Background & Objectives

Background
- Discard ban for EU fisheries proposed for 2015

Project Objective
- How would the landing obligation affect fleet economic performance?
- At fleet level, and given current discards, what would the quota requirements amount to?
- Are there ‘choke’ species that could limit operations of the fleet?

Three case study fleets over three years 2010-2012:
- Irish Sea Nephrops trawl
- North Sea mixed whitefish trawl
- North Sea Nephrops trawl

Economic model utilising:
- Landings data (Source: MMO)
- Discard rates (Source: DARDNI, CEFAS, Marine Scotland)
- UK quota uptake per stock (Source: MMO)
- Fleet economic performance (Source: Seafish Economics)
What the model does:

- Considers the economic implications of the discard ban for specific fleets
- Combines published data on landings, quota use, cost & earnings and discard rates to identify likely 'choke' species for those fleets
- Assesses fleet economic performance taking into account the various allowances and exemptions being proposed
- Highlights priority areas to be addressed in each fleet

What the model doesn’t do:

- Explore changes in behaviour with the introduction of the landing obligation (changes in selectivity, fishing patterns)
- Consider coping strategies of individual vessel owners which will depend on their specific quota holdings
- Anticipate the likely approaches and actions that management authorities may take to help mitigate the perceived negative economic impacts
- Predict the future under a discards ban
Discard Ban Scenarios

Discard Ban

Quota uplift
Quota flexibility
De minimis
Allowances and exemptions

Average Fleet Financial Performance

Irish Sea Nephrops
North Sea TR1 (>100mm)
North Sea TR2 (70-99mm)
Scenarios

Status Quo (0)

No choke species
- Room in hold for current landed volume + discards (1)
- Only room in hold for existing volume (2)

Choke species
- with current quota and swaps (3)

Allowances and exemptions
- With quota uplift (4)
- With quota flexibility (5)
- With de minimis (6)

Combinations
- Uplift + flexibility (7)
- Uplift + de minimis (8)
- De minimis + flexibility (9)
- Uplift + de minimis + flexibility (10)
Key Assumptions

- **Catch composition** (landings plus discards) - assumed to be constant throughout the year - no seasonality is taken into account

- **Fish prices** - assumed constant

- **Effort management** - not as restrictive as quota typically and is not limiting quota uptake - average days fished in 2010-2012 were lower than the permitted days at sea

- **UK quota** - choke species analysis is based on the point at which the *UK quota* would be exhausted. It is assumed that the fleet can access and would utilise all available UK quota

- **Current Swaps** - quota swapping pattern with other EU Member States are maintained
Irish Sea Area VIIa Nephrops Trawl Fleet

- Key ‘choke’ species is whiting - UK VIIa quota used after 5-15 days

- **Leasing** - Low UK TAC for VIIa whiting (32 tonnes), vs. **EU TAC = 84 tonnes**. Leasing in all additional EU VIIa whiting quota would only give another ~24 days fishing. **Not enough quota**

- **Uplift** - 75% or more of current VIIa whiting discards would ensure fleet is viable. **Estimated 293 tonnes of VIIa whiting discarded by fleet in 2012.** Would uplift be consistent with MSY approach? **Uplift unlikely**

- **‘Flexibility’** - converting 9% of Nephrops (552 tonnes) to cover whiting gives fleet enough quota to remain viable and fish for 130 days. But, **VIIa whiting data limited stock**, not within safe biological limits, ICES advising lowest possible catch for 2014. **Flexibility unlikely.**

- **De minimis** - If equals 5% of all of the fleet’s quota catch, fleet is viable. If equals 5% of UK VIIa whiting, gives only 2 more fishing days. **Definition is key – need to justify de minimis**

Conclusion: Fleet should prioritise improving selectivity to avoid whiting, while maintaining current selectivity in terms of cod-avoidance
North Sea Nephrops Trawl Fleet

- **Leasing** - expenditure on leasing would increase 250%, profit margins decrease, but still viable.

- **Key ‘choke’ species is hake** (all years without swaps), or **whiting** (2010 after swaps), **saithe** (2011 after swaps) and **cod** (2012 after swaps)

- **Uplift** - based on ICES estimates and conservative 20% uplift where no ICES uplift advice, fleet still profitable **if** uplift applied also to swaps, otherwise problem

- **‘Flexibility’** - converting 9% of Nephrops to cover choke species reduces profitability but fleet is viable

- **De minimis** - if equals 5% of all of the fleets quota catch, slight reduction in profits. If equals 5% of **hake**, less than 50% of status quo days available to the fleet

**Conclusion:** Ensuring current swaps continue is critical. Combination of flexibility measures would likely maintain fleet viability
North Sea Mixed Whitefish Trawl Fleet

- **Leasing** - expenditure on quota leasing would increase 500%, 25% decrease in profit

- Key ‘choke’ species in 2010-12 is **hake**, **secondary choke species are saithe, cod and haddock**

- **Uplift** - based on ICES estimates and conservative 20% uplift where no ICES uplift advice, fleet still profitable *if* uplift applied also to swaps, otherwise problem

- **Flexibility** - target quota stock debatable. If can use an under-utilised stock (plaice) to cover choke species, profits could actually increase, if haddock used as target, likely profits would have decreased

- **De minimis** - if equals 5% of all of the fleet’s quota catch, slight reduction in profits. If equals 5% of **hake**, around 80% of status quo days available to the fleet

**Conclusion:** Again, current swaps critical, limited additional selectivity improvements possible before loss of target catch. Combination of measures would likely maintain fleet viability
Conclusions & Lessons Learned

- Challenges exist to ensure that EU fishing fleets are still profitable under a discard ban

- The interpretation of the new rules is key – greater clarity is required e.g., how are the exemptions defined?

- Apart from regulatory issues, gear development to avoid choke species is important

- Seafish will be conducting additional research