BIANNUAL ACHIEVEMENTS REPORT January 2016

Marine Ecosystems Research Programme

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Programme's key achievements and overall progress over the last 6 months:

Progress within the programme is on track and reports are available on the website (www.marine-ecosystems.org.uk). The consortium met with its Stakeholder Advisory Group in November 2016 for continued guidance on developing the impact of the programme. Discussions have also taken place with the MMO, Defra, the Natural Capital Committee and others within the UK, Europe and wider afield. Members of the consortium will deliver a briefing to Defra in early February 2016.

MERP Fieldwork 2015

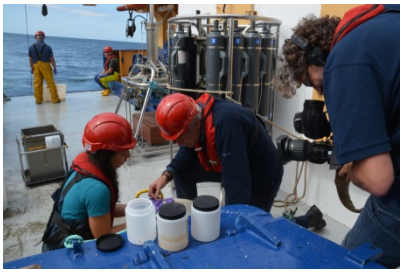
An extensive period of fieldwork was carried out with collaborations across the programme. In autumn 2015, offshore transects near Oban, Bangor, Belfast and Plymouth were completed to explore the input of kelp detritus to the food web in relation to distance offshore. At a time-series site near Plymouth, seasonal mini-cruises (day and night coverage) were run at about six-week intervals to examine jellyfish/fish larvae interactions, pelagic biomass spectra, pelagic-benthic coupling and benthic processing. Regional coverage of the full size-spectrum of the food web (including cetacean distributions) was achieved in autumn cruises of the *Prince Madog* (benthic components) and *Cefas Endeavour* (pelagic). Data and knowledge gained from these cruises, as well as other MERP field and laboratory experiments, will be used by the modelling teams to develop and improve various ecosystem models.

Impact of bottom-up process on fisheries yield

Analysis of outputs of the MERP Model Ensemble revealed good consistency among models in the elasticity of bottom-up effects. A small proportional change in the abundance of primary producers leads to a relative change in the abundance of fish that is approximately 4 times larger. For decades a constant ratio between primary and fish production or abundance has been assumed. This absence of amplification is now ruled out by the model ensemble results. Our results thus suggest that the impacts of climate change on fisheries yield might be being grossly underestimated**.**

MERP Science in the news

MERP scientists were filmed during a benthic sampling cruise by the news station Al Jazeera, for a news segment looking at marine science across the UK. The programme explored how different research methods are being bought together to understand the complexity of the marine environment. Filming took place in the Plymouth Sound in September 2015, with the footage aired on Saturday 26th November every hour for a 24hr period.



Issues and Remedial actions

There have been no major delays incurred during this period; those that have occurred are generally due to staffing issues. Resignation of one of the skilled plankton analysts at PML in spring 2015 impacted MERP but this has been addressed. A post doctoral research assistant (PDRA) from QUB handed in his resignation for the 31st of December. QUB is currently in the process of re-advertising the position.