

New collaborative portal provides one-stop-shop access to isotope hydrology resources

A new information portal, launched in December 2019, will help water scientists expand their access to data from all over the world and increase collaboration possibilities to advance scientific research using isotope hydrology for better assessment of the quantity, quality and sustainability of the world's water supplies.

“We created this one-stop-shop Isotope Hydrology Collaboration Site platform to help streamline how isotope hydrologists access the information we offer,” said Leonard Wassenaar, Head of the IAEA’s Isotope Hydrology Section. “Before, we were receiving many requests for information and data via email, but now experts can instead get the relevant isotope hydrology details they are looking for all in one place, whenever they need it.”

Water molecules have a unique set of ‘fingerprints’ that can be tracked throughout the entire water cycle, from evaporation to their return to a water source. By measuring different isotopes in water molecules, it is possible to determine the age and origin of water. Policymakers can use this information to gauge the vulnerability of water resources to pollution and determine the rate of replenishment.

Featuring an interactive portal for water scientists and collaborative partners who use isotope hydrology technologies and applications, the new system provides all the relevant information concerning IAEA isotope hydrology activities to aid them in their work.

The portal is available following registration for the IAEA’s NUCLEUS platform and gives users access to a wide range of water-related resources, including an archive of all IAEA isotope hydrology publications, technical documents and newsletters, as well as to laboratory



software and participation in laboratory proficiency testing.

Also accessible are two of the IAEA’s flagship collaborative networks: GNIP, the Global Network of Isotopes in Precipitation, and GNIR, the Global Network for Isotopes in Rivers. These networks are used in a variety of areas, such as climate change studies, environmental research and forensics.

The portal includes e-learning pages and reference materials to facilitate education and training. The e-learning component of the portal provides easy-to-understand educational videos on isotope hydrology, such as a step-by-step overview of tritium sample processing and analysis. For those wishing to participate in training courses, a dedicated web page showcases all available courses. A list of upcoming events and announcements allows experts to keep up to date with the latest water-related activities, such as workshops and conferences.

Registered users can also access the IAEA coordinated research projects they are participating in and collaborate with other users. Discussion boards have been set up to foster dialogue between scientists.

Some experts are already engaging with the portal to support their work. “I am really interested in staying in contact with the network. Let me know what we can do to collaborate further,” said Emilia Jiménez Hernández, Research Assistant at the Applied Isotope Laboratory of the Research and Experimental Centre for Public Works (CEDEX) in Madrid, Spain.

— *Ismini Dimidis*