

Job Description for Professional Posts

Reference: NA2025/05

Position and Grade:	Associate Research Scientist (Blue Carbon), P2
Organizational Unit:	Radioecology Laboratory Division of IAEA Marine Environment Laboratories
Duty Station:	Monaco
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 IAEA Marine Environment Laboratories consists of three laboratories, which are located in Monaco. The Division supports Member States in enhancing their capacity to use nuclear and isotopic techniques to understand marine and atmospheric environmental processes and dynamics, and to identify and address environmental problems caused by radioactive and non-radioactive pollutants and climate change.

The Radioecology Laboratory's mission is to improve knowledge about the behaviour and fate of radionuclides and other contaminants in the environment, with a particular emphasis on the biosphere. It aims to assist and enhance Member States' capabilities in the field of radioecology and its applications to ecotoxicology and biogeochemistry.

Main Purpose

The Associate Research Scientist (Blue Carbon) will support the Agency's growing work in applying nuclear and isotopic techniques to contribute to climate change mitigation. Namely, to assess the carbon sequestration capacity of natural coastal vegetated ecosystems (seagrasses, saltmarshes and mangroves) worldwide as Blue Carbon nature-based solution and as biodiversity hot-spots. This will include the application of nuclear and isotopic techniques to determine organic carbon origin, accumulation, and sequestration rates (through stable carbon isotopic ratios and radiometric dating of sediment cores), in collaboration with Member States worldwide.

Role

As part of a team reporting to the Section Head, the Associate Research Scientist (Blue Carbon) will be:

- (i) a researcher assisting in the improvement and application of geochronological techniques (radiometric; sediment dating) and stable C isotopic techniques for assessment of the carbon sequestration capacity of coastal vegetated ecosystems, (ii) an analyst processing and analysing data,

and (iii) a communicator preparing and presenting results through technical reports and scientific publications and outreach at scientific conferences.

Partnerships

The Associate Research Scientist (Blue Carbon) builds and maintains working relationships with staff of the Radioecology Laboratory, and more globally to NAML staff engaged in carbon cycle studies, and with similar relevant staff of other laboratories of the Department of Nuclear Sciences and Applications. He/she also develops and builds networks with scientists and technical staff from Member State laboratories to exchange information on the development and the applications of nuclear and isotopic techniques in marine studies. The incumbent will collaborate with project officers and researchers on projects supporting the application of nuclear and isotopic techniques.

Functions / Key Results Expected

- Improve and apply nuclear-based methods to advance our understanding of Blue Carbon sequestration, particularly in determining sediment accumulation rates and associated carbon fluxes using radionuclides as geochronometers;
- Collect and analyse sediment samples for the Blue Carbon studies;
- Process laboratory samples for the Blue Carbon studies;
- Produce timely and high-quality data, technical reports and scientific publications on relevant results and interpretations.

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.
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.

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Functional Competencies		
Competence	Occupational Role	Behavioural Indicator
Knowledge sharing and learning	Associate	Actively seeks opportunities to learn by formal and informal means; learns from others, adopting and sharing best practice.
Judgement/ decision making	Associate	Consults with supervisor/manager and makes decisions in full compliance

Expertise	
Expertise	Description
Analytical Chemistry/ Biogeochemistry/ Physics /	Knowledge in analytical chemistry, biogeochemistry/ particularly on sediment dating and carbon analyses
Stable Isotope Ratio techniques	Basic knowledge in stable carbon and nitrogen isotopes techniques and application.
Marine Environment, and Coastal Zone ecosystem functioning	Knowledge of marine processes in coastal areas, including human and climate impacts on coastal marine ecosystems
Marine carbon cycle and marine biogeochemical cycles in general	Knowledge of processes affecting carbon & biogeochemical fluxes in the ocean

Education, Experience and Language Skills

- University degree in Radioecology, Marine biology, Marine biogeochemistry, Environmental Sciences or a related scientific field with a demonstrated knowledge in the field of experimental sciences related to coastal vegetated ecosystems. Master's degree would be an asset.
- Minimum of two years of relevant professional experience.
- Strong publication record.
- Practical experience on using multidisciplinary techniques.
- Excellent oral and written command of English. Knowledge of other official IAEA languages (Arabic, Chinese, French, Russian and Spanish) is an asset. Working knowledge of French is desirable.

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