DISCLOSE

Effective conservation of the North Sea ecosystem

– a seabed perspective

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GIESKES·STRIJBIS FONDS

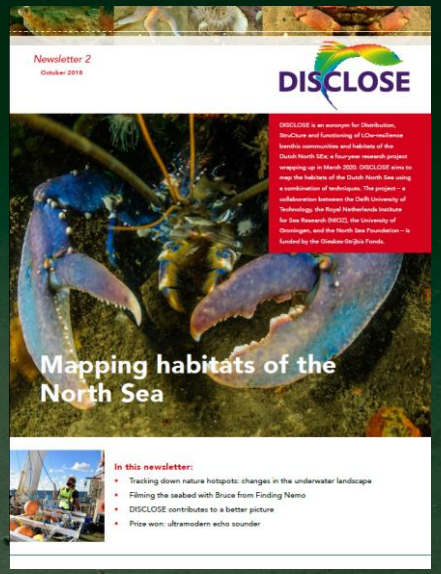
Stichting De Noordzee

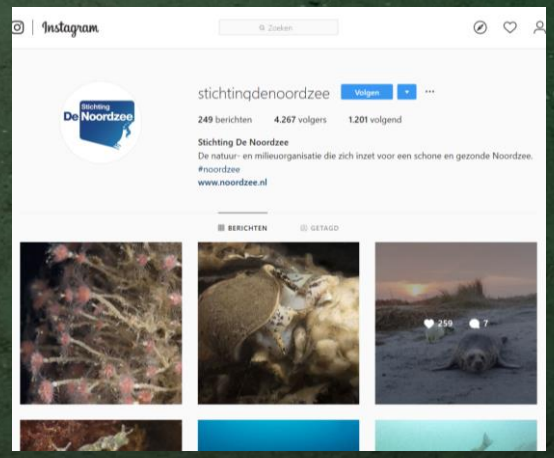
The North Sea Foundation

Goal: A clean and healthy North Sea

DISCLOSE role:

- Stakeholder community
- Communication & policy implementation
- Involvement of general public





Balancing human use & nature

IPPC 2019: Marine Protected Areas (MPAs) a must for sustainability

Since 1992 MPA implementation in NL

Rationale: Exclude uses and their pressures leading to recovery

Actual effect MPA will differ per location

Changes in the North Sea ecosystem since 1850

< Area undisturbed seafloor
< Vulnerable and long-lived species
< Variation in habitats
< Biodiversity sandy bottom communities
< Biogenic reefs
< Hard substrate

Expected effect of MPAs:

All species benefit

Especially those who:

- No or little migration or (temporally) strongly dependent on specific area
- Long-lived
- Vulnerable to (physical) disturbance

