

Symposium

Ecological implications of large-scale wind energy development on the North Sea

8 juni 2016, Rotterdam

Aanleiding

Natuur & Milieu betrokken bij ontwikkeling "2050: An Energetic Odyssey"

Samenwerking Natuur & Milieu en Stichting De Noordzee op thema Wind op Zee

Stichting De Noordzee gevraagd om ecologische feedback

Vanwege innovatief karakter en grootschaligheid besloten wetenschappers te benaderen

Symposium

ologen uit NL, B, D, VK.

rtise: benthos, zeezoogdieren, vogels, vissen.

ning "2050: An Energetic Odyssey"

tarisatie kansen, bedreigingen, kennisleemten

dbevindingen met input van wetenschappelijke raad

DN



Energetic Odyssey

50 – An Energetic Odyssey”: feiten en claims

25.000 turbines van 10MW worden geïnstalleerd

Windparken bedekken 57.000km²

Alle geplande windparken staan buiten de 12-
mijlszone

Een kunstmatig eiland van 6km² wordt aangelegd
op of bij de Doggersbank aangelegd.

Energie wordt opgeslagen in de vorm van
waterstof

Uitgeproduceerde gasvelden worden voor CO₂
opslag gebruikt

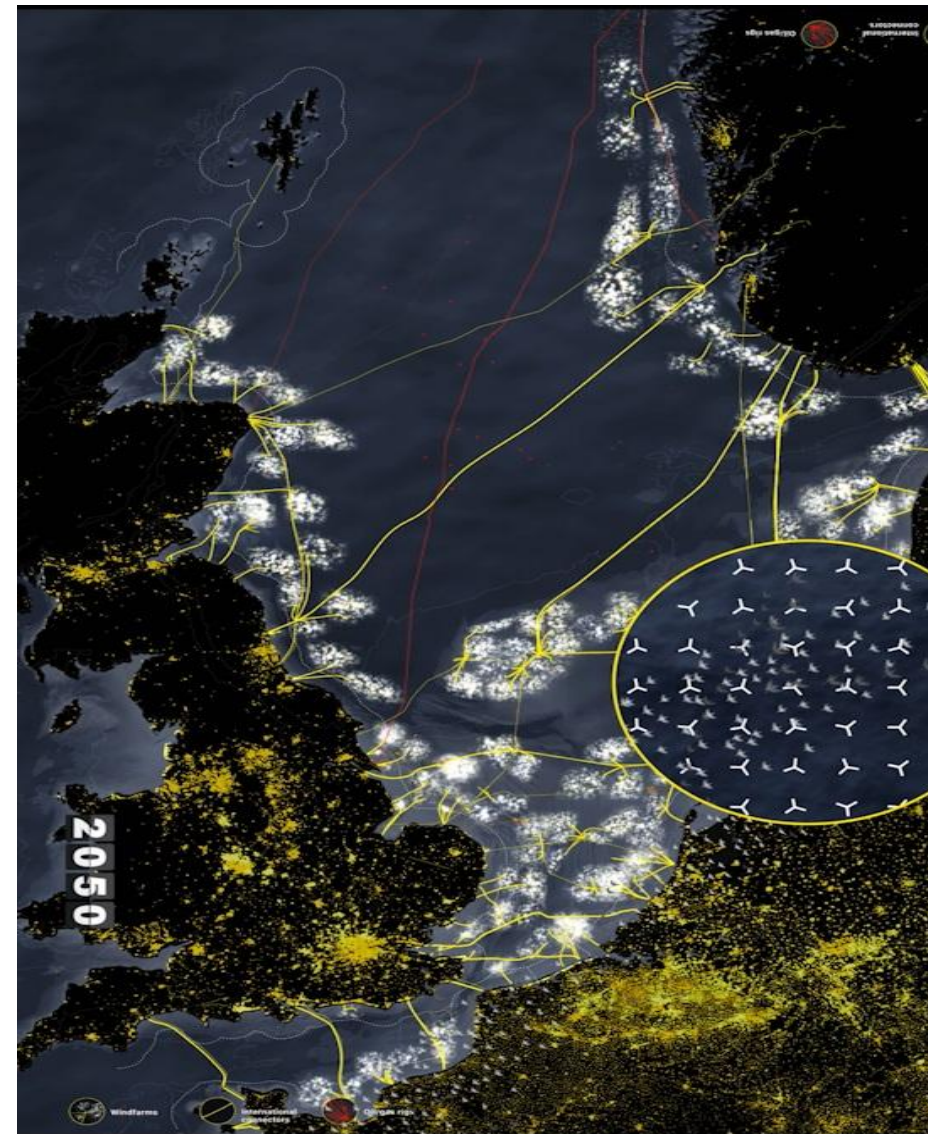
Er wordt rekening gehouden met migratieroutes
van vogels

