Netherlands (1997), Germany (1998), Belgium (2001), Poland (2004), Spain (2007), Morocco (2010), China (2013), Brazil (2016), US (2019), the Netherlands (2022)
- The IAEA is one of the main contributors in the organisation of NORM symposia and has a leading technical role from NORM IV onwards
- First time in South Saharan Africa





From NORM X to NORM XI

- Building on the foundations of 25 years of hard work
 - ✓ Significant **increase** of the **regulations** including provisions on NORM
 - ✓ Much more guidance and explanation is available
- Have made **great progress since 1997** and can be confident that there is now a **regulatory framework** in all countries
- **Active and vibrant** NORM community
- **More work** to do, and it is important to **attract** and **develop** the **next generation**
- Future: explicitly recognise the **potential largescale effects** in optimisation?





NORM XI Symposium – IAEA supported event

11th International Symposium

- ✓ Every 3 years, and 1st time in South Saharan Africa
 - Accra, Ghana
 - **13-17 October 2025**
- ✓ Jointly organized by the Ghana Atomic Energy Commission (GAEC), the Ghana Association for Radiation Protection (GARP), the African ALARA Network (AFAN) and the Nuclear Regulatory Authority, Ghana (NRA)

- ✓ Symposium theme:
 - “Broadening Optimization in Industrial Processes Involving NORM: A Focus on Sustainability in Extractive Industries”***
- ✓ In cooperation with the **IAEA** (May 2024)
- ✓ Supported by **IRPA, ICRP, UNSCEAR, ILO**
- ✓ Site events / training courses
- ✓ Network sessions





NORM XI Symposium – web sites

IAEA
International Atomic Energy Agency

11th International Symposium on Naturally Occurring Radioactive Material (Organized in cooperation with the IAEA)

13 – 17 Oct 2025
Accra, Ghana
Event code: **EVT2401864**

The Ghana Atomic Energy Commission, Ghana Association for Radiation Protection, African ALARA Network and the Nuclear Regulatory Authority, Ghana, in association with the International Atomic Energy Agency, are organizing the Eleventh International Symposium on Naturally Occurring Radioactive Material (NORM XI) in Accra, Ghana.

NORM XI, the first NORM Symposium to be organized in Sub-Saharan Africa, will bring together industrial, technical and scientific communities and regulatory bodies involved in the management of naturally occurring radioactive material (NORM), with the aim to harmonize and streamline international approaches to radiation protection of workers, the public and the environment, and residue management in industrial processes involving NORM.

The theme of the Symposium is 'Optimising Social, Environmental and Economic Performance Impacts from Industrial processes involving NORM: Policy, Regulatory, and Technical aspects including Valorization of Tailings and Residues generated in Mining'. Industrial processes involving water treatment, oil and gas production, and legacy sites, as well as progress made since the 2022 NORM X Symposium, will also be discussed.

The Symposium will provide presentations, discussion forums and networking opportunities, refresher training courses, and side events by relevant organizations, based on the latest research and scientific information, the application of a graded approach, the use of NORM residues, and optimization of protection and safety. The event is intended for operators of industrial processes involving NORM, technical service providers, radiation protection professionals including researchers and regulators.

Related resources

- NORM XI
- NORM
- ORPNET
- ISEMIR-N
- REGSUN
- Webinars on occupational radiation protection

Contacts

- NORM XI contact 1
- NORM XI contact 2
- IAEA contact

<https://www.iaea.org/events/evt2401864>

Symposium will take place in Accra, Ghana | Oct 13 - 17, 2025

Home | About Symposium | Programme | Guidelines | Key Dates | Call For Papers | Registration | Local Info

Welcome to NORM XI Symposium

11th International Symposium on Naturally Occurring Radioactive Materials (NORM)
October 13-17, 2025 | Accra-Ghana

Know more >>

Programme Schedule | Registration | Submit Abstract

Early Bird Registration Deadline	Paper Submission Deadline	Registration Deadline	Symposium Date
March x, 2024	March x, 2024	March x, 2024	October 13 - 17, 2025