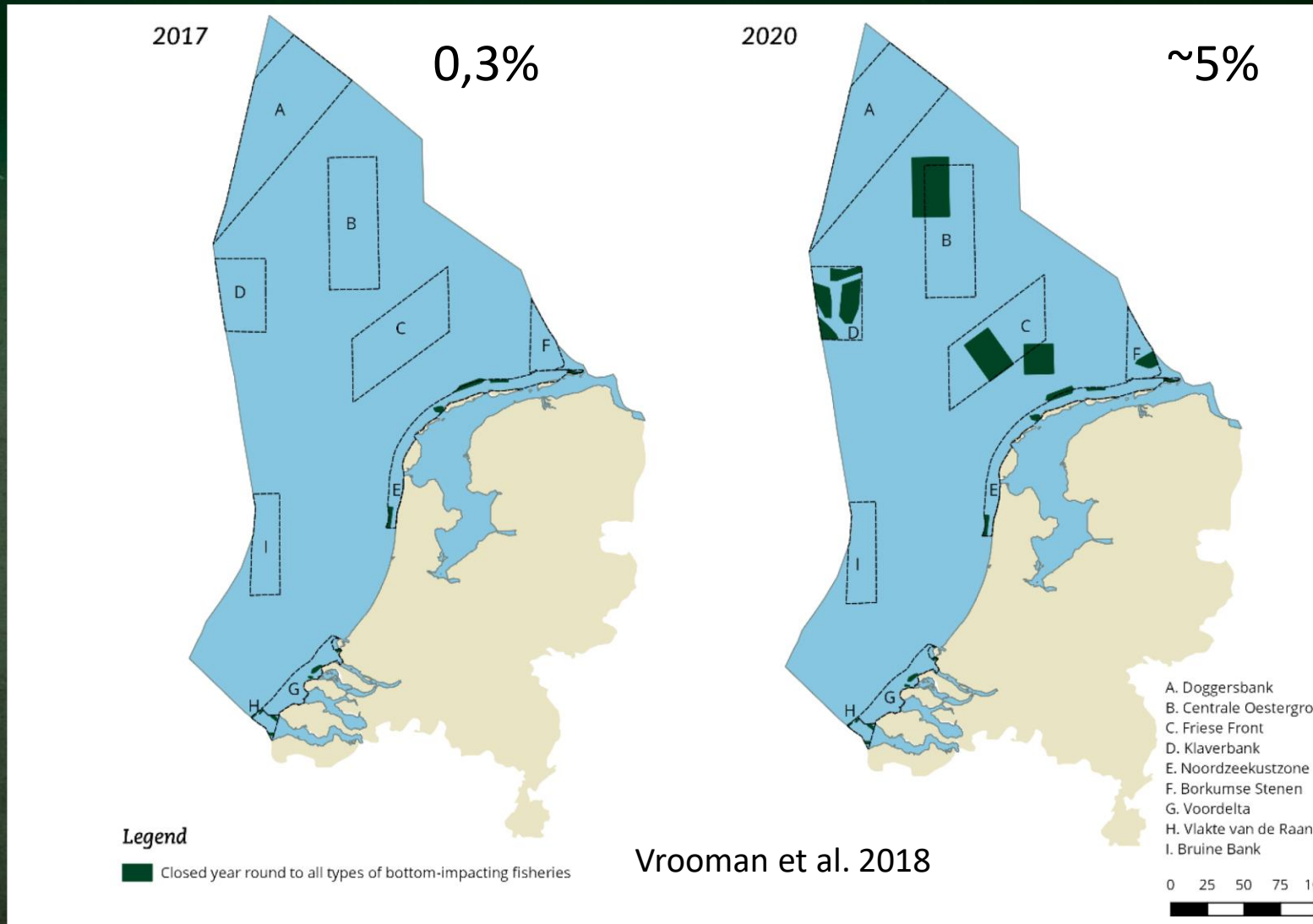
MPA implementation

NGOs

- 0,3 % NCP - year round protected from all bottom contacting fishing gear

Now: from a benthic perspective virtually no effective MPAs!

We have no reference areas to study the effectiveness of such MPAs!



