

KYST og FISK Workshop in Hirtshals, Denmark  
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# **PAINTING WINDMILLS ON OUR HORIZON**

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# ORGANIZING A KNOWLEDGE BASE FOR PROJECTS IN THE COASTAL ZONE

- Localizing activity in the coastal zone involves;
- Convincing stakeholders and decision-makers of the projects excellence
- Making visible and acceptable ideas and consequences contained in the project
- Knowledge needed – but who is to collect/produce what and where? And, how to involve stakeholders in the process?
- Impact Assessment – providing certain information on the project and its consequences is required for some projects

# Follow the Actor; Follow the Impact Assessment

Focus on the IA:

- Making the project and its consequences visible
- How people respond to what the IA may represent?
  
- The Havsul II project (Western Norway) – an ongoing process of localizing an offshore wind power plant in coastal waters – claimed the largest in the world (2006)

# WINDPOWER IN NORWAY

## Political goal

By year 2016  
30 Twh  
renewable  
energy

Windpower -  
of priority but  
share not  
specified

National &  
regional  
planning  
instructions  
produced  
this year

## Status vindkraft Mars 2007

32 gitte konsesjoner

- Totalt ca. 1700 MW
  - 322 MW i drift
  - 105 MW under bygging
  - 1370 MW ikke påbegynt

11 prosjekter er avslått  
eller stilt i bero

- Totalt ca. 1100 MW

NordVind workshop Visby

NVE, v/Johnson, 2007



- Idriftsatt
- Konsesjon gitt
- Konsesjon søkt
- Avslått

NVE  
Mars 2007

Norwegian power  
production mainly  
Renewable  
99 % hydro electric  
power

# The Impact Assessment for Havsul II

Konsesjonssøknad og konsekvensutredning for  
HAVSUL II, GISKE OG HARAM KOMMUNER

**In February 2006  
The application involving  
an IA was filed to the NVE  
(Norwegian Watercourse  
and Energy Directorate)**



# INTERNET VERSION

## Innholdsfortegnelse - Havsul II

Klikk på knappene nedenfor for å få opp ønsket dokument.

