Project Title

MsY proxies for DAta-limited Stocks (MYDAS) for key stone species and species sensitive to the impacts of fishing - Phase 2

Project Description

Many of the stocks which are caught by the Irish commercial fishing fleets are considered to be data-limited or are not assessed at all. These include a number of key stone species (like sprat, gurnards, saithe, pollack, ling) and species sensitive to the impacts of fishing (like rays and skates, john dory, brill and turbot). For these stocks, the fishing mortality is unknown and MSY reference points are not established. This lack of quantifiable targets is an impediment to the implementation of the Common Fisheries Policy (CFP) as well as the Marine Strategy Framework Directive (MSFD).

In phase 1 of the MYDAS project, a framework was developed to establish and test a range of assessment models and methods to establish MSY (or proxy MSY) reference points across the spectrum of data-limited stocks. A range of case-studies is currently being explored and this work is expected to result in a number of generic approaches that vary depending on the biology of the stock and the types of data that are available.

Phase 2 of the MYDAS project aims to implement the approaches developed in MYDAS1 and build capacity to apply these approaches within the Marine Institute and internationally. In order to achieve this, the project will provide hands-on support in the development of a number of case studies by Marine Institute experts. These case studies will serve to build capacity but also to prove the value of the MYDAS framework internationally. At the same time, the project members will actively engage with the relevant ICES expert groups in order to facilitate wider use of the MYDAS framework.

A number of case studies are proposed; these concern stocks that are of importance to Ireland and for which there is an urgent need to establish the stock status and exploitation level relative to MSY reference points. The case studies aim to:

1. Develop assessments and (proxy) MSY reference points for data-poor stocks identified in the Western Waters Multiannual Plan (WW MAP) as target species (e.g. pollack, black anglerfish, four-spot megrim);
2. Develop assessments and (proxy) MSY reference points for sensitive species that are not inclused in the WW MAP as target stocks (e.g. sharks, rays, ling);
3. Develop assessments and (proxy) MSY reference points for stocks for non-TAC stocks that are of importance to the ecosystem (e.g. sprat, witch, lemon sole);
4. Explore Management Strategy Evaluations (MSE) using management rules that are not related to catch, like v-notching and size limits.
5. Use of time series data to establish stocks status, e.g. in-season depletion of lobster CPUE, standardising time series, mapping of CPUE time series for georeferenced catch and effort data, production modelling.
6. Explore if it is possible to obtain reliable growth parameters from mark-recapture data for crustaceans (considering that there is high individual variability in growth).

International collaboration is essential for stocks that are exploited by more than one country. The MYDAS framework can contribute significantly to the development of data-limited approaches. Engagement with key ICES and OSPAR working groups is therefore essential. The project will:

7. Support ICES in the development of robust generic harvest control rules for a range of classes of data-limited stocks through WKLIFE
8. Contribute to the relevant ICES assessment working groups that might benefit from applying the MYDAS framework (WGEF; WGCSE)
9. Contribute to relevant OSPAR meeting(s)

Partners

Galway Mayo Institute of Technology

Duration

The project has a 2 year duration and runs between 2019 and 2020. The project is a continuation of Phase 1 which began in 2017.

Project Outputs

- Working documents or peer-reviewed papers describing the detailed case studies
- Improved knowledge on the value of data, informing future data collection priorities
- Increased number of TAC stocks for which ICES can provide MSY advice
- Increased number of non-TAC stocks that can be managed nationally at MSY
- Increased number of stocks for which MSFD GES descriptors D1 and D3 can be estimated

Expected Benefit

- Sustainable management of fish stocks, providing maximum yield
- Increased capacity in the estimation of stock status relative to MSY for data-limited stocks; both with the Marine Institute and internationally

Further details available on www.emff.marine.ie

Project Wiki: https://github.com/laurieKell/mydas/wiki

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