



# **Regional Meeting on Isotope Hydrology for Karst Aquifers**

**Hosted by**

The Government of Bosnia and Herzegovina

**through the**

Geological Survey of the Republic of Srpska

Trebinje, Bosnia and Herzegovina

**11 to 13 October 2023**

**Ref. No.:** ME-RER7013-2303769

## **Information Sheet**

### **Purpose**

The purpose of this event is to discuss and share experience on the application of isotope hydrology in karst aquifers.

### **Working Language**

The working language of the event will be English.

### **Deadline for Nominations**

Nominations received after **18 August 2023** 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.

This meeting is aimed at enhancing participants' knowledge in applying isotopic hydrology techniques in karst aquifers. It further aims to involve policy and decision makers in the water sector on the possibility of using isotopic methods for different purposes. It will further provide a platform to discuss how activities in this area can be continued after the end of the project.

## **Expected Outputs**

The expected main outputs of this event is are:

- An improved understanding of all participants on the (national) and sub-regional outcomes of the KARST case study conducted under RER7013
- An improved understanding on applying isotope hydrology techniques for karst aquifers
- A plan of actions towards the project sustainability

## **Scope and Nature**

The event will consist of presentations on the results of the Karst study of various attending countries as well as a discussion on the outcomes. Further, the application of isotope hydrology techniques for karst aquifers will be discussed and introduced to attending policy and decision makers. Finally, the meeting will also cover a sampling tour to the Bosnian and Herzegovinian site of the KARST study. The invited participants are expected to actively share their experience during the discussion sessions. Selected participants will be invited to present on their related work during presentations.

## Participation

The meeting is open to up to participants from Member States participating in the RER7013 project and that are either actively part of the RER7013 KARST case study or that have active ongoing or past work in the area of isotope hydrology for karst aquifers which can be of relevance to the meeting.

## Participants' Qualifications and Experience

The participants should be working on karst related topics in the context of the RER7013 project group coming from governmental organisations/entities/bodies authorised/appointed to perform tasks related to water management and isotope hydrology and possess a technical profile in the use of hydrological, hydrogeological or hydrochemical techniques or in water resources assessment and/or management.

## 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. Download and complete the [Designation of Beneficiary and Emergency Contact Form](#), and upload to InTouch+ ('Profile' tab under the personal section) specifying the document name. If already provided, kindly discard this step; and
  - c. Search for the relevant technical cooperation event (EVT2303769) 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](mailto:InTouchPlus.Contact-Point@iaea.org).

Should online application submission not be possible, candidates may download the nomination form for the meeting 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 AX Travel Management, or a travel allowance, 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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