Vrooman et al. 2018

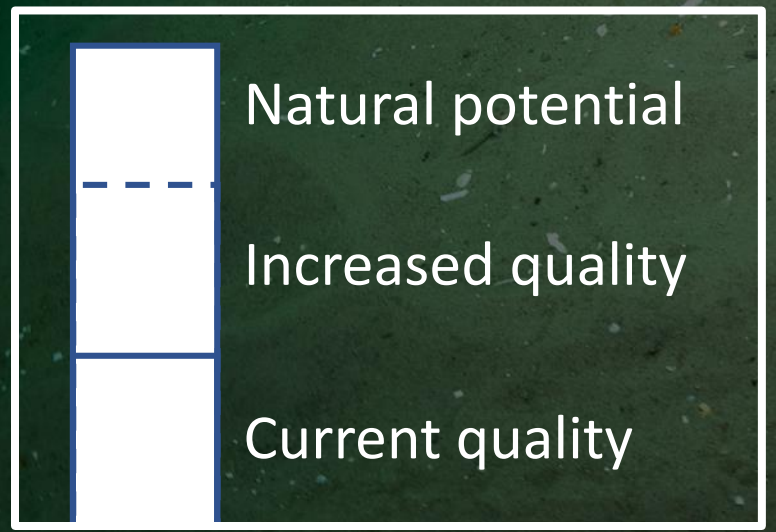
MPA implementation

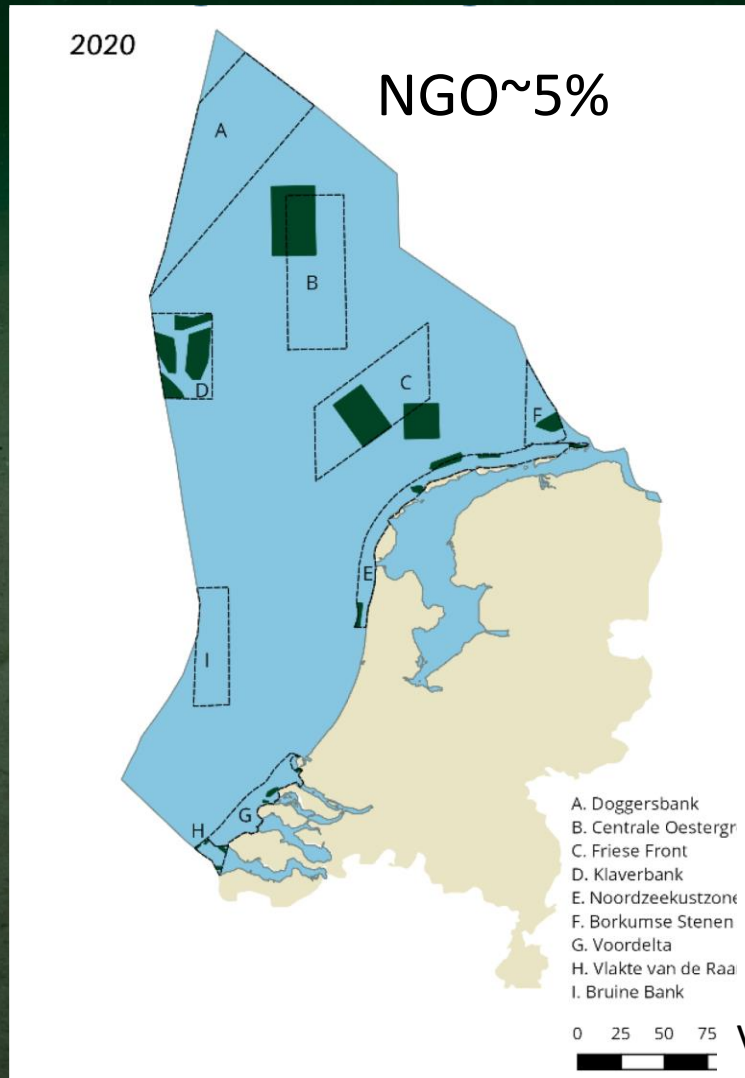
NGOs

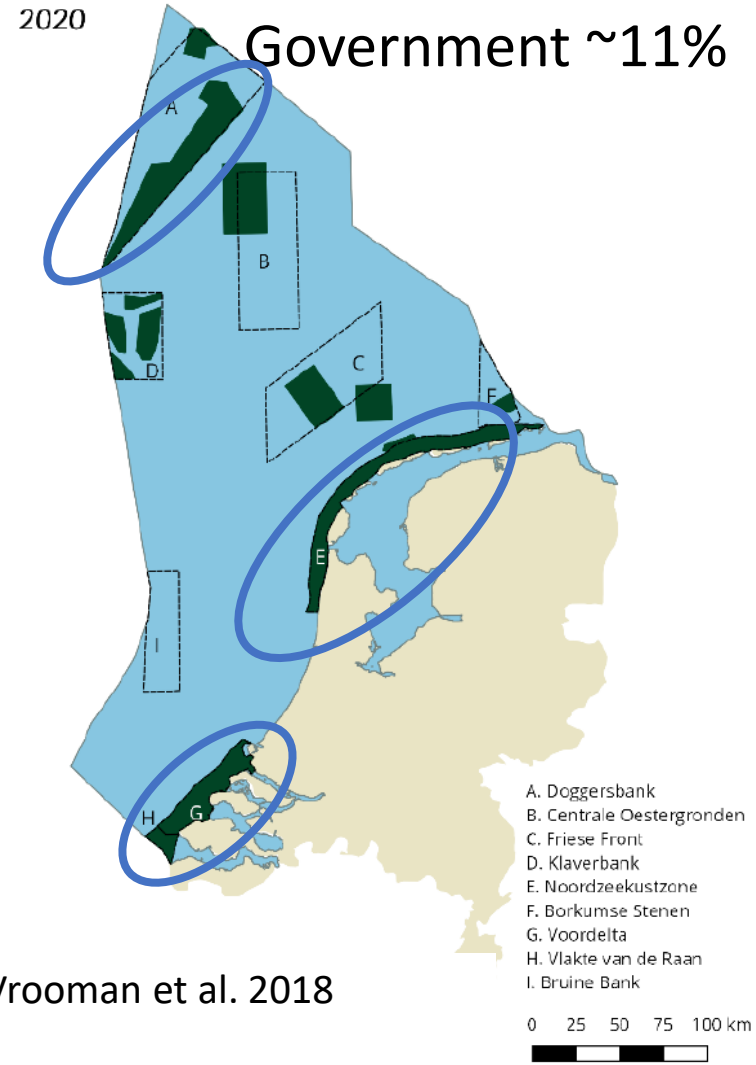
- 0,3 % NCP - year round protected from all bottom contacting fishing gear