Konsesjonssøknader

Fagrapporter

Fotomontasjer

Kart

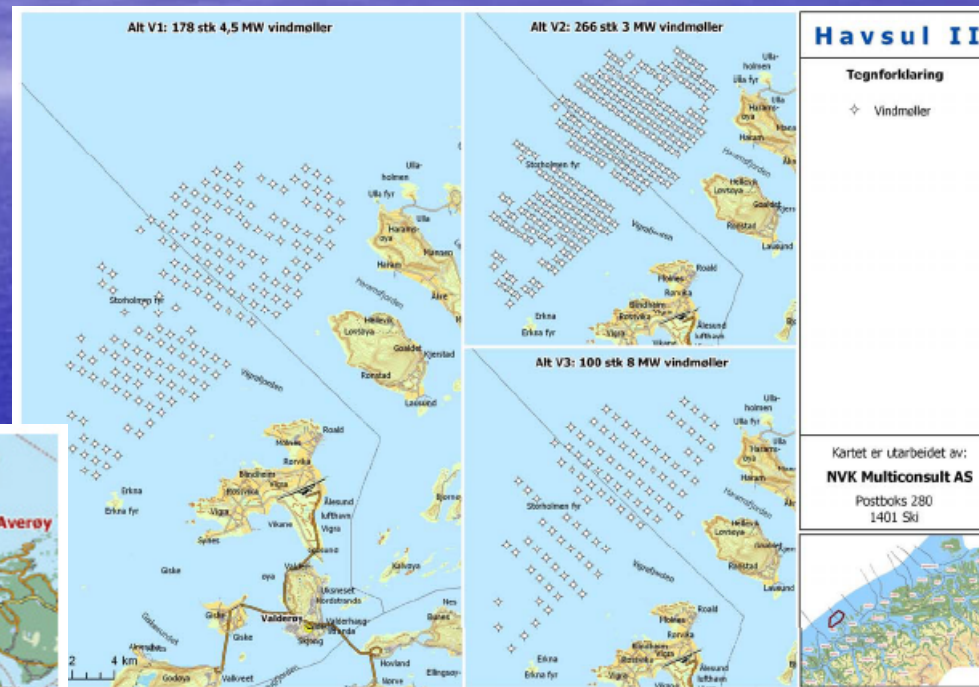
Presentasjoner

Steng vindu

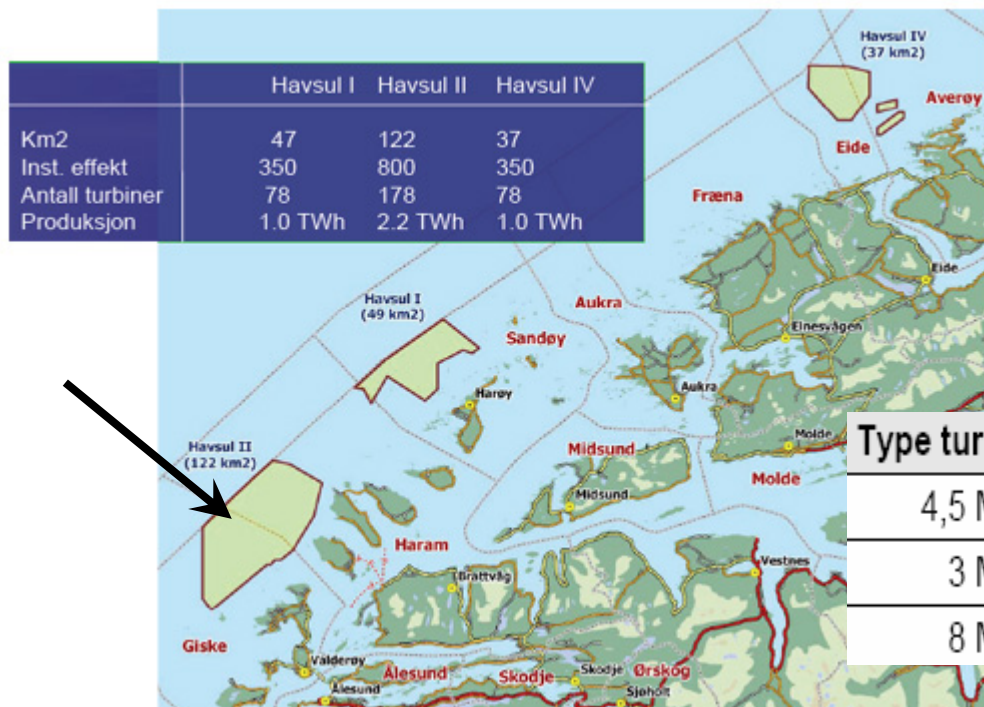
# MAPS/APPLICATION

## – 3 alternatives?

- 122 km<sup>2</sup> of shallow waters covering a forest of 178 4.5 MW wind turbines (800 MW)
- Power for 110 000 dwellings



1: Utbyggingsalternativer for Havsul II.



Type turbin	Antall turbiner	Navhøyde	Rotordiameter
4,5 MW	178	95 m	120 m
3 MW	266	80 m	90 m
8 MW	100	120 m	150 m

	Havsul I	Havsul II	Havsul IV
Km2	47	122	37
Inst. effekt	350	800	350
Antall turbiner	78	178	78
Produksjon	1.0 TWh	2.2 TWh	1.0 TWh

# Scientific Reports

## Park

Biologisk mangfold og verneinteresser

Luftfart og radarvurderinger

Navigasjon & skipstrafikk N

Navigasjon & skipstrafikk S

Kulturminner og kulturmiljø

Marin flora og fauna

Landskap

Samfunnsmessige virkninger

Produksjonsberegninger

Friluftsliv & Reiseliv

Fiskeri og havbruk

Overvintrede sjøfugl

Båndlagt areal

Støy

## Linjer

Friluftsliv

Kulturminner

Landbruk

Landskap

Naturmiljø

Tilbake

# A collection of Manipulated photos

The turbines are visible in the “landscape” close to land - approx. 3 km off shore



# Molnes; - A view with Windmills painted on the Horizon

Local people  
often relax  
glancing at  
this view

7. Fra Molnesfjellet (Giske)

Tueneset; a place frequently visited by  
tourists as well as locals

Tiny roads for walking

A beach

An aquarium park

Monuments  
from the Nazi  
occupation in  
World War II

Does Windmills fit  
into this Picture;  
onto the Horizon?

So, how did people respond to what they considered the IA to be representing?

