

Job Description for Professional Posts

Reference:NA2024/25

Position and Grade:	Associate Isotope Hydrology App Developer, P2
Organizational Unit:	Isotope Hydrology Section Division of Physical and Chemical Sciences
Duty Station:	Vienna
Type/Duration of Appointment:	FT – JPO, 1 year

Organizational Setting

The Department of Nuclear Sciences and Applications implements the IAEA's Major Programme 2, "Nuclear Techniques for Development and Environmental Protection". This Major Programme comprises individual programmes on food and agriculture, human health, water resources, environment and radiation technologies. These programmes are supported by laboratories in Seibersdorf, Monaco and Vienna. The Major Programme's objective is to enhance the capacity of Member States to meet basic human needs and to assess and manage the marine and terrestrial environments through the use of nuclear and isotopic techniques in sustainable development programmes.

The Division of Physical and Chemical Sciences is responsible for assisting and advising Member States in research and development for the nuclear sciences, especially the physical and chemical sciences. Specifically, the Division provides support to Member States in the following fields: production of radioisotopes and radiolabelled products for applications in health care and industry; radiation source applications; research reactor utilization; applications of accelerators and nuclear instrumentation; nuclear and atomic data for applications; controlled nuclear fusion and isotope hydrology and geochemistry.

The Isotope Hydrology Section is responsible for planning and implementing the IAEA's water resources programme. The programme assists Member States in the sustainable management of all aspects of their water resources, but with a particular focus on isotope hydrology. Major activities include internationally coordinated research, global isotope monitoring, capacity building, and technical assistance to Member States to help them with the assessment, development and use of water resources. The Section also operates a well-equipped laboratory for the analysis of stable and radioactive isotopes. The laboratory trains counterparts in using analytical techniques for high-quality measurements of isotopes in water samples.

Main Purpose

As a member of a team led by the Section Head, the Associate Isotope Hydrology App Developer contributes to a results-oriented programmatic response to Member States' priorities in the application of nuclear technologies to meet their development goals related to water resources. The Associate Isotope Hydrology App Developer is provided opportunities for practical exposure to programme

development and execution in the scientific area of water resources management under the guidance of senior professionals.

Role

The Associate Isotope Hydrology App Developer will create and test a Water Sampling App to guide the collection of water samples in the field by counterparts in Member States and ensure the quality of associated meta-data. She/he will be responsible for the development of such an App, the testing of functionalities with stakeholders and the integration of the App in existing database platforms as well as training material. This project requires to work closely together with different groups within and outside of the Isotope Hydrology section (Isotope Hydrology Lab, Technical Officers, Division of Information Technology, and counterparts in Member States). The Water Sampling App will be rolled out to a wide range of stakeholders from least developed to developed countries.

Partnerships

The Associate Isotope Hydrology App Developer maintains professional contacts with IAEA scientific and technical staff and with external experts and stakeholders in data base building, geographic data acquisition and nuclear techniques for water resources management. She/he will establish collaborative relationships with relevant member state institutions to support the use of the Sampling App.

Functions / Key Results Expected

Under supervision of the Section Head and under the direct guidance of the responsible P-staff member, the Isotope Hydrology App Developer carries out the following duties to address Member States' needs related to field sampling for nuclear applications in water resources management:

- Review existing Apps and discuss with Technical Analysts and Officers the requirements of the App. Get to know the work and data management in the Isotope Hydrology Lab to ensure that interface between App and backend systems in the lab work seamless.
- Carry out interviews with future users in Member States to make sure their needs and situation is covered in the App.
- Work together with the Division of Information Technology to find the best solution for uploading and hosting the data.
- Program the App for Android and iOS (time for self-studying of the program languages is accounted for).
- Organize testing the prototype of the App in Technical Cooperation projects and integrate the App into learning material for field sampling.
- Train 1-2 Isotope Hydrology Section staff on maintenance of the App.

Competencies and Expertise (do not revise or edit)

Core Competencies		
Competence	Occupational Role	Behavioural Indicator
Communication	Individual Contributor	Communicates orally and in writing in a clear, concise and impartial manner. Takes time to listen and understand the perspective of others and proposes solutions.

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Achieving Results	Individual Contributor	Takes initiative in defining realistic outputs and clarifying roles, responsibilities and expected results in the context of the Department/Division's programme. Evaluates his/her results realistically, drawing conclusions from lessons learned.
Teamwork	Individual Contributor	Actively contributes to achieving team results. Supports team decisions.
Planning and Organizing	Individual Contributor	Plans and organizes his/her own work in support of achieving the team or Section's priorities. Takes into account potential changes and proposes contingency plans.

Functional Competencies		
Competence	Occupational Role	Behavioural Indicator
Technical/scientific credibility	Associate	Acquires and applies new skills to remain up to date in his/her area of expertise. Reliably applies knowledge of basic technical/ scientific methods and concepts.
Analytical Thinking	Associate	Gathers and analyses information, identifying critical relationships and patterns among data and proposes workable solutions.

Expertise	
Expertise	Description
Geoinformatics	Experience with GIS software, geographic data acquisition and integration.
Programming and Information Management	Good knowledge in at least one programming language, preferably Java or C. Experience with database management software and/or communication protocols would be an asset.
Hydrology	Experience in carrying out hydrological or hydrogeological fieldwork would be an asset.

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Education, Experience and Language Skills

- University degree in geoinformatics, data sciences, geography, hydrogeology, hydrology, information technology, or related field.
- Minimum two years of relevant work experience in the area of geographical information systems and/or software development and/or environmental database management and/or hydrology or hydrogeology, at national or international level.
- Expertise in GIS and good knowledge in programming.
- Experience in the application of isotope techniques for water resources management is an asset.
- Expertise in App development is an asset.
- Excellent oral and written command of English. Knowledge of other official IAEA languages (Arabic, Chinese, French, Russian and Spanish) is an asset.