



## 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

<b>Name and address of Organisation:</b> NatureScot Great Glen House, Leachkin Road, Inverness, IV3 8NW.
<b>Name of the key contact in Organisation:</b> Kelly James
<b>Contact e-mail and phone number:</b> <a href="mailto:Kelly.James@nature.scot">Kelly.James@nature.scot</a> , 01313146763
<b>Title of proposed project:</b> Assessing the resilience of Scotland's MPA network to climate change.
<b>Project outline and intended outcomes:</b> <p>Climate change will have a profound effect on global marine environments, with business-as-usual emission scenarios projecting temperature increases of 4.3°C above pre-industrial levels, pH decreases of 0.31–0.35 and increasingly frequent extreme weather events by 2100. Such changes will have significant impacts to marine ecosystems, for example, by causing changes in species composition and disrupting trophic pathways.</p> <p>Scotland's Marine Protected Area (MPA) network covers 37% of Scotland's seas, hosting a range of species and habitats. The current MPA has been designed with current species and habitats distributions in mind with site-specific conservation objectives aiming to keep species and habitats at, or bring them to, favourable condition. The resilience of the current MPA network to climate change has not been assessed and it is not known if climate change will impact our ability to meet MPAs conservation objectives. A better understanding of this resilience is crucial for a strategic, rather than reactive, response to climate change.</p> <p>This MSc project aims to assess the resilience of Scotland's MPA network to climate change. We envision that the student will first trial different methods for assessing resilience, focusing on a specific MPA. The student may then wish to assess several MPAs and may wish to focus on a specific region (i.e., West Coast or North Sea) or compare MPAs in different regions that host similar species and habitats. Different IPCC scenarios may wish to be explored. As part of an initial literature review, the student may wish to explore how the resilience of MPA networks is being assessed in other countries. Along with the assessment, intended outcomes should include recommendations how to integrate climate change in Scotland's MPA network design.</p>

**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?):**

The student should have a good understanding of climate change and Scotland's marine environment. We have already carried out a review of the impact of climate change on several benthic features, and therefore the focus of this project would be using this review to assess climate change resilience. A review of the effects of climate change on mobile species may be required if the student wishes to investigate mobile species in the assessment.

GIS skills are required, although training may be available if the student does not have experience in this. The project may involve statical analysis, although this is at the students discretion. The MSc is desk based and can be carried out at the University.

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.