Natura 2000 & the management of fishing activities

a scientist's perspective

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Natura 2000 & the management of fishing activities

Contents

- Conservation objects & protected goods
- Management measures
- (Socio-)Economic consequences

  Example

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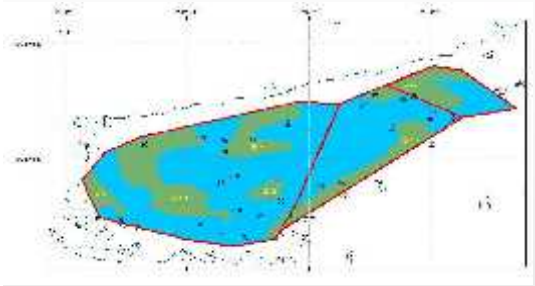
Conservation objects & protected goods

Protected goods

- Different between countries
  - Seamounts in North Western Waters (Scotland), sandbanks and reefs in German Bight, bubbling reefs in Kattegat, ….
- Differ in sensitivity, extension, and so far exposure to fisheries
- Similar goods are evaluated differently across member states
  - e.g. Doggerbank:



Draft Background Document 2017

- No designated area in DK
- Protection in NL, UK, DE
- Planned wind farms in UK

Finally: Joint Recommendation

Draft Background Document 2017

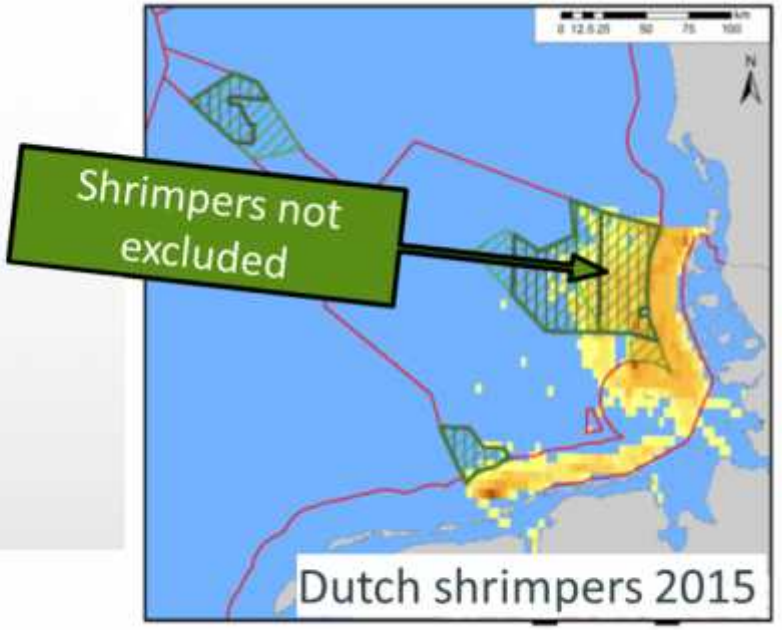
Conservation objects & protected goods

Favourable conservation status /Good environmental status

- Defined ambiguously
- Lack of data of species/habitat distribution and status
  - High uncertainty in several assessments
  - Monitoring of marine mammals & birds, benthic habitats etc. expensive and time consuming (research vessels, planes)
- Lack of indicators and thresholds (under development)

Management measures

- Proposals need to be developed with available knowledge (incomplete knowledge)
- Science based: data based vs expert knowledge
- Precautionary approach
- Size of spatial management arbitrary in some cases
  - e.g. x percent of designated areas
- Position, size and season dependent
  on distribution of fishing effort
  (conflict minimization)



Schulze 2017. International fishing activities in German waters

(Socio-)Economic consequences (science)

Evaluation of spatial management options

- Logbook, landing and vessel monitoring system (VMS) data
- Development of common ways of analyses in different EU-projects or ICES working groups
- Yet no international standard to analyse the impact on the industry
- Uncertainty (lack of data, many assumptions) in biological and economic models

(Socio-)Economic consequences (politics)

