



## PROJECT PROPOSAL FORM

Making the Most of Masters aims to improve collaboration between employers and universities by providing opportunities for postgraduate students to undertake work based projects as an alternative to a traditional university dissertation. Projects should address a real need within the host organisation and be beneficial to both host and student.

The Marine Alliance for Science and Technology for Scotland (MASTS), pools the majority of Scotland's marine research capacity. MASTS members provide Masters courses in a range of marine related disciplines and many of their students are keen to undertake applied projects outside of academia.

### Notes on Topic Selection

A relevant academic will work with your organisation to refine your proposed topic and ensure it meets both your needs and the academic requirements of the student. Projects should typically be achievable within a 12–16 week timeframe (including writing the final report).

Your proposed project could be:

- A specific project title or topic for the student to deliver;
- A general idea of a business need which requires further development;
- A core research theme to be developed by the student into a bespoke project;
- An intended outcome for the organisation.

The level of detail you provide will determine the extent to which further discussion may be required with the relevant programme director to ensure suitability.

desk-based/data studies that will easily facilitate remote working and remote supervision are welcome, as well as in person and/or experimental based projects where appropriate.

### What's Next?

Please send your completed form to the MASTS Programme Coordinator & Deputy Dean of Grad School, Dr Emma Defew ([masts@st-andrews.ac.uk](mailto:masts@st-andrews.ac.uk)) before the deadline.

Following submission of the form, it will be channeled to the leaders of the various Masters programmes that operate within the MASTS community and a representative from the most relevant programme or department will get in touch to discuss the project scope, delivery and the selection of an appropriate student. If more than one student expresses an interest in your project, you will need to ensure discussions take place to enable the most suitable student to be matched with your project. The projects themselves usually won't start until May or June.



## MASTS - Making the Most of Masters – Project Proposal Form

**Name and address of Organisation:**

NatureScot  
Great Glen House, Leachkin Road, Inverness, IV3 8NW.

**Name of the key contact in Organisation:**

Eunice Pinn

**Contact e-mail and phone number:**

eunice.pinn@nature.scot (01463 725216)

**Title of proposed project:**

Development of an indicator for fishery sustainability

**Project outline and intended outcomes:**

The overall health of our marine environment is assessed at regular intervals, both nationally (e.g. [UK Marine Strategy Assessment 2019](#), the [Scottish Marine Assessment 2020](#) and the [State of Nature Scotland Report 2023](#)) and internationally (e.g. [Living Planet Report 2022](#) and the [OSPAR Quality Status Report 2023](#)). Such assessments consider the abundance and distributional trends of species including commercial fish stocks, as well as changes in the physical environment and the potential impacts of our activities.

The indicator used in such assessments for determining the sustainability of a fishery requires consideration of the spawning stock biomass and fisheries mortality. This indicates the health of the stock, and if both criteria are within expected thresholds, the fishery is considered sustainable. This approach takes no account of the fisheries impact on the wider environment (e.g. the bycatch of non-target species, some of which are also protected, or impacts on benthic habitats).

The aim of this project is to explore ways in which the current fisheries sustainability indicator can be combined with biodiversity indicators (e.g. those for determining Good Environmental Status or the Favourable Conservation Status of protected species) to develop a relatively simple metric for improving the determination of the ecological sustainability of Scotland's fisheries.

**Useful References:**

Anderson et al (2015) The Fishery Performance Indicators: A Management Tool for Triple Bottom Line Outcomes. PLoS ONE 10(5), e0122809.  
<https://doi.org/10.1371/journal.pone.0122809>.

Bentley et al (2021). Refining fisheries advice with stock-specific ecosystem information. Front. Mar. Sci. 8: 602072. <https://www.frontiersin.org/journals/marine-science/articles/10.3389/fmars.2021.602072/full>

Eggert et al (2021). Assessing global fisheries using Fisheries Performance Indicators: Introduction to special section. *Marine Policy*, 125, 104253.  
<https://doi.org/10.1016/j.marpol.2020.104253>.

Kell et al (2024). Developing management plans for sprat (*Sprattus sprattus*) in the Celtic Sea to advance the ecosystem approach to fisheries. *Canadian Journal of Fisheries and Aquatic Sciences*, 81(8), 1104-1121. <https://doi.org/10.1139/cjfas-2023-0090>

Marengo et al (2023). Combining indicator trends to evaluate a typical Mediterranean small-scale fishery: The case study of Corsica. *Regional Studies in Marine Science*, 65, 103087. <https://doi.org/10.1016/j.rsma.2023.103087>.

Zhou et al (2016). Ecological risk assessments for the effects of fishing: A comparison and validation of PSA and SAFE. *Fisheries Research*, 183, 518-529.  
<https://doi.org/10.1016/j.fishres.2016.07.015>

**Any additional comments e.g. details of specific disciplines required, methods to be used, travel involved, where the work would take place (i.e. at the host site or at the University), whether you foresee any Intellectual Property or confidentiality issues (and if so, what form might these take?):**

This project would suit a student with an interest in the interface between science and policy. Good critical evaluation skills will be required, and there may also be a need to use statistics and/or GIS depending on the approach chosen by the student. This project is desk-based and can be carried out at the university with regular online supervisor meetings.

We invite the student to visit a NatureScot office to meet with relevant colleagues as well as other MSc students carrying out projects within NatureScot. Travel and subsistence may be covered for this journey.

This project will involve working with Dr Eunice Pinn (Marine Indicators Advisor) and Dr David Donnan (Marine Sustainability Manager – Marine Fisheries) at NatureScot.