The Abdus Salam International Centre for Theoretical Physics

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United Nations Educational, Scientific and Cultural Organization

IAEA International Atomic Energy Agency

Joint ICTP-IAEA Workshop on Evaluating Groundwater Pathways and Residence Times as part of Site Investigations and Post-Closure Safety Assessments for Geological Repositories

17 - 21 June 2013

(ICTP, Miramare, Trieste, Italy)

The Abdus Salam International Centre for Theoretical Physics (ICTP), Trieste, Italy and the *International Atomic Energy Commission, Vienna, Austria* will organize a ***Joint ICTP-IAEA Workshop on Evaluating Groundwater Pathways and Residence Times as part of Site Investigations and Post-Closure Safety Assessments for Geological Repositories,*** to be held at ICTP, Trieste, Italy, from ***17 to 21 June 2013.***

The Workshop is intended to bring together a critical group of practitioners from research organizations and radioactive waste management agencies investigating the use of methods for the isotopic analysis of groundwater in relation to repository siting and safety. It will also offer the opportunity for participation from scientists not usually involved in radioactive waste disposal programmes, but who are at the forefront of research into the use of groundwater isotopes. A key area is in site investigations for near-surface and deep disposal facilities and, more specifically, the development of unambiguous and robust conceptual models of the geosphere at prospective locations. In order to provide an early indication of the potential suitability of a repository site, and also to provide confidence in submissions for regulatory authorizations, an ability to determine radionuclide migration pathways and groundwater residence times with an appropriate level of accuracy and precision provide direct support to the development of the safety arguments for disposal facilities and also be of significant economic benefit.

The Workshop will focus on:

a) Disseminating information on the state of the art in the use of isotopes to identify groundwater recharge/discharge zones, characterize groundwater pathways and to evaluate the residence times of deep groundwater;

b) Providing a timely reminder of the power of isotope data in palaeohydogeology, an important tool in worldwide site characterization programmes for radioactive waste disposal;

c) Evaluating the potential for additional research and the development and further use of the results from isotopic analysis of groundwater in post-closure safety assessments for geological repositories.

Topics to be covered:

Sampling methods from boreholes to ensure the collection and preservation of high quality groundwater samples suitable for isotopic analysis.

The state of the art in isotopic groundwater analysis and the interpretation of results from groundwater samples.

Examples of site characterization programmes using the latest scientific methods to determine recharge/discharge zones, groundwater pathways and groundwater residence times in both deep and shallow groundwater environments.

Integrating the results of groundwater analysis into robust conceptual models of groundwater flow and radionuclide migration.

Development of more advanced numerical models that reflect the long-term temporal evolution of the geosphere surrounding a repository by means of the application of advanced palaeohydrogeological isotopic interpretation tools.

PARTICIPATION

Scientists and students from all countries that are members of the United Nations, UNESCO or IAEA may attend the workshop. As it will be conducted in English, participants must have an adequate working knowledge of this language. Although the main purpose of the Centre is to help researchers from developing countries through a programme of training activities within a framework of international cooperation, a limited number of students and post-doctoral scientists from developed countries are also welcome to attend.

As a rule, travel and subsistence expenses of the participants are borne by their home institutions. However, limited funds are available for some participants, who are not more than 45 years of age. Preference will be given to participants, who are nationals of, and working in, a developing country. Such support is available only to those attending the entire event. Every effort should be made by candidates to secure support for their fare (or at least half-fare). There is no registration fee for attending the workshop.

Activity Secretariat:

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DEADLINE for receipt of online applications:

15 FEBRUARY 2013

INTERESTED IN PARTICIPATING?

An Application Form can be accessed at the following activity website:

http://agenda.ictp.it/smr.php?2465.

Once in the website, comprehensive instructions will guide you step-by-step on how to fill out and submit the application form.