Landing Obligation and Choke Species in Multispecies and Mixed Fisheries
The North Sea (demersal)

Prof. Clara ULRICH
DTU Aqua, Denmark
Structure of the Presentation

1. The mixed-fisheries in the North Sea
2. Risks of choke in the North Sea
3. CFP Tools and Policy changes
4. Specific choke stories from 2019
5. Incentivising changes. Options?
6. Conclusions
1. The mixed-fisheries in the North Sea

What is a “fishery”?

- Aggregation of individual trips/vessels into broad categories
- Many different criteria can be used
- The average patterns different from the individual observations
- The more we zoom the more differences we see

From Ulrich et al., 2012
Gears and fleets

Average mW Fishing hours 2012-2015

North Sea gears

From ICES, 2017

Fleets and stocks: Who catches what?
**Stocks**

- **demersal**
  - Graph showing trends over time with different colors and markers indicating various species or data sets.

- **SSB/MSY**
  - Graph showing trends over time with different colors and markers indicating various species or data sets.

From ICES, 2017

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**Discard rate**

- **a)**
  - Graph showing discard rate for different groups over the years 2013 to 2016, with legends indicating benthic, demersal, elasmobranch, crustacean, and pelagic.

- **b)**
  - Bar chart showing discards and landings in thousand tonnes with legends indicating the same groups as in the graph.
2. Risks of choke in the North Sea

Choke categories:
- Category 1: Sufficient quota at MS level.
- Category 2: Insufficient quota at MS level.
- Category 3: Insufficient quota at EU level.
- Category 4: Economic choking.

Choke situation not observed yet! Only speculations on what may happen if the landing obligation is fully enforced

From NSAC, 2017
<table>
<thead>
<tr>
<th>STOCK / AREA</th>
<th>CHoke CATEGORY</th>
<th>MAIN COUNTRIES /FLEET AFFECTED</th>
<th>MITIGATION SUGGESTED / COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Sea Cod</td>
<td>2</td>
<td>UK as a whole; Scotland</td>
<td>Enhanced leasing and swapping</td>
</tr>
<tr>
<td>North Sea Cod</td>
<td>1</td>
<td>France in TR2</td>
<td>De minimis</td>
</tr>
<tr>
<td>Cod in Skagerrak</td>
<td>2</td>
<td>Sweden, Germany</td>
<td>Improved selectivity</td>
</tr>
<tr>
<td>Cod in Kattegat</td>
<td>2 or 3</td>
<td>Germany, Sweden, Denmark</td>
<td>Improved selectivity. Levels of discards likely underestimated.</td>
</tr>
<tr>
<td>Plaice in North Sea</td>
<td>2/4</td>
<td>Netherlands, Belgium in BT2</td>
<td>little success in finding proper mitigation measures yet</td>
</tr>
<tr>
<td>Plaice in Kattegat</td>
<td>2</td>
<td>Germany</td>
<td>Choke risk considered low</td>
</tr>
<tr>
<td>Plaice in Skagerrak</td>
<td>2</td>
<td>Sweden</td>
<td></td>
</tr>
<tr>
<td>Saithe in North Sea*</td>
<td>2</td>
<td>Scotland(UK), Denmark, Sweden</td>
<td>little success in finding proper mitigation measures yet.</td>
</tr>
<tr>
<td>Whiting in North Sea</td>
<td>3</td>
<td>All</td>
<td>Uncertainty in actual discard rates. little success in finding proper mitigation measures yet</td>
</tr>
</tbody>
</table>

NSAC 2017 analysis on main stocks
From NSAC, 2017
Trying to quantify the potential impact...

At Regional North Sea level...

At National level (UK choke analysis)...

At individual level…
Blue= Indiv Quota. Red= landings

From ICES, 2017
From Russell et al., 2017
From Mortensen et al., 2018
3. CFP Tools and Policy changes

North Sea Discard Plan
With a limited number of de minimis and survival exemptions

<table>
<thead>
<tr>
<th>Fishery</th>
<th>Cod</th>
<th>Haddock</th>
<th>Saithe</th>
<th>Whiting</th>
<th>N. lobster</th>
<th>Sole</th>
<th>Plaice</th>
<th>N. prawn</th>
<th>Hake</th>
</tr>
</thead>
</table>
But also…

- TAC increases ("top-ups") but discarding continues…
- Removal of TACs (dab and flounder)…
- Changes to prohibited species (dogfish)…
- MultiAnnual plans with Fmsy upper…
- Reduction in the number of stocks with MSY advice…

From Borges et al, 2018
The landing obligation dilemma

- Flexibility needed to keep fishing
- Constraints needed to incentivise changes

Different approaches in different Member States

From STECF, 2018 and Fitzpatrick & Nielsen, 2018
4. Specific choke stories from 2019

Northern Hake: Climate change + Brexit

But also boarfish, tuna... and other "big movers"

Densities by quarter (blue: Q1, green: Q2, orange: Q3, red: Q4).

From Baudron and Fernandes, 2015
4. Specific choke stories from 2019

**North Sea plaice: technical challenges**

Large quantities of small fish; sustainable stock; some survival but not “very high”; little success in selectivity trials

![Graph showing trends in TAC, landings, catch, and SSB over time.](image-url)
4. Specific choke stories from 2019

Sharks and rays: Conservation vs. exploitation

Pros and Cons of
- Generalised TAC or TAC by stock
- Landing trips limits
- Minimum/maximum size
- Spatio-temporal closures
- Prohibited species list
- Survival exemptions
- Avoidance programs

From STECF, 2017
5. Incentivising changes: options

Make smart use of the TAC ‘top-ups’
- Where it is most needed
- To reward changes in fishing practices
- New Zealand’s deemed value?

Results-based management with Electronic Monitoring
- Focus on impact and controllability
- Two-tier approach possible (with/without EM)

Policy changes conditional to demonstrated selectivity changes
6. Conclusions (I)

North Sea demersal fisheries highly mixed...
... Broad categories hiding large individual differences

Choke situations not observed yet...
... Will only be observed if landing obligation fully enforced

Choke issues can occur at various scales, from EU to individual fishers...
... No simple approach to assess and quantify the impact

In the North Sea, issues mainly linked to quota distribution more than resource shortage...
... They will not disappear without intervention
6. Conclusions (II)

Already many policy changes beyond article 15...
... Removing constraints is removing incentives to change

Not all choke situations can be handled within Art. 15...
... Make additional policy changes conditional on selectivity changes

Making the landing obligation to work...
... Smart use of TAC ‘top-ups’ and Results-based management with Fully Documented Fisheries (Electronic Monitoring)

Thank you for your attention