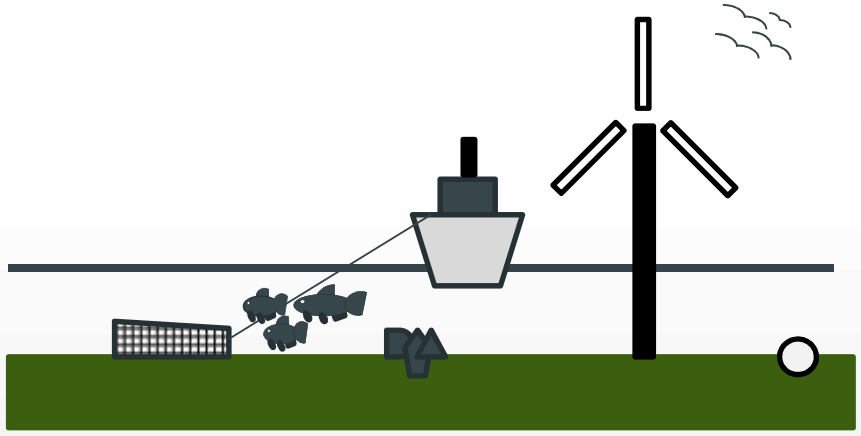
Evaluation of spatial management options

- Should not be disproportional
  - Area with management should fit area with protected goods
- Should not be discriminating
  - Impact on fleets of different member states should be balanced
- Interests between member states differ because of
  - Different size and structure of the fleets
  - Different fishing areas used by fleets (historic rights, knowledge)
  - Different power of environmental and industrial NGOs

Analyses of (socio-)economic consequences

Decisions so far

- Mostly based on single sector impact analyses
  - e.g. Natura 2000 (Sell et al. 2011, Oostenbrugge et al. 2015)

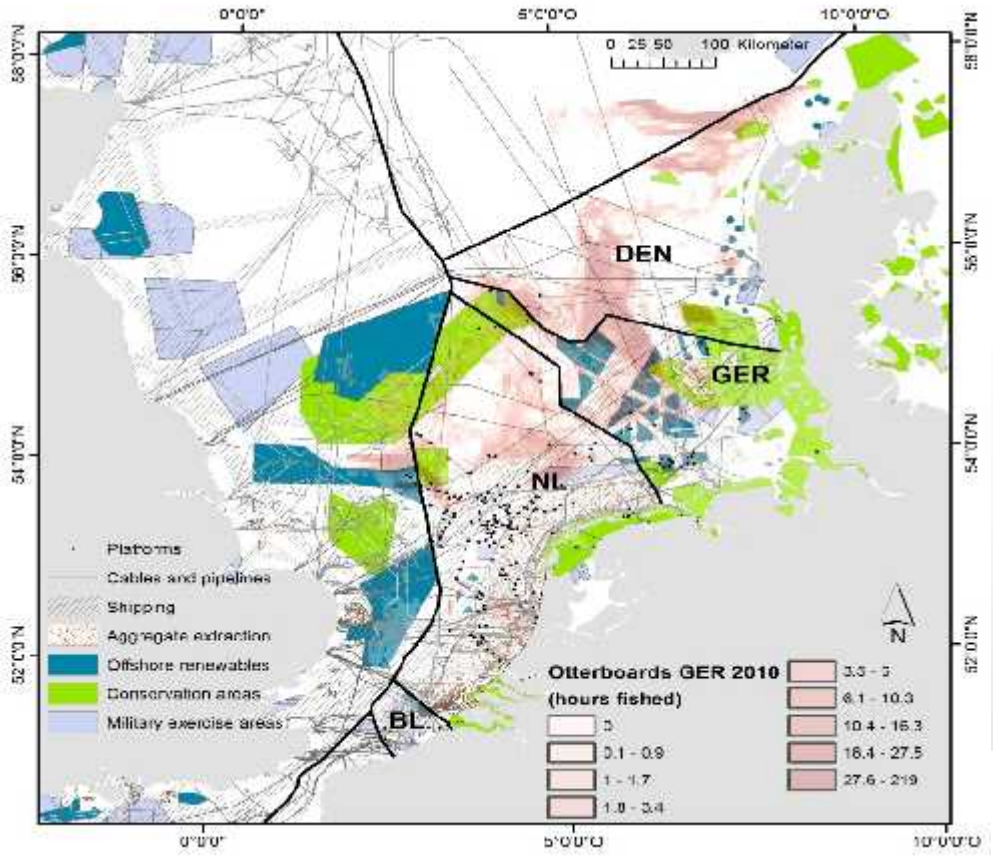


- Joint Recommendations for fisheries management in one member state only
- Only one competing sector evaluated (Fisheries vs Nat 2000 areas)