The Ghana Atomic Energy Commission (GAEC), the Ghana Association for Radiation Protection (GARP), the African ALARA Network (AFAN) and the Nuclear Regulatory Authority, Ghana (NRA) are pleased to jointly host the 11th International Symposium on Naturally Occurring Radioactive Material (NORM XI), scheduled to take place from 13th to 17th October 2025 in Accra, Ghana.

www.normxi2025.com



Instagram: normxi2025



LinkedIn: NORMXI SYMPOSIUM



Committees - *established*

▪ International Steering Committee

- ✓ Chairperson: Marta Garcia-Talavera San Miguel (CSN, Spain)
- ✓ Advising the Scientific Programme Committee (SPC) about the scientific framework of the Symposium, i.e., to establish the scientific themes, sessions, invited speakers and refresher courses

▪ Scientific Programme Committee

- ✓ Chairperson: David Andrew Bradley (Sunway University, Malaysia)
- ✓ Establishing the details of the scientific programme, including suggestions for session chairs and invited speakers, reviewing abstracts, summaries of sessions, etc.

▪ Local Organizing Committee

- Chairperson: Joseph Kwabena Amoako (GARP)
- ✓ Local arrangements
- ✓ GAEC, GARP, AFAN and NRA

The Symposium's President

Prof. Samuel Boakye Dampare

D.G. Ghana Atomic Energy Commission



NORM XI Symposium

- NORM management challenges and progress in [Sub-Saharan Africa](#)
- Forum for the industrial, technical and scientific communities, and regulatory bodies involved in the management of NORM (in line with the IAEA Safety Standards)
- Dissemination of
 - ✓ New regulatory approaches
 - ✓ Research, scientific information
 - ✓ Knowledge on [RP of workers, the public](#) and the environment for a wide range of NORM industry sectors, e.g., mining, including U/Th mining and processing, as well as other industrial processes involving NORM (oil and gas production, and legacy sites)



Symposium topics



Fundamental and practical implementation aspects of regulations applicable to NORM in line with the international safety standards: Strategies to support the circular economy



Optimization of radiation protection in different situations involving exposure to NORM: Embedding the UN SDGs



Application of the graded approach to the regulation of NORM: Challenges and case studies



Sustainable management of NORM: Valorisation of NORM tailings and residues. Fostering emerging markets of secondary raw materials



Environmental aspects of NORM: Discharges and management of residues



NORM sampling and radiological characterization: Metrology and QA



Symposium topics (Cont'd)



ORP in NORM involving industries, including exposure to Rn-222 and Rn-220



Assessment of doses to people and non-human species



Decommissioning and remediation of legacy sites: Lessons learned and innovative approaches



Radiation protection aspects of NORM transport, trade and commerce



Stakeholder engagement and community development projects



Strategies for capacity building and knowledge management



Symposium topics, opening of registration and abstract submission

- Web-site- updated
- Registration link: <https://normxi2025.com/registration/>
- Abstract link: <https://normxi2025.com/submission-of-abstracts/>
- 2nd announcement 24TH February

Login to submit your abstract

KINDLY NOTE THE FOLLOWING:

- If you do not have a login account, kindly click on "Create an Account" shown in the section below.
- This account is **ONLY FOR ABSTRACT SUBMISSION AND TRACKING**.

Please sign in to visit the Abstract Dashboard

Sign In Forgot Password Reset

Username or Email

Password

Enter security code (required) j i 3 j

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NORM XI Symposium Registration

Attendee Registration

* Required

1. Full Name

Enter your answer

2. Prefix

Select your answer

3. Gender

Select your answer

4. Email *

Enter your answer

5. Organization *

Enter your answer

6. Country

Select your answer

NORM XI SYMPOSIUM 2025

11th International Symposium on Naturally Occurring Radioactive Material

October 13-17, 2025
@ Mensvic Grand Hotel,
Accra - Ghana

WWW.NORMXI2025.COM

CALL FOR ABSTRACTS!

SYMPOSIUM THEME | Broadening Optimization in Industrial Processes Involving NORM: A Focus on Sustainability in Extractive Industries.