Government

- Noteworthy bottom impacts







Vrooman et al. 2018

MPA implementation

NGOs

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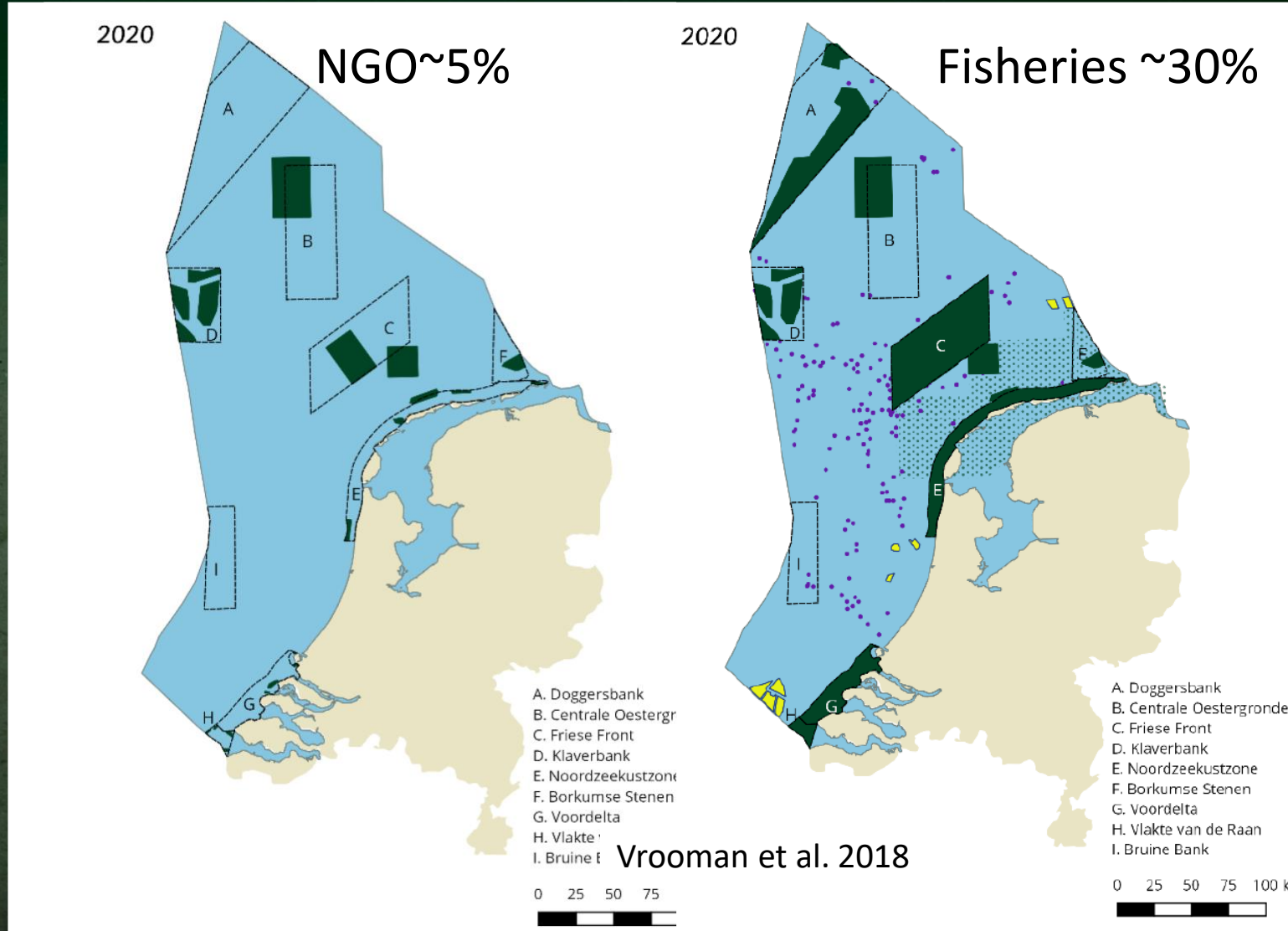
Government