Analyses of (socio-)economic consequences

Missing

- Cross-Border and Cross-Sector evaluation
- Test of cumulative impacts
- Transparent discussion of a
  - What are the neighbours doing
  - What are the plans for other s
  - What is the impact on coastal
- Evaluation of consequences



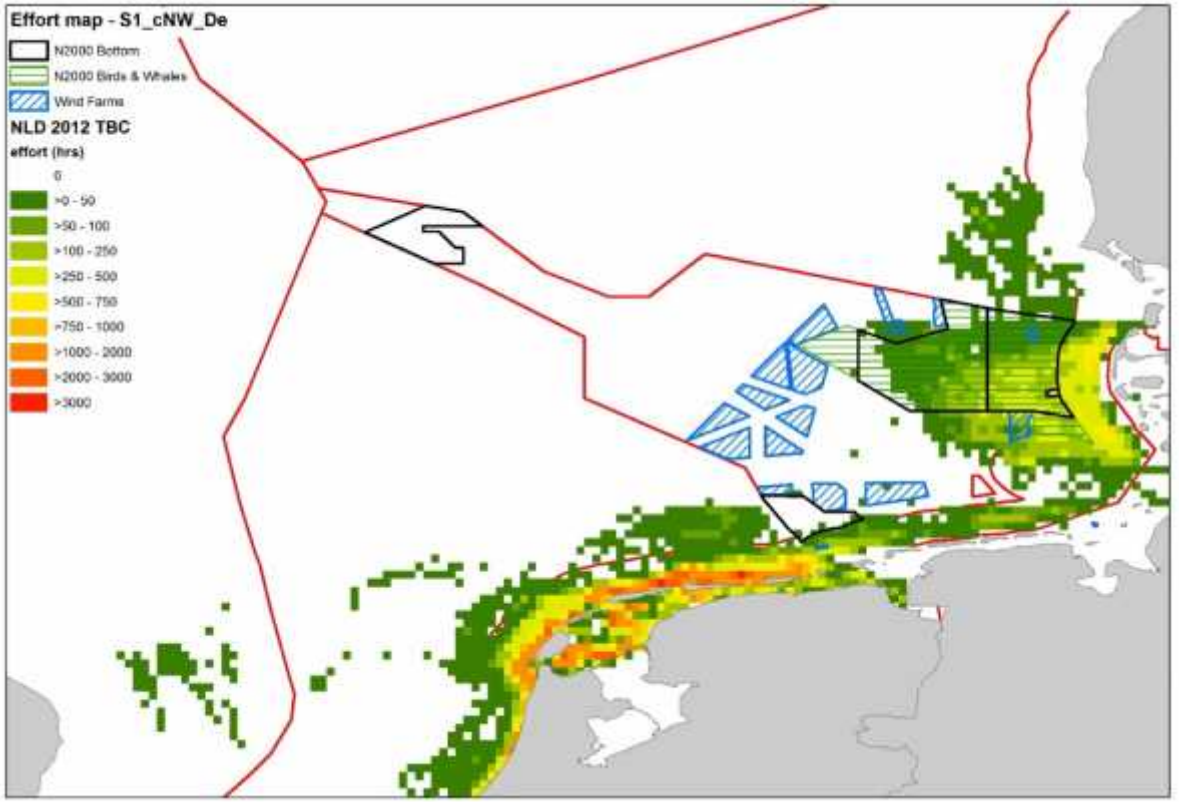
Analyses of (socio-)economic consequences

Effort maps per fleet and gear

Scenario: Natura 2000 and Windfarms in German waters

2012

Beam Trawls targeting
Brown shrimp
C. crangon
(TBB_16-31_CRU)



Analyses of (socio-)economic consequences

Stress Level (SL)

- Indicates losses of e.g. revenues
- SL revenues = percentage on the total of revenues in the past in a specific area which would get lost if an area will be closed for an activity in future.

