

ACADEMIC POSITIONS

JOB DESCRIPTION

- **JOB TITLE/PROFILE**

PhD in environmental chemistry

- **RESEARCH FIELD(S)¹**

Chemistry, environmental sciences

- **JOB DESCRIPTION**

The Ocean Sciences Institute with Amidex funding and the French National Research Institute for Sustainable Development (IRD) are financing a PhD Project entitled “**Eco-dynamics of emerging contaminants in the Red River (Vietnam)**”. The research will focus on analyzing contaminants of emerging concern and plastic debris in the Red River/Gulf of Tonkin interface in Vietnam” The successful PhD candidate will have the opportunity to work in two laboratories at Aix Marseille University namely the Laboratory of Environmental Chemistry (LCE, Laure Malleret) and the Mediterranean Institute of Oceanography (MIO, Vincent Fauvelle). Strong links will also be made with the Laboratory of Geophysical and Oceanographic Studies (LEGOS) and other laboratories of the Observatoire Midi Pyrénées (OMP) in Toulouse.

The present PhD project aims at evaluating for the first time i) the microplastic and associated contaminants trophic transfer to flagship species of Vietnamese aquaculture that represent up to 10% of Vietnamese GDP, ii) the contaminants and plastic fluxes at the Red River/Gulf of Tonkin interface, iii) the emissions related to open plastic waste burning. These three major expected outcomes are based on original analytical techniques (passive sampling, Laser Directed Infra-Red, GC-MS-IRMS).

The findings of this PhD project will contribute to wider international policy and research networks such as GDRi PASSPORT 2C (plastic debris in developing countries: definition of standards for measuring plastic debris), GDRi SOOT-SEA (impact of black carbon: plastic sourced black carbon), LMI LOTUS (Land Ocean aTmosphere regional coUpled System) Interreg SHAREMED, Labex DRIIHM etc. Apart from MIO and LCE laboratories, this project includes partners from Vietnam (BUI Van Hoi, lecturer at University of Science and Technologies of Hanoi) and Norway (Dorte Herzke, senior researcher at NILU Tromso). The successful candidate will be required to carry out short stays (1 to 4 weeks) at both places for sampling in Vietnam and perform dedicated analyses in Norway.

- **QUALIFICATIONS/SKILLS/EDUCATION & RESEARCH REQUIREMENTS**

The PhD student will be in charge of methods development for regulatory and emerging concern contaminants, including extraction/preconcentration techniques for water,

¹ **Social Sciences** - Law, Education, Economics, Social Science, Psychology - **Political Science** - Political Science - **Computational Sciences** - Computer Science, Mathematics - **Engineering** - Architecture and Design, Engineering - **Natural Sciences** - Biology, Chemistry - **Physical Sciences** - Physics, Space Science - **Environmental Sciences** - Agricultural Science, Geosciences - **Humanities** - Theology, Philosophy, Literature, Linguistics, History, Anthropology, Arts and Culture - **Medical Sciences** - Medicine

sediment and biological matrices and hyphenated techniques based on chromatography and high resolution or tandem mass spectrometry. He/she will evaluate the potential of application of the passive sampling approach to emerging contaminants in coastal environments and their benefits for the evaluation of impacts on marine biota and for the prioritisation of contaminants and locations. His/her research will provide new monitoring tools for chemicals of emerging concern, deliver new compound information, enable the growth in capacity of monitoring along the coastline. In addition, the successful candidate will be in charge of sampling and analysis of microplastics in situ.

The candidate should have a masters degree: in environmental chemistry, analytical science, environmental sciences, marine/water sciences, or water sciences. Skills in hyphenated analytical techniques as well as in environmental sciences are mandatory. Knowledge of environmental issues related to plastic will be appreciated. Sampling campaigns at sea may form part of this work to generate samples for analysis. Experience in field campaigns (sampling designs and tools), strong knowledge in statistics and modelling are also desirable. As stated above, the candidate will have to interact with different members of the consortium. Evidence of working in multidisciplinary teams and ability to communicate across disciplines is desirable. Candidates should have a strong interest in the marine environment and/or environmental science. More specifically he/she will have to contribute to supervision of Master students, who will support the different tasks of the study.

○ **APPLICATION DEADLINE**

25/05/2022

○ **STARTING DATE**

01/10/2022

○ **JOB LOCATION**

LCE and MIO Labs in Marseille, France + short stay (weeks) in NILU Tromsø, Norway; USTH Hanoi, Vietnam; LEGOS Toulouse, France.

○ **REQUESTED DOCUMENTS OF APPLICATION**

Candidates must send in one pdf file the following documents: application letter detailing their motivation and how this PhD project fits both their skills and professional strategy, Curriculum Vitae, Master diploma (or equivalent with ranking and details of grades), 2 letters of recommendation.

○ **CONTACT TO APPLY** (Email, Websites, etc.)

Laure Malleret laure.malleret@univ-amu.fr

Vincent Fauvelle vincent.fauvelle@ird.fr

Kalliopi.Prud-homme kalliopi.pediaditi@univ-amu.fr

[Laboratoire Chimie Environnement | UMR 7376 \(univ-amu.fr\)](#)

[Institut Méditerranéen d'Océanologie \(osupytheas.fr\)](#)

[Institut OCEAN | Aix-Marseille Université \(univ-amu.fr\)](#)

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