- Noteworthy bottom impacts

Fisheries

- Closed to one or more gear type



Vrooman et al. 2018

The North Sea shows recovery potential

We thought we had no offshore biogenic reefs

Hence, misfit with policy and no protection

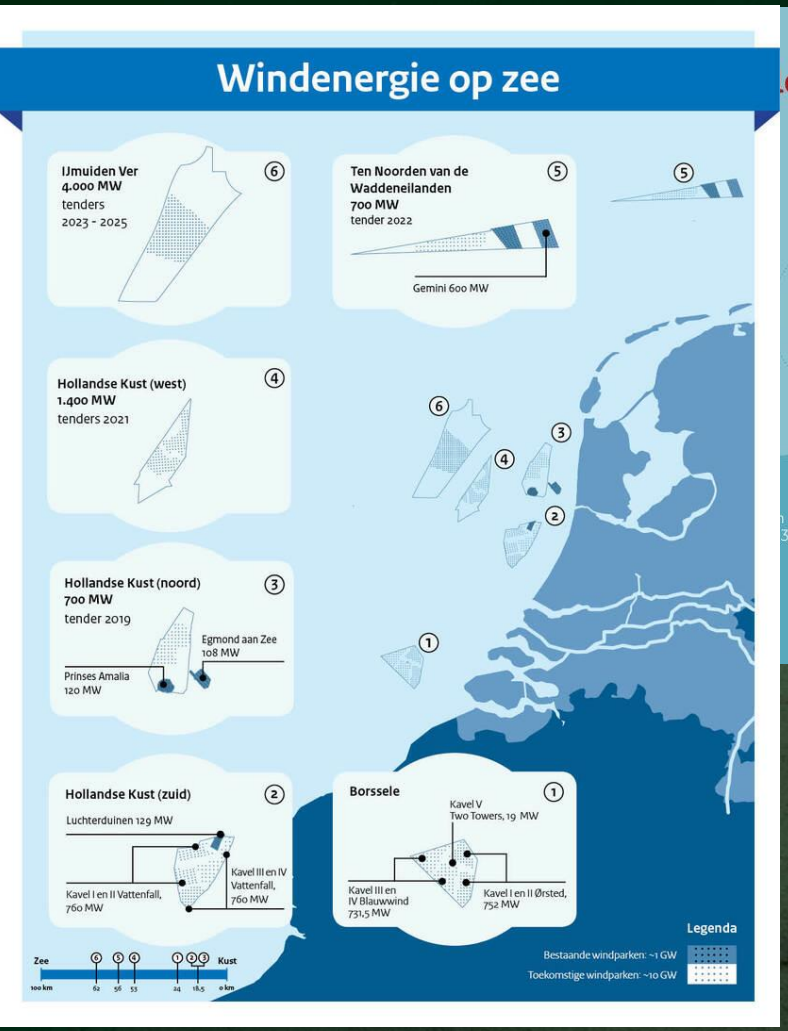
NL aims to protect or restore benthic communities:

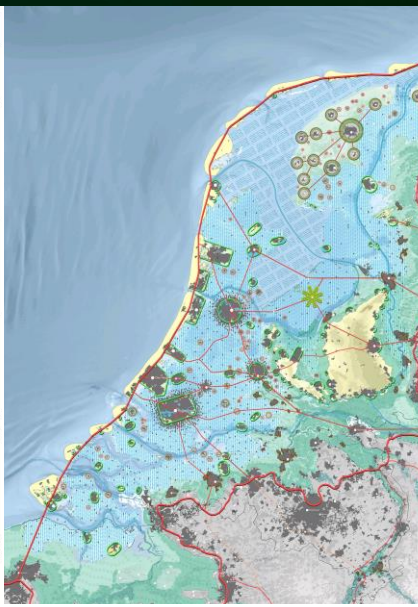
- Biogenic reefs are:
  - OSPAR: Rare, of high ecological importance and vulnerable
  - Natura 2000: Indicator of good structure and function
  - MSFD: important to D1, D4 & D6

Solution:

- Define biogenic reefs as habitat type

Future challenges: optimize use vs conservation





Suppletieprogramma 2016-2019 VPRO - Waterlanders

Offshore wind

2023 4.5 GW = ~2% NCP

2030 11.5 GW = ~5% NCP

2050 25-75 GW = X-25% NCP?

www.rijksoverheid.nl + Piet et al. 2018

Dredging

2018-2027 31 million m^3

With sea level rise 72 or even 240 million m^3 a year…

Baptist & Gerkema Noordzeedagen 2018

Case study: optimizing MPAs & fisheries

Hotspot paper: fisheries target specific habitats

How do fisheries' catches relate to MPAs?

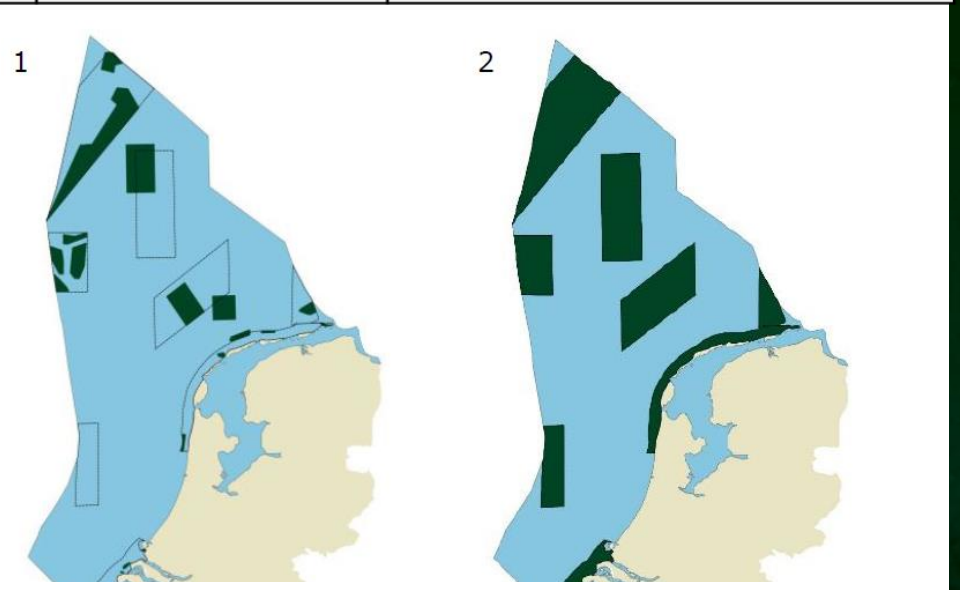
- Study with WMR in 2018
- VMS & catch data 2013-2017
- Calculated the worth of areas within the NCP

G. Piet et al. 2018, '*Ruimtegebruik op zee en de effecten op de visserij*', WMR 2018. (based on VMS data 2013-2017)

Case study: MPAs and fisheries catches

- Worst case scenario
  - no fish and euros from closed areas

Scenario	Area closure due to	Description
1	Nature protection	As in the current proposals for the management plans. This will become reality in 2020.
2	Nature protection	Areas completely closed to bottom fishing. This is a hypothetical scenario for illustration.