Abstract Submission Details

Authors must submit abstracts for oral papers and poster presentations by 15 May 2025. The following topical areas are of particular interest:

- ✓ Fundamental and practical implementation aspects of regulations applicable to NORM in line with the international safety standards: Strategies to support the circular economy.
- ✓ Optimization of radiation protection in different situations involving exposure to NORM: Embedding the UN SDGs.
- ✓ Application of the graded approach to the regulation of NORM: Challenges and case studies.
- ✓ Sustainable management of NORM: Valorisation of NORM tailings and residues. Fostering emerging markets of secondary raw materials.
- ✓ Environmental aspects of NORM: Discharges and management of residues.
- ✓ NORM sampling and radiological characterization: Metrology and quality assurance.
- ✓ Occupational Radiation Protection in NORM involving industries, including exposure to radon and thoron.
- ✓ Assessment of doses to people and non-human species.
- ✓ Decommissioning and remediation of legacy sites: Lessons learned and innovative approaches.
- ✓ Radiation protection aspects of NORM transport, trade and commerce.
- ✓ Stakeholder engagement and community development projects.
- ✓ Strategies for capacity building and knowledge management.

For symposium information and abstract submission instructions, visit:
<https://normxi2025.com/abstract-information/>

Organized By

In Cooperation With

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Broadening Optimization in Industrial Processes Involving NORM: A Focus on Sustainability in Extractive Industries



NORM XI

11th International Symposium on Naturally Occurring Radioactive Material (NORM)

October 13-17, 2025
@ Mensvic Grand Hotel,
Accra - Ghana

THEME

Broadening Optimization in Industrial Processes Involving NORM: A Focus on Sustainability in Extractive Industries

SYMPOSIUM HIGHLIGHTS

- ✓ 5 days of scientific presentations
- ✓ Refresher Courses
- ✓ Social Events
- ✓ Trade Exhibition

2ND ANNOUNCEMENT

Contact Us

✉ info@normxi2025.com | normxi2025@outlook.com
☎ +233 27 772 6656 | 233 24 212 0986 | + 233 24 273 3102

SYMPOSIUM PROGRAMME

The NORM XI Symposium provides a unique opportunity for industry leaders, researchers, regulators, and other stakeholders to come together and share the latest advancements, innovations, and best practices in NORM management.

The programme will feature a series of keynote plenary presentation sessions, technical topical sessions, poster sessions, plenary summaries, panel discussions, and networking events - all focused on the critical challenges and opportunities in this rapidly evolving field. The plenary sessions, featuring world-leading NORM experts and NORM practitioners, will highlight the current state of key topics. The final plenary session will identify the principal conclusions and outcomes from the Symposium. The preliminary programme contains twelve topical sessions. These sessions will provide oral presentations of submitted papers and selected keynote presentations, reflecting the scientific and practical areas defined by the topics and subjects:

- 01 Fundamental and Practical Implementation Aspects of Regulations Applicable to NORM in line with the international safety standards: Strategies to support the circular economy**
 - This theme explores the regulatory frameworks governing NORM, emphasizing compliance with international safety standards such as IAEA GSR Part 3 and its application to NORM management
 - It will examine practical strategies for integrating these regulations into industry practices, promoting the circular economy by minimizing waste and enhancing resource recovery.
 - Case studies and experiences demonstrating successful regulatory implementation and provide insights into effective practices that align with sustainable goals.

- 02 Optimization of Radiation Protection in Different Situations Involving NORM: Embedding the UN SDGs.**

- This thematic area focuses on optimizing radiation protection strategies in various contexts of exposure to NORM, including industrial and environmental settings.
- It will highlight the integration of the United Nations Sustainable Development Goals into radiation protection policies aligning radiation protection strategies with sustainable development goals.
- Innovative approaches to minimize exposure while supporting sustainable development, emphasizing the balance between economic growth and radiation safety.

- 03 Application of the Graded Approach to the Regulation of NORM : Challenges and case studies.**

- This topic addresses the challenges (gaps and barriers) and successes of applying a graded approach to NORM regulation.
- Case Studies on Graded Approach Implementation from different industrial processes involving NORM
- Adaptive Management Strategies to develop flexible regulatory frameworks that respond to new data and technologies with potential solutions that can enhance regulatory efficiency and effectiveness.
- Optimizing the regulator and operator resources