- *“Living in picturesque surroundings is considered more attractive than close to an industry site facing a view constantly reminding of something forever lost.”*

# Public meetings



**Communication of information**

**Protests**

**Questions**

**Answers**

**Comments**

**Expert witnesses**

# Local Initiatives

## Genesis of Resistance

Start bank account for money raising - communication of alternative information through

- web site
- info.meetings

Local painting course: Challenge

Painting Wind Mills on the Horizon?

Protest in sunbreeze  
Part of nationwide event  
Songs  
Poetry  
Speeches on issues  
(tourism, birds)

The fortress made for shelter  
for those walking in the area

Reported as an act of

crime

Vs. 122 square km of  
Wind Mills

# "Update-day" on the IA Seminar for Bureaucrats working in the Host Municipalities

- Host municipalities update on IA related issues
- The authors in charge of making the IA – the reports – the scientific knowledge invited to informing the crowd;
  - - a briefing on the topics
  - - answer questions;
  - - add information
  - - discussion

# **Offshore simulator at the Ålesund University College**



**Manipulated photos**

**People taken for a trip into the windmill park**

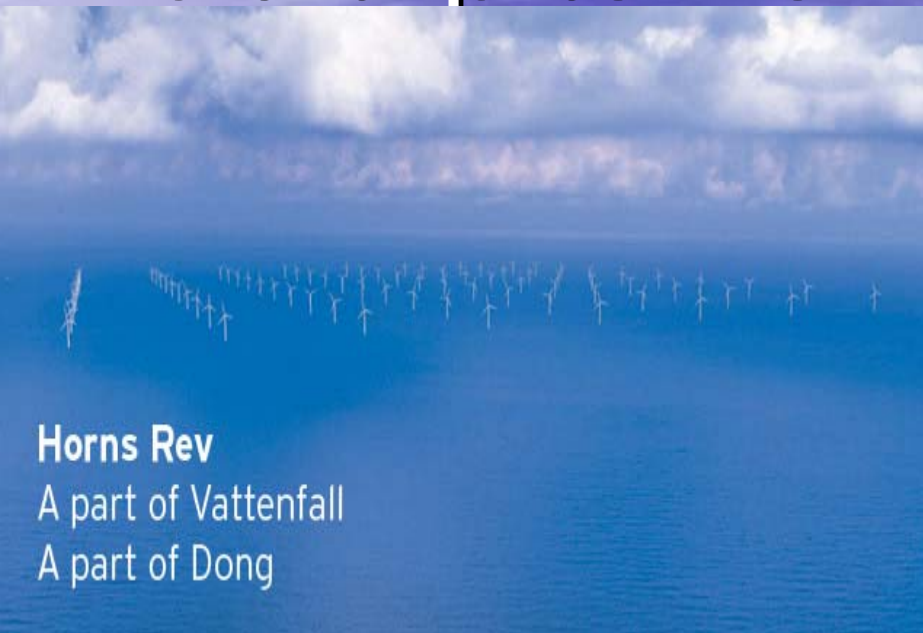
**Ship navigation in a forest of windmills**

**Reduced visibility in demanding waters**

**Localizing information tech, radars etc inside  
turbines**

# Decision-makers

## Field trip to Horns Rev (DK)



### Horns Rev

A part of Vattenfall

A part of Dong



**Experience:**

**Turbine size - Visibility - Noise**



**Sources: websites of Havqul, HornsRev, Haram kommune**

# **One Municipality: Referendum**

**Goal: Reflecting the people's wish when commenting on the application**

**Participation 52 %**

**Vote Results: No + 70 %**

**(1830 votes)**

**A few days prior to the ref. a Proposal of Moving some wind turbines further off shore was presented**

# The IA painting Wind Mills on the Horizon - on the Minds of People

- Main focus:
  - How it was introduced to the world on the internet
  - How people responded to what the IA might represent by referring to some events
- Did the IA have an impact on stakeholder involvement in organizing the knowledge base?
- Yes, some indications

**On-site Inspection in June  
2007**

**Opposition still mobilizing  
protests**

**THANK  
YOU FOR  
YOUR  
ATTENTION**

**A decision is expected to  
be made by the NWE this  
autumn –**

**QUESTION:**

**Is local opposition to be  
emphasized and reflected  
in the decision?**

**Will there be Windmills  
painted on the Horizon**



**Sources: [www.havsul.no](http://www.havsul.no); [oyblikk.no](http://oyblikk.no); [smp.no](http://smp.no) ; [haram.kommune.no](http://haram.kommune.no);  
+web sites of Rolls-Royce and Horns Rev Windmill Park**