Kunstmatig hard substraat biedt nieuw habitat

Onderwatergeluid wordt gemitigeerd

In windparken worden visserij managementzones
gecreëerd

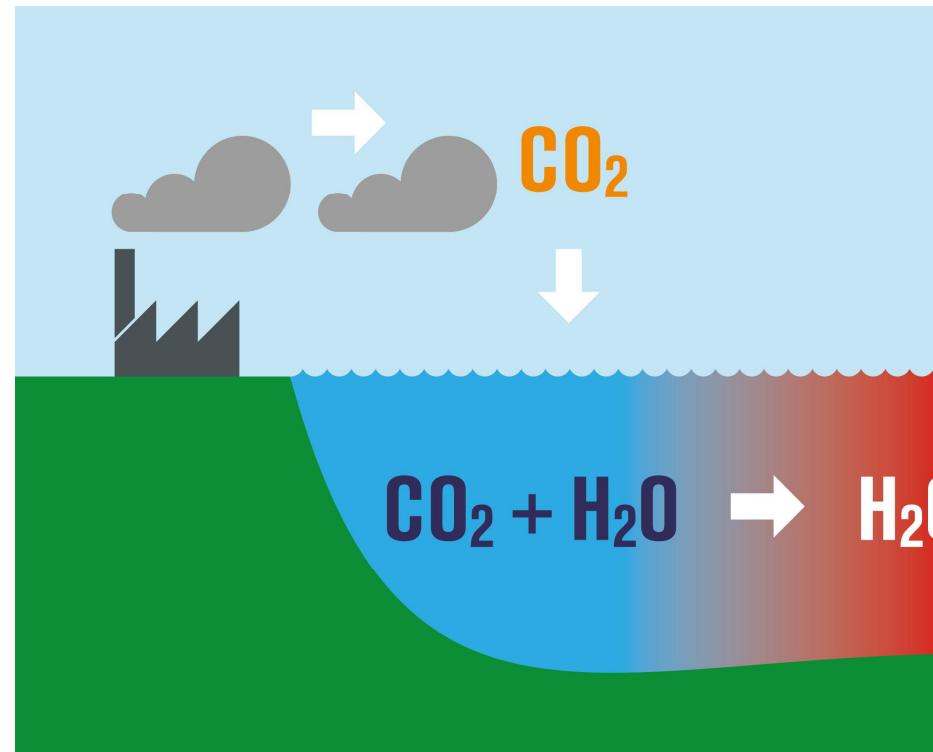
Het belasten van CO₂ uitstoot is noodzakelijk



