

Aquaculture Mapping Project

Dorset and East Devon FLAG

Keith Jeffery (Aquaculture Sector Specialist)

Simon Kershaw (Water Quality Advisor)

Paulette Posen (GIS Specialist)

Background - why we need Aquaculture – a quick reminder.

- Marine aquaculture presents an opportunity for increasing seafood production in the face of growing demand for marine protein and limited scope for expanding wild fishery harvests
- Current total landings of all wild-capture fisheries could be produced using less than 0.015% of the global ocean area (Gentry et al, 2018)
- Human population looks set to reach 10 billion people by 2050, our food systems will be under intense pressure to produce animal protein for an increasing population
- Relative sustainability of marine aquaculture compared with land-based meat production and the human health benefits of diets rich in fish make it even more pressing that we consider aquacultures potential

Background – Finding space for aquaculture !

UK Marine Policy Statement

*...aquaculture can use space and resources more efficiently if they are carefully planned and managed.
The overall outlook is dependent on site availability and environmental carrying capacity.*

Marine plan authorities should ensure that proposed activity has minimal wider effect and should seek to embrace the significant opportunities for co-existence of aquaculture and other marine activities in developing Marine Plans.

Seafood 2040 A Strategic Framework for England (2017)

Refers to ‘...Creation of Prioritised Aquaculture Areas’ being desirable.



EATiP (2017) A review of the Strategic Research and Innovation Agenda ..vision for the future of European Aquaculture.

‘...The development and application of planned zoning for aquaculture production will enable social and economic benefits for coastal and rural communities.’

EAFRO (2017) Vision – where will European aquaculture be in 2030, 2050 and beyond, outlining the main drivers and game changers.

‘By 2030 Suitable zones have been allocated to aquaculture, so that coastal and rural communities benefit socially and economically’



Project aim

The purpose of this project is to identify and map **areas best-suited to specific types of sustainable aquaculture**, within the boundaries of the FLAG area (a local larger scale plan).

Following consultation with the industry, produce an **in-depth analysis which should benefit aquaculture interests in the FLAG area** and act as an exemplar approach for others to adopt.

In consultation with key stakeholders the project will also seek to identify potential management and mitigation measures that may **facilitate sustainable aquaculture development** in the FLAG area, without unduly restricting opportunities for fishing.

Project methods

Project Start 16/07/2018

Data collation/synthesis

Literature review

Mapping

Consultation

Pressures and Opportunities analysis

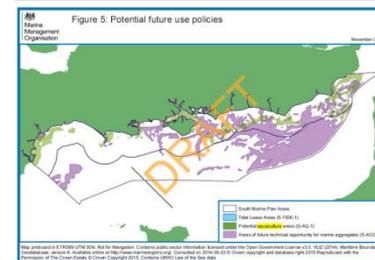
Mapping refinement

Dissemination

Project End 30/11/2019

Mapping utility

- Improved level of mapping, building on previous work

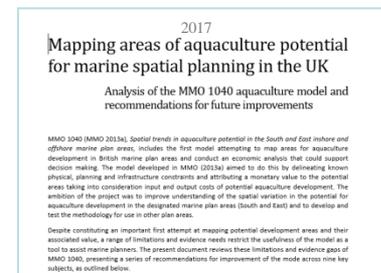


- Improved information on water quality

- Greater emphasis on species specific suitability

- Consideration of factors to support land-based systems/facilities

- Regard to modern aquaculture techniques & technologies

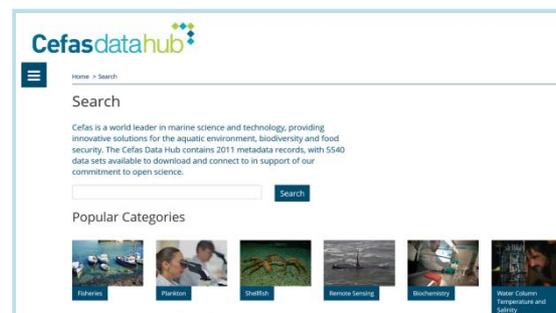
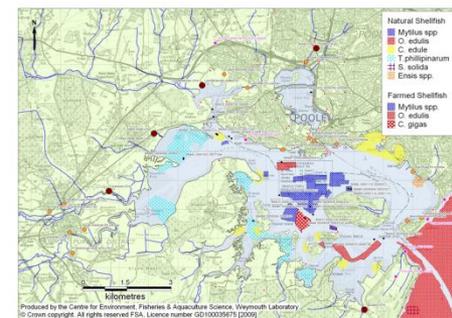


