Report of the launch of the Mareframe West of Scotland Case study

Thursday 22 May 2014

Chaired by Paul Fernandes (University of Aberdeen); hosted by Alex Rodríguez (North Western Waters Advisory Council)

Introduction

1. Mareframe is an EU research project which aims to break down the barriers associated with the application of the Ecosystem Approach to fisheries management. It aims to do this by applying new data to computer simulated models of various ecosystems around Europe to examine various management & fisheries scenarios that encompass the Ecosystem Approach. The project has several case studies, including the west of Scotland (ICES area VIa).

2. On 22 May 2014, a meeting took place at Bord Iascaigh Mhara (BIM) Head Office, in Dublin, to launch the west of Scotland case study to stakeholders. The meeting had the following objectives:
   a) To introduce participants to the Mareframe EU project.
   b) To describe the West of Scotland case study
   c) To discuss management priorities in the West of Scotland case study

3. There were 6 participants at the meeting, despite all key members of the NWWAC West of Scotland Working Group being invited in due advance (i.e. fishing industry representatives from France, Belgium, UK-Scotland and Spain and eNGOs). The participant list and contact details are provided in Annex I. The meeting agenda is provided as Annex II.

4. Presentations were given on: i) the Mareframe project; ii) the concept of co-creation; and iii) the west of Scotland case study. These raised some interesting discussions, with the following points of note:

   i. The status of fishery resources should be described both in terms of the current status of fishing mortality and biomass in relation to reference points (not just mortality as is often the case).
   ii. The issue of food and nutrition security should be used as a means to justify improved fishery management, not just the requirement to reduce overfishing and improve marine stewardship.
   iii. In relation to co-creation, one needs to be wary of poorly informed but highly publicised views which lack an evidence base. Although scientific views are not the only ones which should be considered, they are often well informed, and the same standards in terms of the evidence base should be demanded from other stakeholders.
   iv. Fishery stakeholders need to be more effective in their campaigns to promote the value of their activity (e.g. see point 4.i and 4.ii above). Environmental stakeholders are traditionally more effective at garnering and influencing public opinion. An example of a new approach can be seen in the Bluefish campaign (see

http://www.gov.je/ENVIRONMENT/SAVEWATERREDUCEPOLLUTION/Pages/BlueFishCampaign.aspx).

v. There was some concern about the data that would be required to reliably inform any model simulations of benthic (trawling) impact. Coral maps are in preparation for example, but these are for area VIb; other data sources are required for mapping this and other vulnerable marine habitats.

vi. The issue of benthic impact also touches on resuspension of sediment and nutrients (see van Danderen et al., 2013[1]). Can this be modelled?

vii. The issue of pelagic fish (mainly herring & mackerel) bycatch in the demersal fleet needs some investigation.

viii. Could deep sea fish and fisheries be included in the models?

5. The management issues and scenarios that were identified to be explored were:

i. What would be required to recover the cod stock?

ii. What would be required to recover the whiting stock?

iii. What is the impact of seal predation?

iv. What is the optimum (economic) balance between the prawn and whitefish fisheries?

v. What is F_{MMEY} (the fishing mortality associated with the multispecies maximum economic yield)?

vi. How to include the data-poor stocks?

vii. How to measure the impact of deep-water fishing?.

viii. Study the effect of alternative selectivities in the main fisheries.

ix. Consider sub-regional effects (Clyde vs Minch vs Offshore).

x. Can the model estimate the optimum fleet size? Although it is not clear what the "optimum" might be (economic or social). Perhaps best to consider the maximum fleet size for all vessels to be making a minimum amount of earnings before interest, tax, depreciation and amortisation (EBITDA); and have the option to estimate the n number of vessels that would make the x amount EBITDA.

xi. To simulate the scenario of "black discards" (discards occurring at sea, assuming compliance).

xii. To simulate the effect of choke species (cod on the west coast): when would the fishery close? What are the likely losses (revenue, EBITDA)?

xiii. What would a recreational fishery look like in the west of Scotland?

[1] van Denderen, P. Daniel, Tobias van Kooten, and Adriaan D. Rijnsdorp. "When does fishing lead to more fish? Community consequences of bottom trawl fisheries in demersal food webs." *Proceedings of the Royal Society B: Biological Sciences* 280.1769 (2013).

Annex I

Timetable

09:00 – 09:30		***Coffee***	
09:30 – 09:45	The Mareframe project **Fernandes**	Presentation	Introduction to the project
09:45 – 10:30	The West of Scotland case study **Baudron**	Presentation	Description of the case study, ecosystem model, project methods
10:30 – 10:45	Management priorities **Fernandes**	Discussion	Discuss objectives for next session
10:45 – 11:00		***Coffee break***	
11:00 – 12:00	Management priorities **Group work**	Discussion	Identify management priorities
12:00 - 12:30	Management priorities Reporting back	Discussion	Conclude on set of ranked priorities

Annex II Participant list

	Name	**Affiliation & location**	**E-mail**
1	Paul Fernandes	**University of Aberdeen**	fernandespg@abdn.ac.uk
2	Alan Baudron	**University of Aberdeen**	alan.baudron@abdn.ac.uk
3	Jane Sandell	NWWAC – SFO	jane.sandell@scottishfishermen.co.uk
4	Mike Park	NWWAC – SWFPA	mike@swfpa.com
5	Bertie Armstrong	NWWAC – SFF	barmstrong@sff.co.uk
6	Alex Rodriguez	NWWAC Secretariat	rodriguez@bim.ie