Oplossing klimaatprobleem

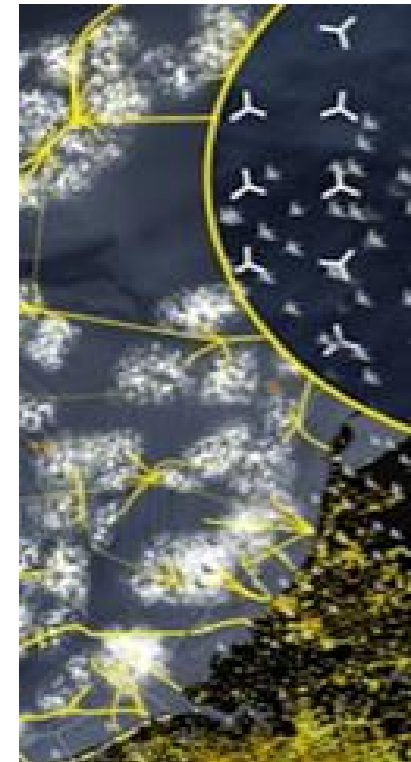
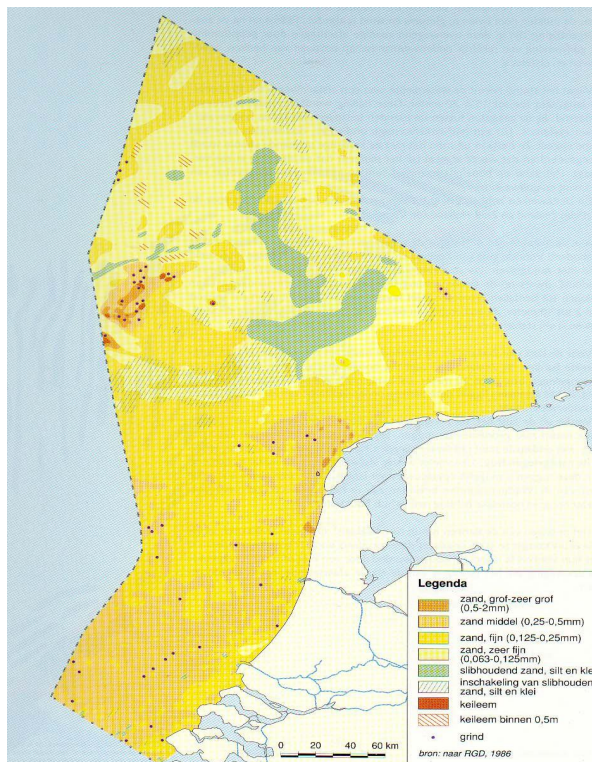
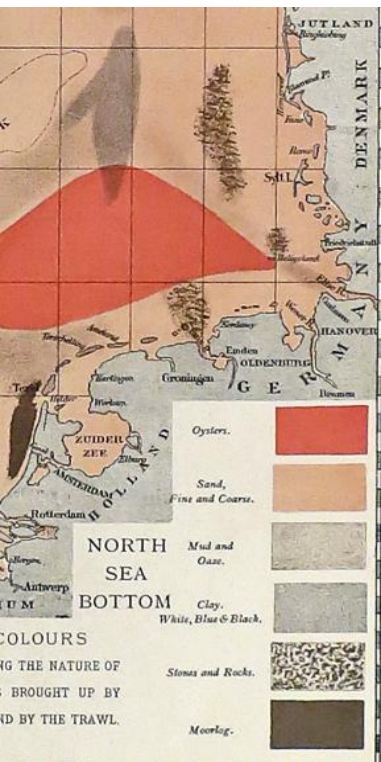
Climate change is a global problem with local solutions.

North Sea should be part of the solution by providing space for harvesting renewable energy through



Veranderende Noordzee

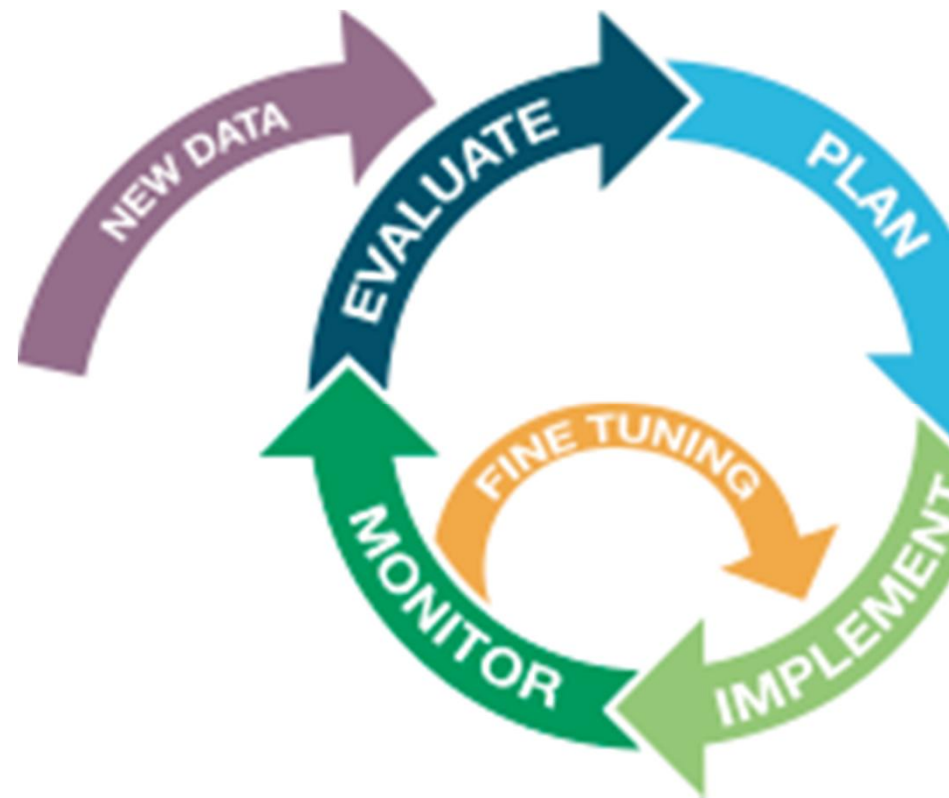
Large-scale development of offshore wind farms on the North Sea further accelerates the transition from a degraded seascape to a modified seascape."