SL= 10 %

Analyses of (socio-)economic consequences

Test of new approach: Individual Stress Level Analyses

Analyses per individual vessel

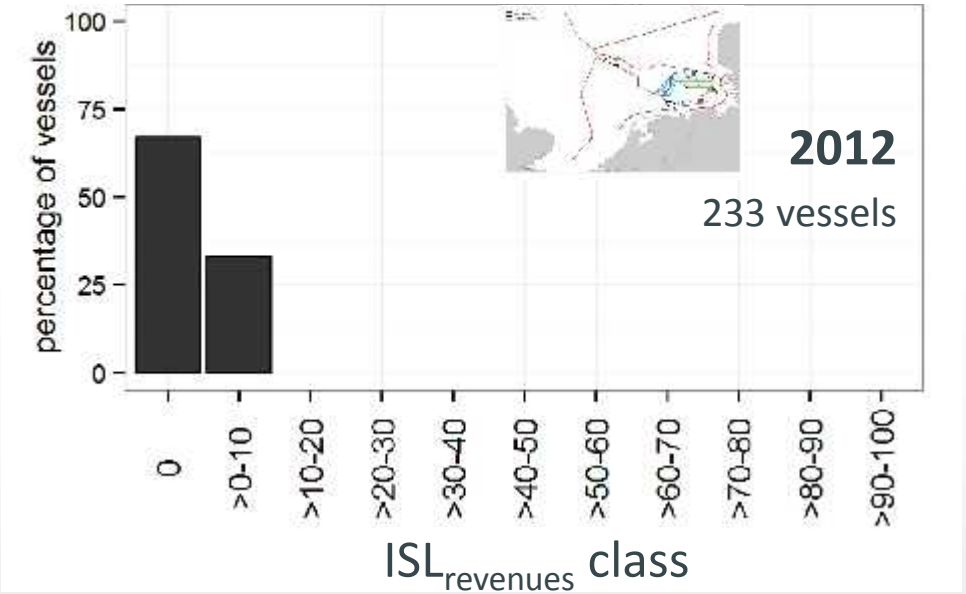
Test for the fleets of

- The Netherlands
- Denmark
- Germany

Years: 2012 - 2015

Scenario:

Natura 2000 and Windfarms in German waters



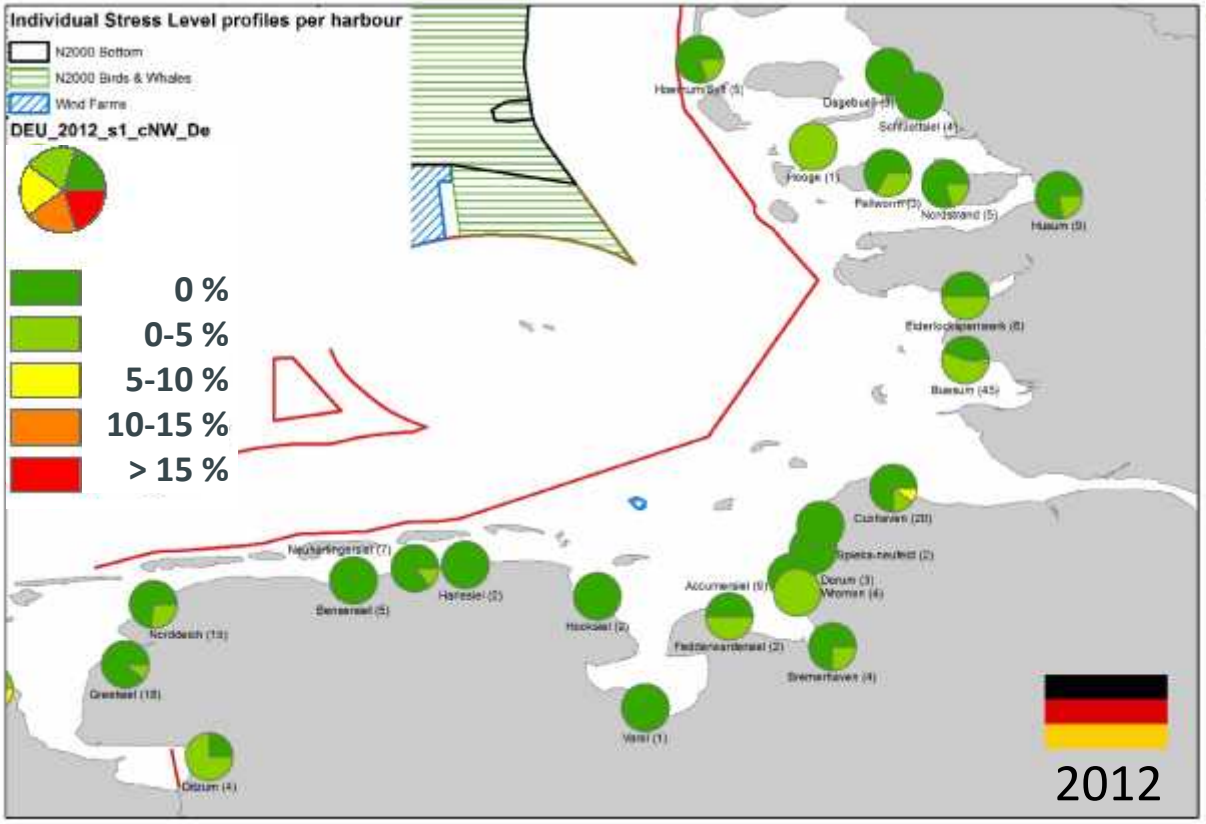
Schulze et al. 2010, COEXIST Deliverable 3.2

