FARNET TRANSNATIONAL SEMINAR FOR FLAGS
VIGO (GALICIA), SPAIN 13 - 15 MARCH 2018
FLAGs and local resource management

The Orkney Shellfish Research Project

Orkney FLAG

CONTEXT

- Landings into Orkney Islands worth £9M at first sale, >99% shellfish, >50% brown crab (landings are a quarter of Scottish total)

- Processing sector in Orkney (Orkney Fishermen's Society – fisher's co-operative) of prime importance – markets for Orkney crab

- Marks and Spencer Plan A requires 100% of seafood products to be from sustainable sources – ecolabel, or in process to achieve standards (FIP)

- Orkney Sustainable Fisheries Ltd set up in 2006 as industry initiative, initially to take over running of lobster hatchery, but saw need for wider sustainable development of inshore fishery sector

- EFF funding for crab tagging project 2007, engaged fishers

- Industry desire for local management, preceded FIP for brown crabs

- OSF Ltd recognized as Inshore Fishery Group (IFG) for Orkney in 2013
    - Accountability
    - Good governance
    - Robust science

- Engagement of fishers has been crucial for the IFG

- Lack of management of non quota species in CFP

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OBJECTIVES OF THE PROJECT

Aims:

- Formalize management principles for Orkney crab and lobster fisheries

- Establish Fishery Improvement projects for scallop and whelk species

- Build knowledge and a management framework for local inshore fishery resources more generally

Continuity with previous initiatives:

- Fishery monitoring from 2007 onwards

- Fishery Improvement Project (FIP) for creel fisheries 2013-2016, following pre-assessment against MSC Sustainable Fisheries Standard

- Logbooks, observer trips, biological sampling to characterize catch and effort

- Mapping of creel fishing effort in relation to leasing areas for wave and tidal development

- Biological studies

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PARTNERS (including previous to current project)

- <u>Orkney Sustainable Fisheries Ltd</u> set the agenda for the project and employ three scientists to undertake the work

- <u>Heriot-Watt University</u> (ICIT – Orkney campus) provide scientific support for the project, and expertise in relation to MSC standard

- <u>Other fisheries organizations in Orkney</u> such as Orkney Fisheries Association (working also as part of the OSF partnership) coordinate work complementary to the project, also in support of development of the local inshore sector

- <u>Marks and Spencer</u> (retailer) and <u>WWF</u> (NGO) supported the FIP process, with participation of other stakeholders

- <u>Orkney Islands Council</u> (local government) provided financial support for fishery development activities

- <u>The Crown Estate</u> provided substantially financed OSF scientists, paying for mapping of fishing effort by creel vessels

- <u>Marine Scotland</u> (government agency) sponsored vessel monitoring systems (Succorfish) and engage with IFG on developing local management

METHODOLOGY

- Observer trips to characterize catch, bycatch and discarding practices

- Biological sampling of landings

- Fishers' logbooks to record catch, bycatch, discards and effort data

- Crab tagging to determine stock structure

- Spatial analyses of fishing effort in relation to habitats

- Linked projects examining, for example, escape gaps for traps, survival of discarded crab

- Biological studies, especially into size at sexual maturity of crustacean species

- Codes of practice

- Examination of governance and legal framework for local management

- Modelling of harvest control rule

RESULTS

- Much fishery monitoring data to allow stock assessment
    - Catch and landings composition
    - Catch per unit effort
    - Bycatch

- Tagging data revealing large scale of crab stock from which Orkney landings are taken

- Biological parameters for local stocks, crucial for defining sustainable fishery management
    - Size at maturity in brown crab

- Re-evaluation of spawning capacity of crab stocks as basis for developing biological reference points

- Modelling of harvest control rule, including risk and uncertainty
    - Low probability of reproductive impairment for brown crab

- Orkney crab fishery currently under assessment against the MSC standard
    - Can we define effective harvest control for an open access fishery?

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