Adaptive management

Large-scale development of offshore wind farms will have wide ranging impacts on the ecology of the North

It is recommended to take a **step-by-step** approach, supported by a dedicated **monitoring** scheme that enables **adaptive management**."



Vorzorgsbeginsel

knowledge base regarding the (cumulative) effects of scale offshore wind energy is limited.

ore, the **precautionary principle** should be applied the roll-out of offshore wind farms."

An ounce of prevention is worth a pound of cure



PEARLS OF WISDOM

Natuurbeschermingsrecht

der whether **nature conservation law** would allow large-scale development of wind farms at sea as stated in the Energetic Odyssey.

applicable legal requirements will have to be **taken into account.**"

Stichting
De Noor



Internationale samenwerking

... that **negative ecological impacts** of a future
Sea wind farm network are **kept to a**
minimum.

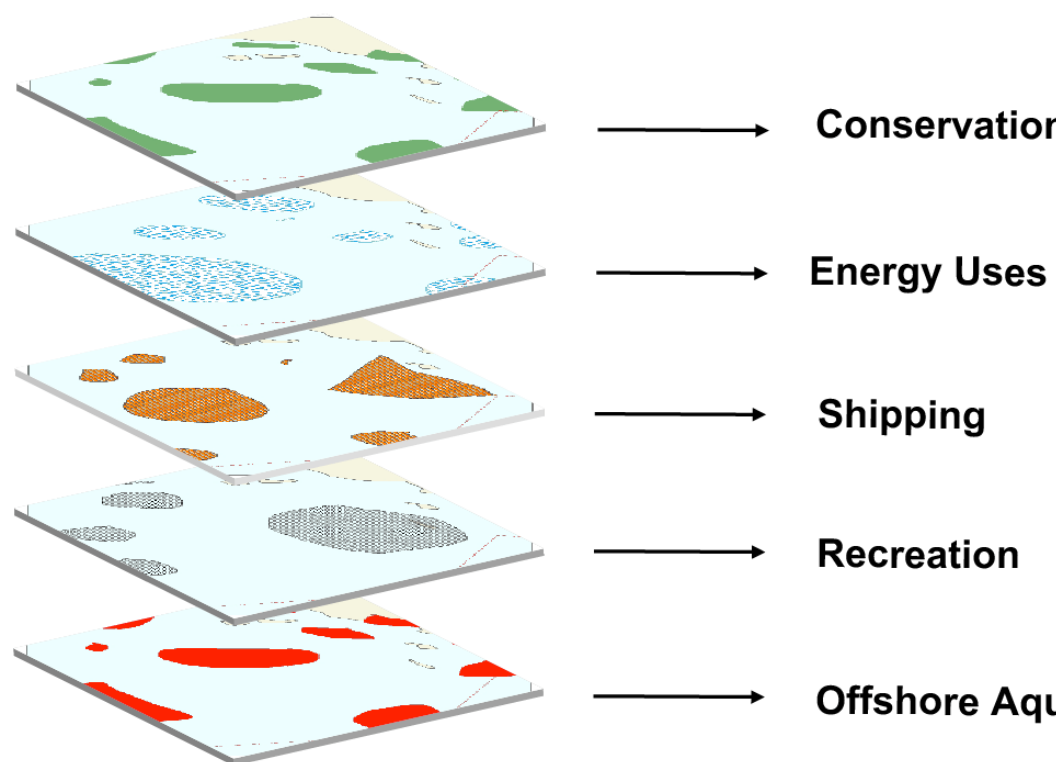
... **international cooperation** directed at **spatial**
planning and at improving **research and monitoring**
... "



Ruimtelijke ordening

op large-scale offshore wind farms in a
e way, using an **integrated approach to**
the spatial planning.

ew spatial plan for the North Sea, all
es are awarded space based on **ecological**
s and need."



Beschermde gebieden

farms should **not be conflated** with Marine Protected Areas (MPAs).

ating and conserving **MPAs as natural reference** will remain necessary in the future.”





Bedankt!