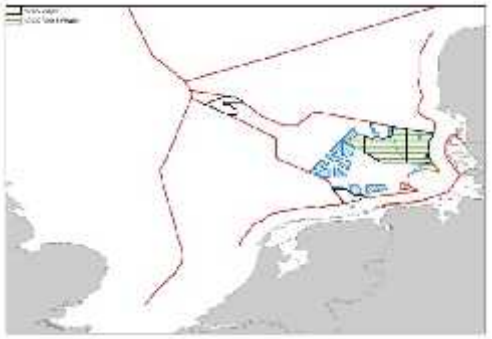
Schulze et al. ICES Annual Science Conference 2016

Analyses of (socio-)economic consequences

Individual Stress Level profiles per harbour

Scenario: Natura 2000 and Windfarms in German waters



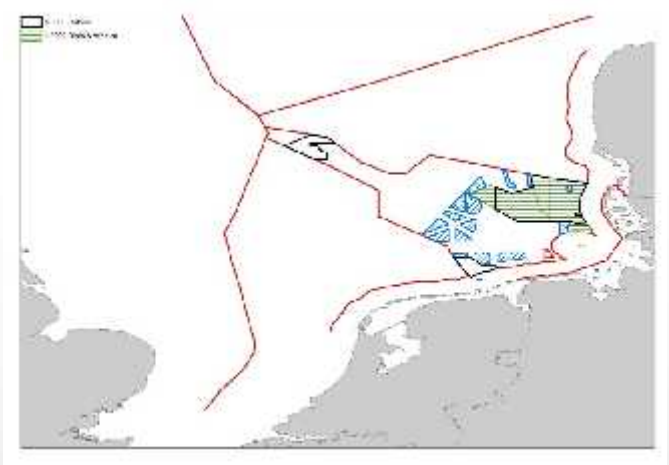


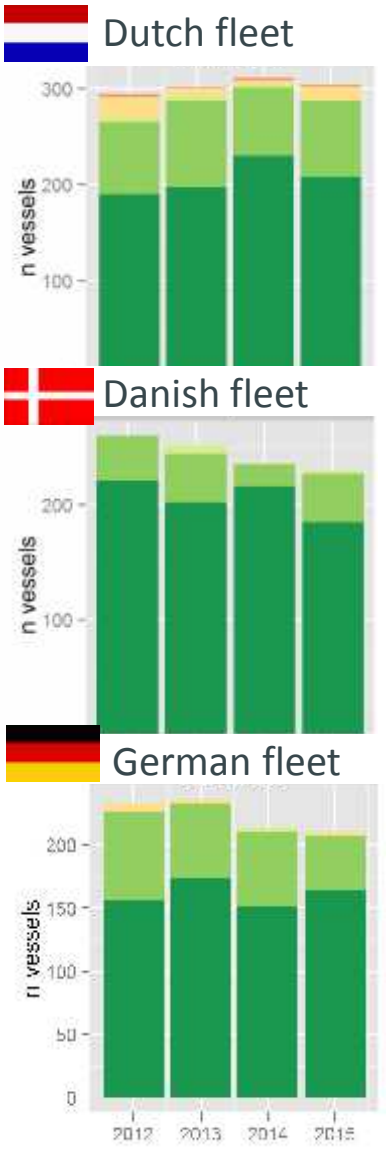
Analyses of (socio-)economic consequences

Individual Stress Level profiles per fleet

Scenario:

Natura 2000 and Windfarms in German waters





Questions remaining (Summary)

Scientific evaluation of management options?

- What are the operational objectives?
- What are the indicators?
- What are the thresholds?

→ Political discussion and decisions needed in many cases since management needs to be

- In consensus with conservation goals based on scientific knowledge
- Proportional & not discriminating
- Balanced between ecological, economic and social objectives

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Thank You for listening!