

MRes Project: Fisheries Aggregation Devices – Collection of shore crab for use as bait: physical, biological and chemical impacts.

Supervisors: Prof Nick Polunin with Alex Aitken (Northumberland IFCA)

Framework: the first semester October-December inclusive is largely taken up with taught modules, however Covid-19 contingency planning means the first three weeks of October in 2020/21 academic year will provide opportunities to begin planning the main project (MST8025). This preparation will be completed by early March (including formal proposal for summative assessment), data gathering and analysis will be in the period March-June, with July to mid-September devoted to writing up. The main outputs are a research paper, a literature review and oral presentation due by mid-September. The research paper is assessed by External and Internal Examiners who are not involved in project supervision.

Duration of Research Project: preparation during October-February, intensive work during January-September 2021.

The Project: Fisheries Aggregation Devices (FADs) is a term used here to describe artificial shelters e.g. roof tiles, guttering, drainpipes, chimney pots and tyres. They are placed in intertidal, usually estuarine, areas to provide a shelter for shore crabs (*Carcinus maenas*) for use as fishing bait by anglers. The shelters are commonly placed on the banks of estuaries and crabs are collected from them when they are exposed at low tide. The majority of shelters are tyres (fig.1) from which, chemical leachates could be released. The scale of this activity has been quantified by Northumberland IFCA, however the impacts the FADs have on estuarine habitats and communities is largely unknown and understudied. The aim of this project would be to assess the physical, biological and chemical impacts of this activity to further understand whether this activity should be managed. Results of the project will feed directly into regional fisheries management decisions could be applicable nationally.



Figure 1 Tyres placed in the Coquet Estuary, Northumberland .



Figure 2 Fisheries Aggregation Devices placement (red polygons) on the Blyth Estuary, Northumberland. There is estimated to be 2,177 FADs on this estuary.

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Eligibility: You need at least an upper 2:1 BSc degree in a relevant subject, an understanding of marine monitoring and policy, computer literacy with a wide range of software experience (preferably R and ArcMap), and to be an independent worker with good organisational skills.

To Apply: Admission to the MRes in Marine Ecosystems & Governance is via <https://www.ncl.ac.uk/postgraduate/courses/degrees/marine-ecosystems-governance-mres/#profile> with a personal statement of your career aspirations and skills you would bring to the work, CV and a proposal (including scientific rationale, objectives, methodology, outline budget, any health, safety or ethical [e.g. animal or human subject analyses] issues and timetable). The proposal needs to be discussed first with the supervisors.