

## School of Natural Sciences: Funded PhD Scholarship

**Project Title:** Connecting past and present knowledge about the future of our mesopelagic fish resources and ecosystem functioning.

**Supervisors:** Dr. Martin White at NUI Galway, Prof. Dave Reid at the Marine Institute

**Duration:** 4 years full-time Structured PhD, funded by SFI - iCRAG (SFI Research Centre in Applied Geosciences).

**Project description:** The mesopelagic zone describes the (relatively understudied) light-depleted waters between 200 to 1,000 meters' depth connecting the surface waters with the deep sea, hence this zone and inhabiting organisms, forms a key component of many Earth-system processes, such as carbon cycling to deeper waters. This fellowship aims to further the understanding of the role of vertically migrating mesopelagic fish, their abundance and ecological role, and to evaluate whether sustainable exploitation of mesopelagic resources is sustainable or not, under what conditions, and with what potential result on carbon cycling.

The successful candidate will be involved in multidisciplinary field data collection, both acoustic (echosounder) and environmental, during the Marine Institute annual Blue Whiting fisheries surveys, as well as biological (zooplankton and mesopelagic fish) sampling. Historical data from past acoustic surveys will also be analysed to estimate mesopelagic fish abundance and the environmental drivers affecting this, using geostatistical modelling. The student will undertake a structured PhD at NUI Galway but will interact significantly with Prof Dave Reid's research team at the Marine Institute at Oranmore, Galway.

**Stipend:** €18,500 per annum & fees for 4 years.

### Entry Requirements:

- A master's degree or first class honours B.Sc. in a relevant discipline (e.g. oceanography, marine biology, or similar), with a good foundation and an interest in fisheries related biophysical interactions
- Experience with field monitoring, data collection and sampling, statistical and large data analysis (inc. data manipulation skills (e.g. R, matlab etc.)).

### How to apply:

Please email an introduction letter and current CV, indicating your research experience, and names of two referees, to Dr. Martin White [martin.white@nuigalway.ie](mailto:martin.white@nuigalway.ie) with subject line 'iCRAG Ph.D. Application'.

**Closing date for applications:** 19<sup>th</sup> August 2022

**Start date:** From: Oct 2022. For informal discussion, contact Dr. Martin White at [martin.white@nuigalway.ie](mailto:martin.white@nuigalway.ie) or Prof Dave Reid at [David.Reid@marine.ie](mailto:David.Reid@marine.ie) with the subject line 'iCRAG Ph.D. Application'.