

Marine Scotland Science - Capability Statement

Role of MSS

Marine Scotland Science (MSS - formerly Fisheries Research Services) is a Division of Marine Scotland, the directorate of the Scottish Government responsible for marine management in Scottish waters. MSS provides scientific advice, underpinned by research and monitoring, in the areas of sustainable marine fisheries, marine spatial planning, marine protected areas, marine renewables, aquaculture, freshwater environment and fisheries and marine status and trends.

Scientific Resources

MSS is based at three sites; Pitlochry, Aberdeen and Edinburgh. There are approximately 270 staff, with an additional 30 post-graduate students. Science disciplines include all aspects of marine physics, chemistry, biology and ecology, as well as socio-economic expertise. MSS has a significant engineering capability to support observational studies.

Vessels

MSS has three research vessels, and a number of small inshore boats. Scotia is a 69m RV capable of work throughout the NE Atlantic. It undertakes regular fish stock assessment surveys, as well as oceanographic, acoustic and ecological surveys. It can carry 12 scientists, has a full range of scientific winches and cranes and has a flexible container-based on board laboratory system. The vessel is fitted with swath bathymetry, scientific fishery acoustics, and MSS owns box corers, beam trawls, benthic grabs, plankton samplers, as well as a full range of oceanographic sampling instrumentation. MSS has significant capacity in terms of moored sampling technology, and has a specific specialism in underwater video and camera techniques using drop frames and towed sledges.

Alba na Mara is an inshore research vessel capable of operating in all coastal waters up to 12nm from the coast. It can carry 5 scientists, and can fish as well as perform the full range of environmental sampling.

Temora is an inshore catamaran with limited ability to work offshore, but provides a stable inshore day-boat platform for all types of work, including limited small-scale fishing.

Fixed Stations

MSS runs a network of fixed stations around the Scottish coast, principally at Stonehaven and Loch Ewe where weekly ecological sampling is carried out, and where decadal context-setting time series of the principal physical and biological variables are available. Approximately 10 other sites provide regular temperature measurements, and monthly ecological sampling.

Survey Time Series

Through its offshore sampling on Scotia, MSS is responsible for many important ecological time series and context-setting climate time series. These include the ground fish surveys in the northern North Sea and west of Scotland conducted in each area twice per year. The surveys consist of a regular and repeated network of trawl stations covering the shelf in a random-stratified survey design using demersal (sea bed) standardised fishing gear. All fish species are measured and recorded. Hence this provides a vital and unique time series of shelf seas fish biodiversity. Often spare berths are available on these trips, and it is possible to fit in some extra work in the hours of darkness. These surveys have been carried out since the 1980s in their current form.

Other notable time series include the annual shelf-edge deep water / Rockall surveys which include demersal fish trawls as well as habitat sampling. These surveys have taken place for more than 10 years.

Another notable time series are the physical oceanographic series conducted three times per year along standard sections in the northern North Sea and in the deep waters of the Faroe Shetland Channel. The FSC section time series are more than 100 years in duration.

Offers of Collaboration

MSS is willing to consider any reasonable request to work on our vessels, or to utilise our inshore stations and moorings.

Of particular interest to us are collaborations which may add value to our regular surveys. For example, using our unique marine invertebrate specimen bank to provide genetic analysis of cold water corals, and to develop taxonomy or DNA bar-coding. We would welcome studies which helped to understand connectivity and population structure of sensitive species across sites, and which further developed habitat mapping techniques. We are open to any novel ideas and approaches to add value to surveys in remote areas. Our deep water work encompasses the continental slope Rockall, Rosemary Bank, Wyville Thompson Ridge, Faroe Shetland Channel and we work on the Stanton Banks.

MSS is willing to consider funding co-supervised CASE PhD studentships