Project benefits

- Detailed appraisal of aquaculture potential in FLAG region based on up-to-date data and stakeholder consultation.
- Supported by MMO - will feed into future revision of the South Marine Plan.
- FLAG (EMFF) & Match-funding from Defra
- Access to outputs to support business development plans and diversification opportunities.
- FLAG aquaculture development officer can use

Aquaculture mapping outputs

- Report including comprehensive literature review and mapping.
- Areas of aquaculture potential – downloadable maps and GIS shapefiles (Cefas data hub)
- Online resources (via FLAG funded Virtual Hub) to support future aquaculture business development and diversification
- Dissemination event



Horrendogram!

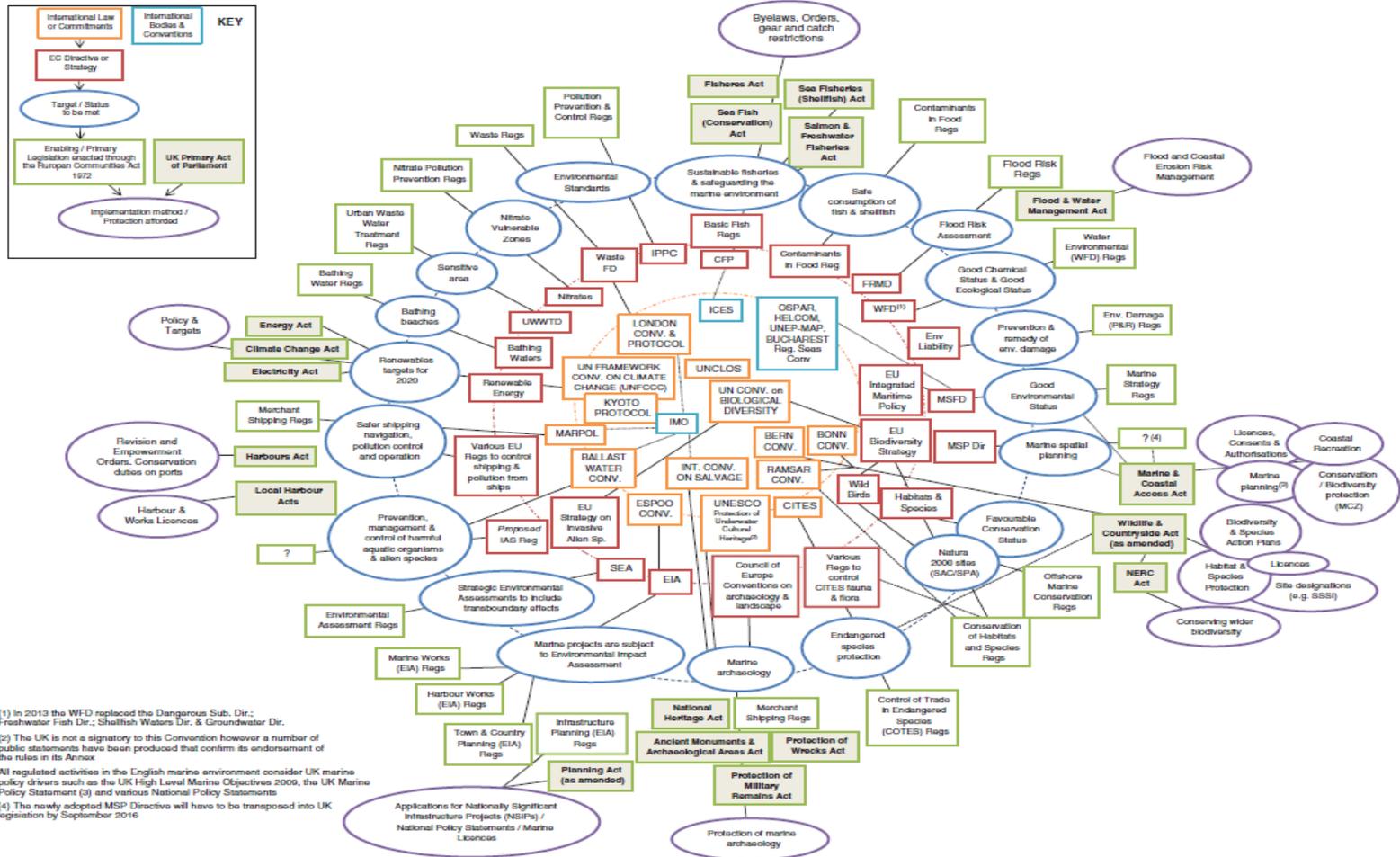
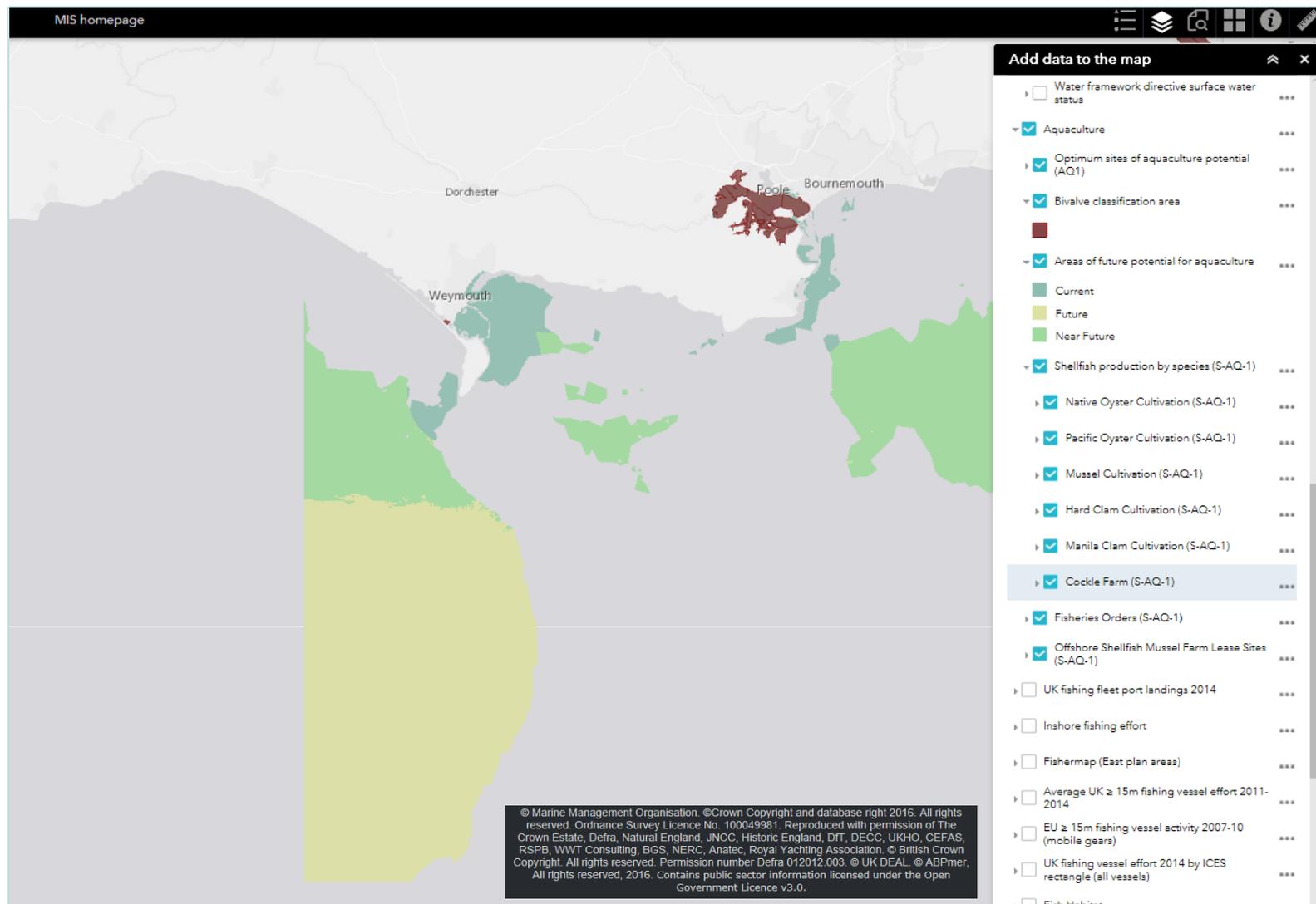


Fig. 1. Marine environmental legislation horrendogram showing Regulations made through the European Communities Act 1972 to implement an EU directive versus a UK Primary Act of Parliament (adapted from Boyes and Elliott, 2014).

MMO Marine Information System - Aquaculture



Thankyou any questions ?

Simon Kershaw (PI) - simon.kershaw@cefasc.co.uk

Keith Jeffery - keith.jeffery@cefasc.co.uk

Paulette Posen - paulette.posen@cefasc.co.uk



Marine
Management
Organisation



Department
for Environment
Food & Rural Affairs

