



Regional Training Course on Isotope Hydrology in Russian Language

Hosted by

The International Atomic Energy Agency
IAEA Headquarters
Vienna, Austria

2 to 6 November 2020

Ref. No.: TN-RER7013-2001127

Information Sheet

Purpose

The purpose of this training course is to train participants on guidelines for the application of conventional hydrological techniques and isotope methods to improve water resources assessment for sustainable development and protection of water resources.

Working Language(s)

The working language(s) of the event will be Russian.

Deadline for Nominations

Nominations received after 17 August 2020 will not be considered.

Project Background

Although groundwater represents 98% of the world's unfrozen freshwater, there is often not enough understanding of complex aquifer systems. Due to the increase of groundwater usage over the past decades, there is an increasing global risk of over-depletion of groundwater, quality deterioration and pollution, putting at risk the resilience of communities, populations and ecosystems dependent on groundwater sources. The better understanding of complex aquifer systems and groundwater-surface-water interactions is thus indispensable for effective integrated water management. The analysis of stable isotopes and natural radioisotopes is an excellent tool for characterizing and understanding aquifer systems, especially when assessing the long-term exploitation of groundwater in important water supply points. However, the knowledge about isotope-based techniques and the capacity to apply them differs significantly among countries in the European region. Some Member States do have high to very high human and technological capacities to integrate isotopic techniques as an important tool for integrated water management, whereas in some other countries little to no knowledge exists.

In collaboration with its Member States, in 2020 the IAEA has thus launched this Technical Cooperation Regional Project RER7013 "Evaluating Groundwater Resources and Groundwater-Surface-Water Interactions in the Context of Adapting to Climate Change" aiming to bridge these gaps by transferring knowledge and capacity from advanced to less advanced Member States by (1) increasing awareness on the existence of isotope hydrology techniques in Member States where knowledge is very limited, (2) transferring knowledge and building capacity on the use of isotope hydrology techniques through training courses and fellowships, (3) answering specific regional or sub-regional and transboundary questions, such as on the impact of a changing climate and anthropogenic activities on groundwater resources, and (4) enhancing and sustaining a regional network for the monitoring and evaluation of water resource quality and quantity using isotope techniques. The ultimate aim of this project is to enhance evidence-based decision-making in integrated water management by an improved characterization and monitoring of groundwater resources.

Scope and Nature

The course will comprise of lectures on sampling and analysis of stable (deuterium, oxygen-18 and nitrogen-15) and radio- isotopes (tritium and carbon-14) in groundwater and establishment of water-related monitoring networks as well as hands-on training exercises and laboratorial demonstrations laser spectrometry, samples handling, analysis, interpretation and mapping of the isotopes data. The training workshop will cover database management systems and principles, but also the practical application of isotope hydrology for water resource management. Participants are expected to give a presentation in the beginning of the course. For the completion of the practical exercises, participants are required to bring their own laptop with Google Maps and QGIS (free version) (or ArcGIS) and Microsoft Excel.

Participation

The training course is open to up to two (2) participants from each of the participating Member States of RER7013.

Participants' Qualifications and Experience

Participants should have a university diploma with a technical/scientific profile that attests to substantive experience with the use of hydrological, hydrogeological or hydrochemical techniques, and/or their involvement in water resources assessment and/or management. They should preferably have a good understanding of water-related/hydrogeological issues.

As the course will be conducted in Russian language, participants should have sufficient Russian language proficiency to follow lectures and express themselves without difficulty.

Application Procedure

Candidates wishing to apply for this event should follow the steps below:

1. Access the InTouch+ home page (<https://intouchplus.iaea.org>) using the candidate's existing Nucleus username and password. If the candidate is not a registered Nucleus user, she/he must create a Nucleus account (<https://websso.iaea.org/IM/UserRegistrationPage.aspx>) before proceeding with the event application process below.
2. On the InTouch + platform, the candidate must:
 - a. Finalize or update her/his personal details, provide sufficient information to establish the required qualifications regarding education, language skills and work experience ('Profile' tab) and upload relevant supporting documents;
 - b. Search for the relevant technical cooperation event (EVT2001127) under the 'My Eligible Events' tab, answer the mandatory questions and lastly submit the application to the required authority.

NOTE: Completed applications need to be approved by the relevant national authority, i.e. the National Liaison Office, and submitted to the IAEA through the established official channels by the provided designation deadline.

For additional support on how to apply for an event, please refer to the [InTouch+ Help page](#). Any issues or queries related to InTouch+ can be addressed to InTouchPlus.Contact-Point@iaea.org.

Should online application submission not be possible, candidates may download the nomination form for the training course from the [IAEA website](#).

NOTE: A medical certificate signed by a registered medical practitioner dated not more than four months prior to starting date of the event must be submitted by candidates when applying

for a) events with a duration exceeding one month, and/or b) all candidates over the age of 65 regardless of the event duration.

Administrative and Financial Arrangements

Nominating authorities will be informed in due course of the names of the candidates who have been selected, and will at that time be informed of the procedure to be followed with regard to administrative and financial matters.

Selected participants will receive an allowance from the IAEA sufficient to cover their costs of lodging, daily subsistence and miscellaneous expenses. They will also receive either a round-trip air ticket based on the most direct and economical route between the airport nearest their residence and the airport nearest the duty station through the IAEA's travel agency American Express, or a travel grant, or they will be reimbursed travel by car/bus/train in accordance with IAEA rules for non-staff travel.

Disclaimer of Liability

The organizers of the event do not accept liability for the payment of any cost or compensation that may arise from damage to or loss of personal property, or from illness, injury, disability or death of a participant while he/she is travelling to and from or attending the course, and it is clearly understood that each Government, in approving his/her participation, undertakes responsibility for such coverage. Governments would be well advised to take out insurance against these risks.

Note for female participants

Any woman engaged by the IAEA for work or training should notify the IAEA on becoming aware that she is pregnant.

The Board of Governors of the IAEA approved new International Basic Safety Standards for Protection against Ionizing Radiation and for the Safety of Radiation Sources. The Standards deal specifically with the occupational exposure conditions of female workers by requiring, inter alia, that a female worker should, on becoming aware that she is pregnant, notify her employer in order that her working conditions may be modified, if necessary. This notification shall not be considered a reason to exclude her from work; however, her working conditions, with respect to occupational exposure shall be adapted with a view to ensuring that her embryo or foetus be afforded the same broad level of protection as required for members of the public.

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