



Intermediate Training Course on Data Processing and Interpretation Applied to Isotope Hydrology Studies

Virtual Event

19th May to 5th June 2025

Ref. No.: EVT2303850

Information Sheet

Introduction

Isotope hydrology is a powerful tool for understanding the movement, distribution, and quality of water within natural systems, and it plays a critical role in groundwater management, environmental monitoring, and climate change studies. As part of its capacity-building efforts, the IAEA offers a range of training courses, technical workshops, and e-learning materials to advance expertise in isotope hydrology. These initiatives provide comprehensive learning opportunities for integrating isotope tools into water resource assessments.

This specialized training courses on isotope data processing and interpretation, which incorporate the latest theoretical developments and practical exercises, is designed to enhance the expertise of professionals, researchers, and students in isotope hydrology, focusing on the methods and techniques for processing and interpreting isotopic data.

Objectives

The course aims to offer a comprehensive overview of isotope hydrology, focusing on its applications in water resource management. It also covers the latest advancements in isotope hydrology to better understand and characterize atmospheric, surface, and groundwater systems. Participants will gain the skills needed to process and interpret isotopic data accurately, addressing critical hydrological questions. The training also includes hands-on exercises and real-world case studies to illustrate the practical applications of isotope techniques in diverse hydrological settings.

Target Audience

The course is open to 30 participants. In the selection of nominated participants priority will be given to technical and scientific staff involved in hydro(geo)logical research and/or projects related to water resources assessment and management.

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

Participants must have successfully completed the Introductory e-Learning Training Course in Isotope Hydrology, available on the following Link: <https://elearning.iaea.org>

The introductory course offers valuable teaching modules on isotope hydrology tools and methods, delivering basic knowledge for effectively applying these tools in hydrological research.

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

Working Language(s)

The language of instruction will be English.

Structure

The course will run over three weeks, from May 19th to June 5th, 2025. Virtual sessions will be held on Mondays, Wednesdays, and Friday during the first week, and on Mondays and Wednesdays during the final two weeks. There will be two sessions per day: from 10:30 AM to 12:00 PM and from 1:00 PM to 2:30 PM (CET), each covering different material.

The course will include formal live virtual lectures, case study presentations and hands-on exercises focused on key hydrological concepts, commonly addressed using isotope hydrology tools. Participants will be expected to complete an online assessment at the end of each module.

Topics

- Basic Definitions and Calculations
- Interaction within the water cycle
- Timescales of Water cycle processes
- Isotopes in Water Quality and Pollution Studies

Additional Information

The course will be wholly online. Participants will be assessed through online quizzes and are required to pass the course to progress to the Practical course. An official certificate of completion will be provided to course participants who pass the course.

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.

In order to be designated by an IAEA Member State or invited organization, participants are requested to submit their application via the InTouch+ platform (<https://intouchplus.iaea.org>) to the competent national authority (Ministry of Foreign Affairs, Permanent Mission to the IAEA or National Atomic Energy Authority) or organization for onward transmission to the IAEA **28 April 2025**, following the registration procedure in InTouch+:

1. Access the InTouch+ platform (<https://intouchplus.iaea.org>):
 - Persons with an existing NUCLEUS account can sign in to the platform with their username and password;
 - Persons without an existing NUCLEUS account can register [here](#).
2. Once signed in, prospective participants can use the InTouch+ platform to:
 - Complete or update their personal details under ‘Complete Profile’ and upload the relevant supporting documents;
 - Search for the relevant event under the ‘My Eligible Events’ tab;
 - Select the Member State or invited organization they want to represent from the drop-down menu entitled ‘Designating Authority’ (if an invited organization is not listed, please contact InTouchPlus.Contact-Point@iaea.org);
 - Submit their application.

Once submitted through the InTouch+ platform, the application, together with the auto-generated form(s), will be transmitted automatically to the required authority for approval. If approved, the application, together with the applicable form(s), will automatically be sent to the IAEA through the online platform.

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

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

Participants are hereby informed that the personal data they submit will be processed in line with the [Agency’s Personal Data and Privacy Policy](#) and is collected solely for the purpose(s) of reviewing and assessing the application and to complete logistical arrangements where required. The IAEA may also use the contact details of Applicants to inform them of the IAEA’s scientific and technical publications, or the latest employment opportunities and current open vacancies at the IAEA. These secondary purposes are consistent with the IAEA’s mandate. Further information can be found in the [Data Processing Notice](#) concerning the IAEA InTouch+ platform.

Organization

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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/EVT2303850