IAEA
International Atomic Energy Agency
Atoms for Peace

Training Workshop on In Situ Radiological Assessment: Practical Methods and Techniques

IAEA Headquarters Vienna, Austria and

IAEA Laboratories Seibersdorf, Austria

26 – 30 November 2018

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Information Sheet

A. Background

Over the last 20 years, the Nuclear Science and Instrumentation Laboratory (NSIL) of the International Atomic Energy Agency (IAEA) has played a leading role worldwide in the effective use of nuclear instrumentation and nuclear spectrometry techniques, including the development of portable systems and analytical methodologies for in situ radiological and materials characterization in Member States' priority areas, such as on-site environmental assessment, mineral prospecting and site remediation projects. In addition to these research activities, the NSIL has supported IAEA technical cooperation projects by providing training in nuclear instrumentation to hundreds of research fellows and visiting scientists. The NSIL has extensive experience in providing training on, and recommendations for, the implementation of nuclear spectrometry techniques.

The state of the art in portable instrumentation and interpretation tools offers multiple choices for implementing in situ surveys for a variety of environmental scenarios and compartments. In situ

techniques have reached a high level of analytical performance and offer many advantages over other more traditional techniques, including fast determination of contaminant concentrations/activities, identification of hot spots, cost reduction for the investigations, and fast determination of the contaminant's spatial distribution. In situ measurements can also improve the sampling strategies for high accuracy laboratory analysis if needed.

Geostatistics-based interpretation of large data sets allows a model to be simulated that can be used to describe the statistical and geostatistical variability of the measurement results. It can provide useful tools to represent an estimate of the distribution of the contaminants, to evaluate the volume of contaminated material and to support decision making in environmental remediation processes.

As there is an uneven level of experience and access to such techniques across IAEA Member States, many countries could benefit from the advantages of training on these topics to support their investigations related to different environmental problems. The NSIL is offering training on in situ techniques through workshops and technical cooperation projects.

B. Objectives

The purpose of the workshop is to develop the capabilities and skills of scientists and technicians from Member States to use in situ techniques for environmental characterization purposes. The workshop will help to share knowledge on approaches for conducting in situ measurements and representing results in maps.

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

- Hands-on training on the use of portable detectors;
- Measurement strategies;
- Data handling and interpretation, including:
    - Data loading
    - Validation of GPS coordinates
    - Exploratory data analysis of measurement results
    - Creation of maps and representation of measurement results.

C. Workshop Format

Participants should submit an abstract describing their interest in the topics of the workshop and their respective country's needs, along with their official designation.

The workshop will consist of lectures and practical demonstrations. Participants are encouraged to prepare a presentation describing their needs in a field of relevance to the workshop and are encouraged to engage in discussions on possible projects involving the use of in situ techniques.

The official language of the workshop is English. No interpretation will be provided. It is expected that the workshop will start at 9.30 a.m. on Monday, 26 November 2018 and conclude by 4 p.m. on Friday, 30 November 2018.

D. Administrative and Financial Arrangements

The selected candidates will in due course be sent full details of the procedures to be followed with regard to administrative and financial matters.

No registration fee is charged to participants. The costs of the workshop facilities and of logistical support will be borne by the IAEA.

As a general rule, the IAEA does not pay the costs for attendance at the workshop. However, limited funds may be made available to facilitate the attendance of selected participants and approved in accordance with the current IAEA rules and regulations. Travel and subsistence expenses of participants may be borne by the IAEA utilizing the limited funds that are available to help cover the cost of certain participants. Such assistance can be offered upon specific request to normally one participant per country, provided that, in the IAEA's view, the participant on whose behalf assistance is requested will make an important contribution to his or her State's arrangements for the use of ion beam analysis techniques. The application for financial support should be made at the time of nominating the participant. If Governments wish to apply for financial support on behalf of their nominees, they should address specific requests using the attached Grant Application Form (Form C) to the IAEA Scientific Secretary.

It should be noted that compensation is not payable by the IAEA for any damage to or loss of personal property. The IAEA also does not provide health insurance coverage for participants in meetings, workshops or training courses or for consultants. Arrangements for private insurance coverage on an individual basis should therefore be made. The IAEA will, however, provide insurance coverage for accidents and illnesses that clearly result from any work performed for the IAEA.

E. Registration and Participation

The workshop may be attended only upon official nomination. Participants should complete the attached Participation Form (Form A) and send it to the appropriate national authority (Ministry of Foreign Affairs, Permanent Mission to the IAEA or National Atomic Energy Authority) for subsequent transmission to the IAEA, not later than **09 November 2018**. Nominations received after that date or applications sent directly by individuals or by private institutions cannot be considered. Nominating Governments will be informed in due course of the names of the selected candidates and at that time full details will be given of the procedures to be followed with regard to administrative and financial matters. For Member States receiving technical cooperation assistance, applications for financial support should be made at the time of nomination the participant.

The workshop will be of interest to professionals working on environmental assessment of sites impacted by enhanced contents of naturally occurring radioactive materials or who have been designated by their national authorities to provide an assessment of their country's needs in these fields. Individuals

wishing to be considered for participation are expected to submit a short abstract describing their interest in the topics of the workshop and their country's needs, along with their official designation.

F. Local Arrangements

It is the responsibility of all participants to make their own travel arrangements to and from Vienna, Austria. Detailed information on accommodation, local transport to and from the workshop venue, and other organizational details will be sent to all designated participants well in advance of the workshop.

G. Visas

Participants who require a visa to enter Austria should submit the necessary application to the nearest diplomatic or consular representative of Austria as soon as possible. An official letter of invitation will be issued to all participants by the IAEA Scientific Secretary.

H. Deadlines and Key Dates

- **09 November 2018:** Submission of abstracts and requests to the IAEA for participation and financial support.
- **12 November 2018:** Participants are informed of the acceptance of their nominations and of their requests for financial support.

I. Organization

Scientific Secretary

Mr Roman Padilla-Álvarez
Nuclear Instrumentation Specialist
Nuclear Science and Instrumentation Laboratory
Physics Section
Division of Physical and Chemical Sciences
Department of Nuclear Sciences and Applications
International Atomic Energy Agency
Vienna International Centre
1400 VIENNA
AUSTRIA
Tel: +43 1 2600 28244
Fax: +43 1 2600 28222
Email: R.Padilla-Alvarez@iaea.org

Administrative Secretary

Ms Sakura Gyay de Goyaz
Team Assistant
Nuclear Science and Instrumentation Laboratory
Physics Section
Division of Physical and Chemical Sciences
Department of Nuclear Sciences and Applications
International Atomic Energy Agency
Vienna International Centre
1400 VIENNA
AUSTRIA
Tel: +43 1 2600 28227
Fax: +43 1 2600 28222
Email: S.Gyay-De-Goyaz@iaea.org