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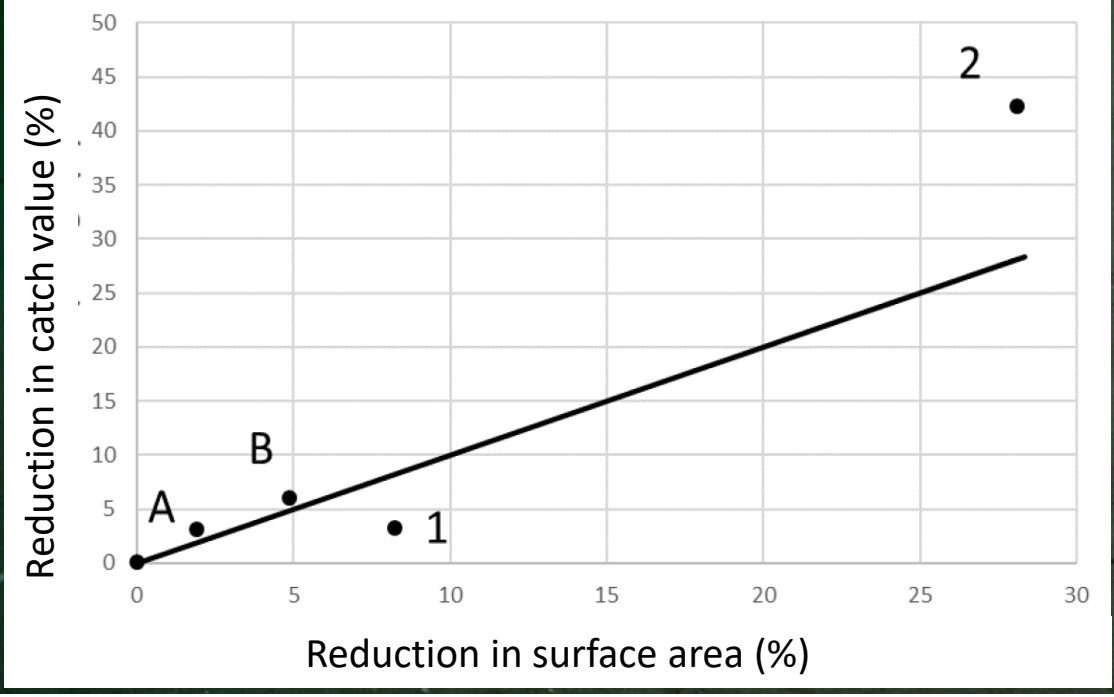
Case study: MPAs and fisheries catches

- Line represents complete random positioning of MPAs

- Above line relatively unfavorable for fisheries
- Below line favorable for fisheries



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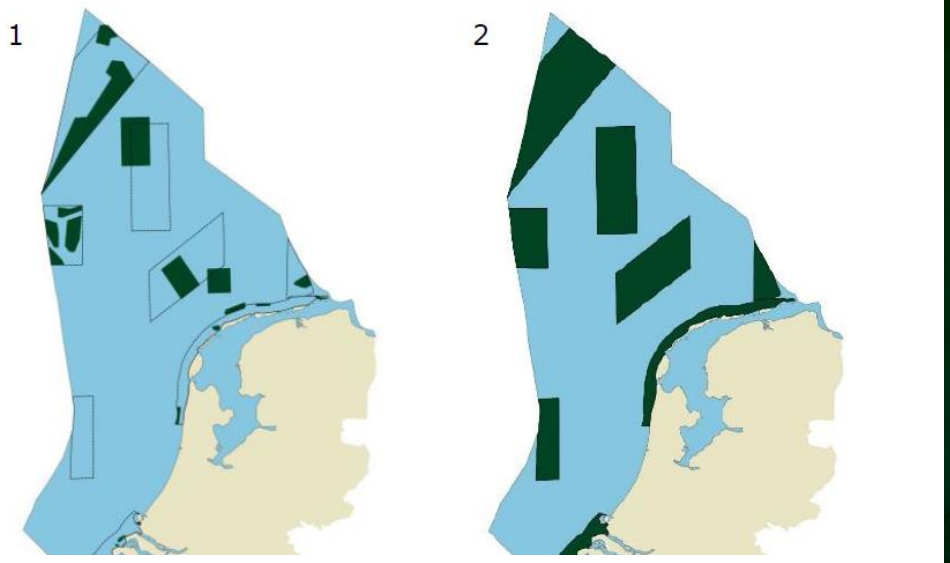