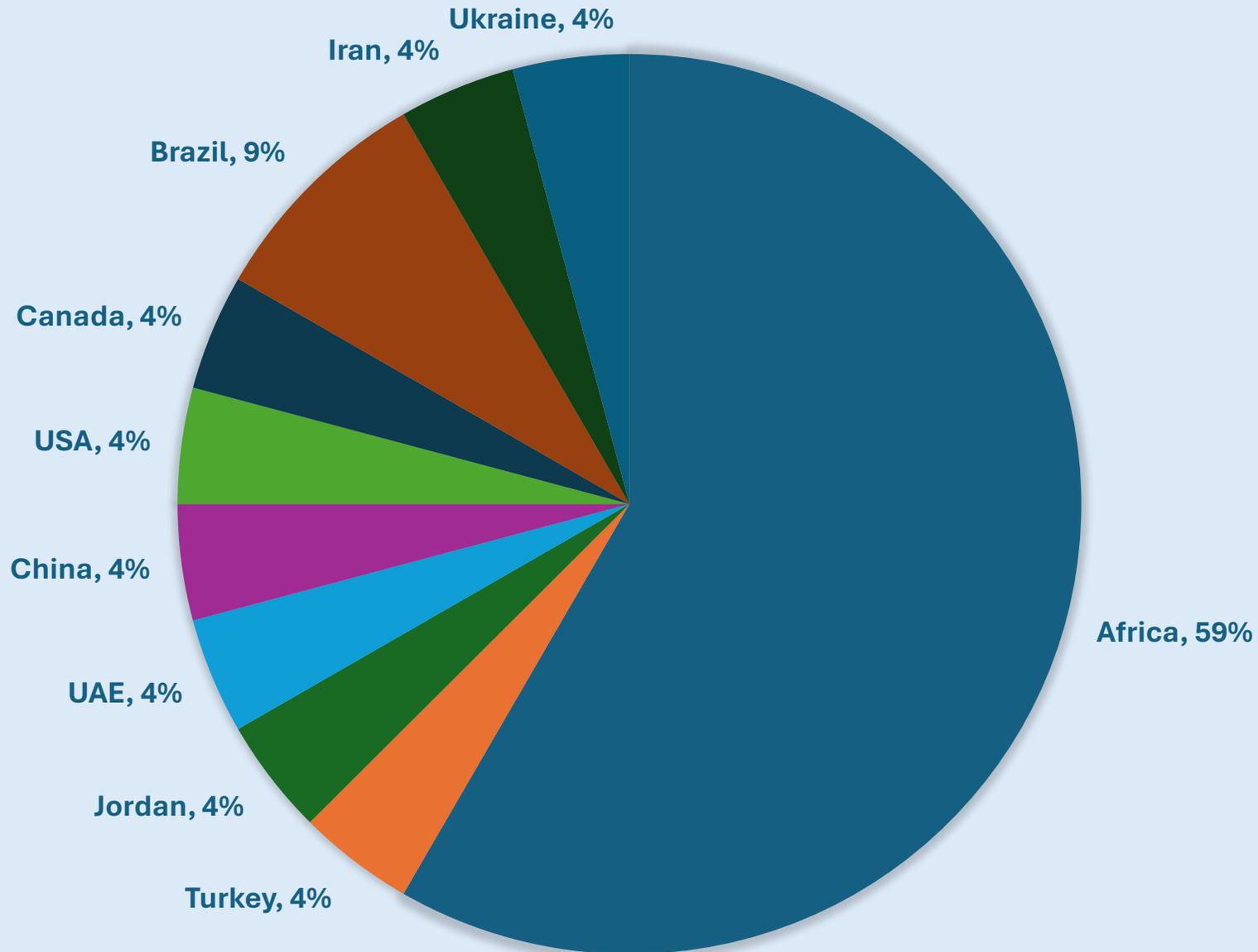
- 04 Sustainable Management of NORM: Valorisation of NORM tailings and residues. Fostering emerging markets of secondary raw materials.**

- This theme will focus on sustainable practices for managing NORM, particularly the valorization of tailings and residues.
- Innovative methods for repurpose of these materials into secondary raw materials, fostering emerging markets.
- Technological advancements and policy frameworks that support sustainable practices, contributing to a circular economy within the extractive industries.
- Lifecycle Assessment to evaluate the environmental impacts of NORM management practices.



