



IAEA

International Atomic Energy Agency

Atoms for Peace and Development

Workshop on Characterization and Monitoring to Support the Management of Radioactively Contaminated Land

**IAEA Headquarters,
Vienna, Austria**

10 – 14 October 2021

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Information Sheet

Introduction

Contaminated sites and areas requiring environmental improvement exist across the world. Critical to ensuring their clean up and reuse is the ability to characterize and monitor the site before, during and after physical works.

Characterization and monitoring of contaminated land is a multi-disciplinary task requiring a range of expertise and technical backgrounds. It can include the use of in field instrumentation, sampling strategies and techniques, laboratory analysis and data assessment and visualization.

Before starting a characterization project or monitoring programme, it is essential to build an understanding of the potential contaminant sources, the receptors that maybe at risk and the migration pathways. This conceptual site model underpins the development of the characterization or monitoring strategy and all other tasks associated with the management of the radioactively contaminated land.

In general characterization is an iterative process underpinned by systematic planning approach; data maybe collected at different times and through different methods which are then combined to produce the overall status a site. For example, in situ survey techniques provide the opportunity to gain real-time information on the spatial distribution of radioactive contaminants and inform sample collection. Geo-statistics can then be used to integrate and evaluate the data sets to support further characterization, for use in safety assessment, to underpin waste management decisions and/or to inform remedial design.

This training workshop is part of an on-going series of activities organised by the International Atomic Energy Agency's (IAEA's) Decommissioning and Environmental Remediation Section to support Member States in the characterization of radioactively contaminated land.

Since characterization of contaminated land is a multi-disciplinary activity, this workshop is supported by experts from the IAEA's Terrestrial Environmental Laboratory and the Waste and Environmental Safety Section.

Objectives

The objective of the workshop is to increase the knowledge and skills of early career practitioners, scientists, and technicians regarding the key steps in the characterization of radioactively contaminated land.

The workshop will also enable Member States to share good practices and experience related to the methodologies and technologies used for the characterization of radioactively contaminated land.

Topics

This workshop is designed to provide overarching knowledge of the key technical aspects regarding the planning and implementing characterization of radioactively contaminated land. This workshop will comprise lectures, tutorial exercises and equipment demonstrations.

The following topics are expected to be included in the programme:

- Creating a conceptual site model
- Systematic planning for environmental characterisation
- Environmental monitoring with a focus on groundwater monitoring
- Designing and implementing soil and vegetation sampling plans
- Familiarisation, selection and use of in situ radiological survey equipment
- Data visualisation, spatial analysis and mapping using geostatistical techniques.

Target Audience

This an introductory training workshop and is intended for individuals involved the radiological characterization and remediation of radioactively contaminated land. The course is particularly applicable to early career practitioners, scientists and technicians carrying out radiological characterization and groundwater monitoring activities and trainees pursuing a career within the field of radioactive contaminated land management.

The course would also be relevant to project managers responsible for the implementation of radiological characterization programmes.

Working Language

English.

Participation and Registration

All persons wishing to participate in the event have to be designated by an IAEA Member State or should be members of organizations that have been invited to attend.

Nominations will not be considered unless a personal abstract is provided (see additional requirements section).

In order to be designated by an IAEA Member State, participants are requested to send the **Participation Form (Form A)** to their competent national authority (e.g. Ministry of Foreign Affairs, Permanent Mission to the IAEA or National Atomic Energy Authority) for onward transmission to the IAEA by **12 August 2022**. Participants who are members of an organization invited to attend are requested to send the **Participation Form (Form A)** through their organization to the IAEA by the above deadline.

Selected participants will be informed in due course on the procedures to be followed with regard to administrative and financial matters.

Additional Requirements

Participants should submit with their official designation a personal abstract describing their experience and interest in the topics of the workshop and their respective country's needs.

The personal abstract should include at least the following:

- Job title and description of duties
- Name and brief description of the contaminated site(s) where they are working on or have recently worked
- Specific contaminants and environmental media they are interested in
- Whether they have participated in other training events on characterization and/or monitoring radioactively contaminated land.

The selection of the participants will be based on the information provided in the personal abstract.

Prior to attending the workshop, participants must complete three IAEA e-learning modules on environmental remediation and in situ techniques for radiological characterization of sites. The e-learning will be assigned via the IAEA Learning Management System (CLP4NET) to track the completion of the e-learning.

Participants are also expected to be familiar with the following IAEA publications prior to attending the workshop:

- Remediation Strategy and Process for Areas Affected by Past Activities or Events, IAEA Safety Standard Series No. GSG-15, IAEA, final draft available. (Note, this Safety Standard replaces Remediation Process for Areas Affected by Past Activities and Accidents, IAEA Safety Standards Series No. WS-G-3.1, 2007).
- Guidelines on Soil and Vegetation Sampling for Radiological Monitoring, Technical Reports Series No. 486, IAEA, 2019.

- In Situ Analytical Characterization of Contaminated Sites Using Nuclear Spectrometry Techniques: Review of Methodologies and Measurements, IAEA/AQ/49, IAEA Analytical Quality in Nuclear Applications Series No. 49, IAEA, Vienna, 2017.
- Guidelines for radioelement mapping using gamma ray spectrometry data, IAEA-TECDOC-1363, IAEA, 2003.

Expenditures and Grants

No registration fee is charged to participants.

The IAEA is generally not in a position to bear the travel and other costs of participants in the event. The IAEA has, however, limited funds at its disposal to help meet the cost of attendance of certain participants. Upon specific request, such assistance may be offered to normally one participant per country, provided that, in the IAEA's view, the participant will make an important contribution to the management of radioactively contaminated land in his or her State's.

The application for financial support should be made using the **Grant Application Form (Form C)**, which has to be stamped, signed and submitted by the competent national authority to the IAEA together with the **Participation Form (Form A)** by **6 August 2021**.

Venue

The event will be held at the Vienna International Centre (VIC), where the IAEA's Headquarters are located. Participants must make their own travel and accommodation arrangements.

General information on the VIC and other practical details, such as a list of hotels offering a reduced rate for IAEA participants, are listed on the following IAEA web page:

www.iaea.org/events.

Participants are advised to arrive at Checkpoint 1/Gate 1 of the VIC one hour before the start of the event on the first day in order to allow for timely registration. Participants will need to present an official photo identification document in order to be admitted to the VIC premises.

Visas

Participants who require a visa to enter Austria should submit the necessary application to the nearest diplomatic or consular representative of Austria at least four weeks before they travel to Austria. Since Austria is a Schengen State, persons requiring a visa will have to apply for a Schengen visa. In States where Austria has no diplomatic mission, visas can be obtained from the consular authority of a Schengen Partner State representing Austria in the country in question.

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Subsequent correspondence on scientific matters should be sent to the Scientific Secretary/Secretaries and correspondence on other matters related to the event to the Administrative Secretary.

Event Web Page

Please visit the following IAEA web page regularly for new information regarding this event:

www.iaea.org/events/EVT2103802