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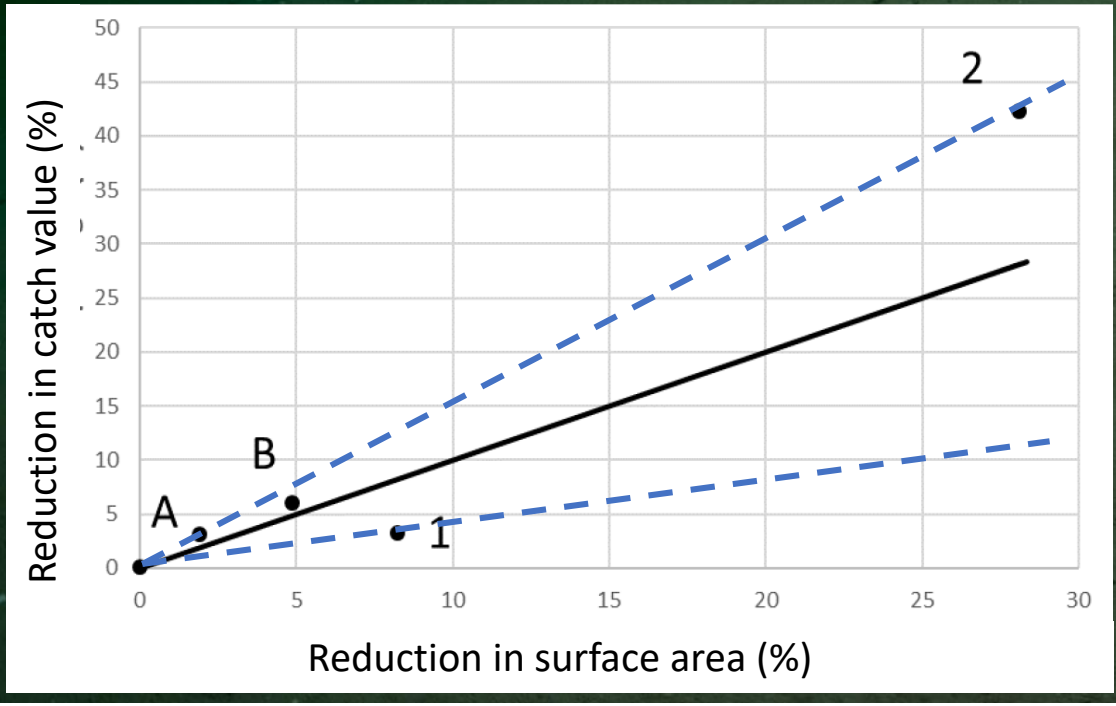
Case study: MPAs and fisheries' catches

Political decision, decrease surface and impact catch values

How much do areas with special nature values overlap with areas of high catch value?

And hence, will these MPAs on these locations be effective as they should be?



It is difficult to find optimal solutions

Risk of overcompensation

G. Piet et al. 2018, '*Ruimtegebruik op zee en de effecten op de visserij*', WMR 2018. (based on VMS data 2013-2017)

Summary on effective conservation

Challenges:

- Close knowledge gap effect MPAs – circle between science and policy
- True integration of sector & ecological knowledge will to put things in perspective
- Legal framework with control and enforcement

Conclusions:

1. Implementing MPAs is a crucial and urgent step to create clarity (start 1992)
   - Knowledge base – what is the natural potential of different zones/areas?
   - Acknowledge that some functions cannot be combined
   - MPAs can be reference areas for future uses

2. Current MPA proposals & North Sea agreement possible a solution, but no guarantee