WWW.NORMXI2025.COM

NORM XI Registrations



Broadening Optimization in Industrial Processes Involving NORM: A Focus on Sustainability in Extractive Industries

NORM XI Abstracts Received

Topical Area

Countries

NORM sampling and radiological characterization: Metrology and quality assurance

**Congo, Malaysia, Brazil
Qatar**

Occupational Radiation Protection in NORM involving industries, including exposure to radon and thoron

Kenya , Brazil

Assessment of doses to people and non-human species

Nigeria, Mali

Radiation protection aspects of NORM transport, trade and commerce

Nigeria

Environmental aspects of NORM: Discharges and management of residues

**Brazil, Ghana, Ukraine
South Africa**



IAEA Form B & Form C



IAEA
International Atomic Energy Agency

Form B
EVT2401864

Form for Submission of a Paper

11th International Symposium on Naturally Occurring Radioactive Material (NORM XI)

Accra, Ghana
13 to 17 October 2025

To be completed by the participant and sent to the competent national authority (e.g. Ministry of Foreign Affairs, Permanent Mission to the IAEA, or National Atomic Energy Authority) of his/her country for subsequent transmission to the International Atomic Energy Agency (IAEA) either by email to: Official.Mail@iaea.org or by fax to: +43 1 26007 (no hard copies needed). Please also send a copy by email to the Scientific Secretary H.B.Okvar@iaea.org and to the Administrative Secretary e.pantelevmonova@iaea.org.

Participants who are members of an invited organization can submit this form to their organization for subsequent transmission to the IAEA.

Deadline for receipt by IAEA through official channels: 16 August 2025

Title of the paper:

Family name(s) and first name(s) of all author(s): e.g. Smith, John	Scientific establishment(s) in which the work has been carried out	City/Country
1.		
2.		



IAEA
International Atomic Energy Agency

Form C
EVT2401864

Grant Application Form

11th International Symposium on Naturally Occurring Radioactive Material (NORM XI)

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Family name(s): (same as in passport)	First name(s): (same as in passport)	Mr/Ms:
Mailing address:		Tel.:
		Fax:
		Email:
Date of birth (yyyy/mm/dd):	Nationality:	

1. Education (post-secondary):

Name and place of institution	Field of study	Diploma or Degree	Years attended from to	

2. Recent employment record (starting with your present post):

Name and place of employer/ organization	Title of your position	Type of work	Years worked from to	

<https://normxi2025.com/abstract-information/>



Training courses (refresher) and site visits

- Training courses
 - Measurement and characterization
 - Practical application of NORM regulations
 - Strategies for proper use of IAEA Safety Standards, Graded approach
 - ICRP course-Hazard / risk assessment
 - Policies and Strategies for the Management of NORM Residues and Wastes
- Site visits
 - Under review with operational sites



KEY DATES

Opening of Registration	October 2024
Call for Abstract Submission	October 2024
Registration Deadline (Early-Bird)	15 March 2025
Abstract Submission Deadline	15 May 2025
Notification of Accepted Abstracts	15 July 2025
Registration only (no paper submission)	No deadline



Symposium Venue

Mensvic Hotel, Accra - Ghana





Exclusive Discounted Hotel Accommodation for Attendees!

We are pleased to offer **special discounted hotel rates** exclusively for attendees of **NORMXI 2025**. Enjoy a comfortable and convenient stay at our partnered hotels, ensuring a seamless conference experience.

Partner Hotels & Discounted Rates

Hotel	Location	Deluxe/Double Price Per Night	Suite Price Per Night
Mensvic Grand Hotel	Lagos Ave	\$150	–
Tomreik Hotel	Lagos Ave	\$100	\$120
Ange Hill Hotel	JRHG+PRX, Ange Hill St	\$100	\$120
Erata Hotel	Ouagadougou Ave	\$90	\$110
MJ Grand Hotel	460 Abotsi St	\$120	\$140
Golden Key Hotel	8 Pretoria Ave	\$70	\$85

Edit

All accommodations come with the following benefits:

– Airport Pickup & Drop-off Available ✈

[Key Dates](#)[Programme Schedule](#)[Registration Fees](#)





- Extended Abstracts to be published by the IAEA
- Virtual option will be available for the Symposium

YOU are all invited to disseminate the information



THANK YOU

In Cooperation With



ICRP

