

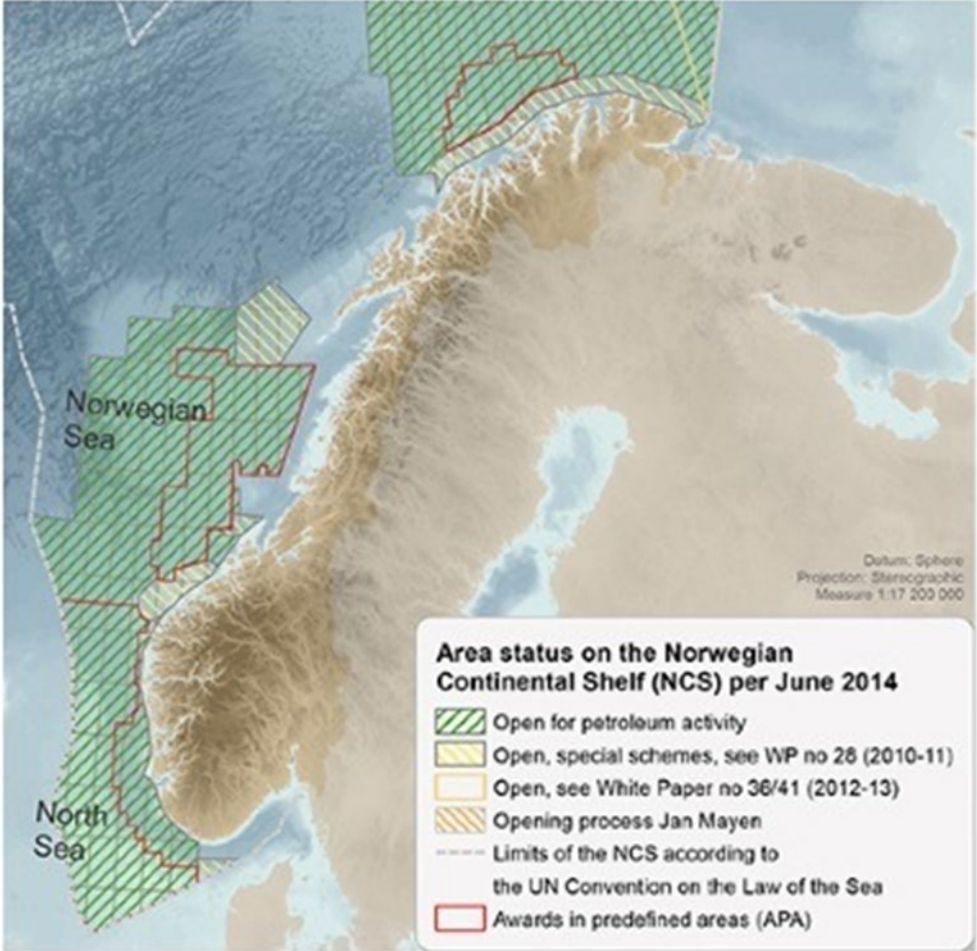
Biodiversity management in the oil and gas sector

Module 2b

Outline

1. Sector responsibility
2. Integrated management plans
3. O & G life cycle and environmental aspects
4. Laws and regulation
5. Dialogue and transparency

Sector responsibility : Ministry of Petroleum & Energy



SEA



Opening of new area



Nominating blocks



Awarding blocks (petroleum licences)

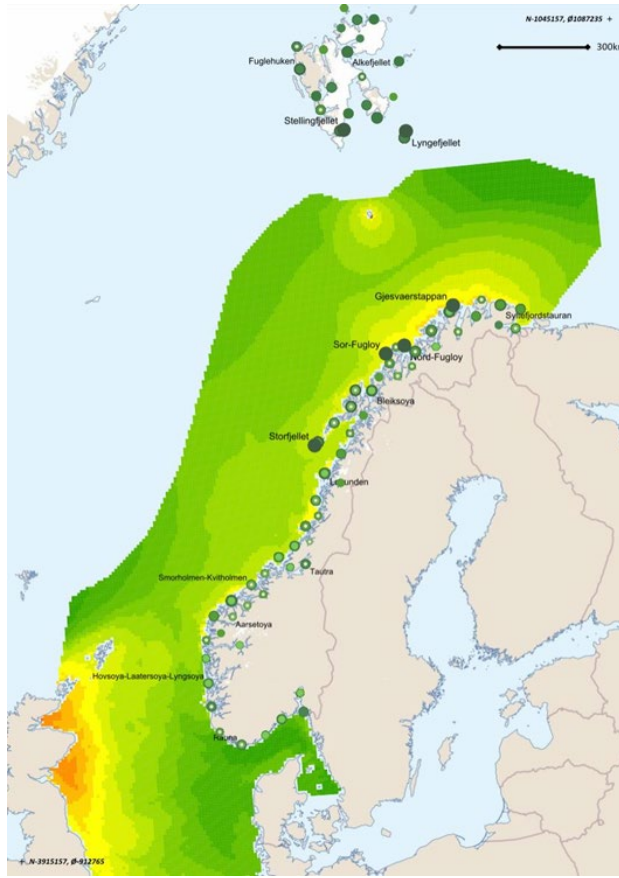
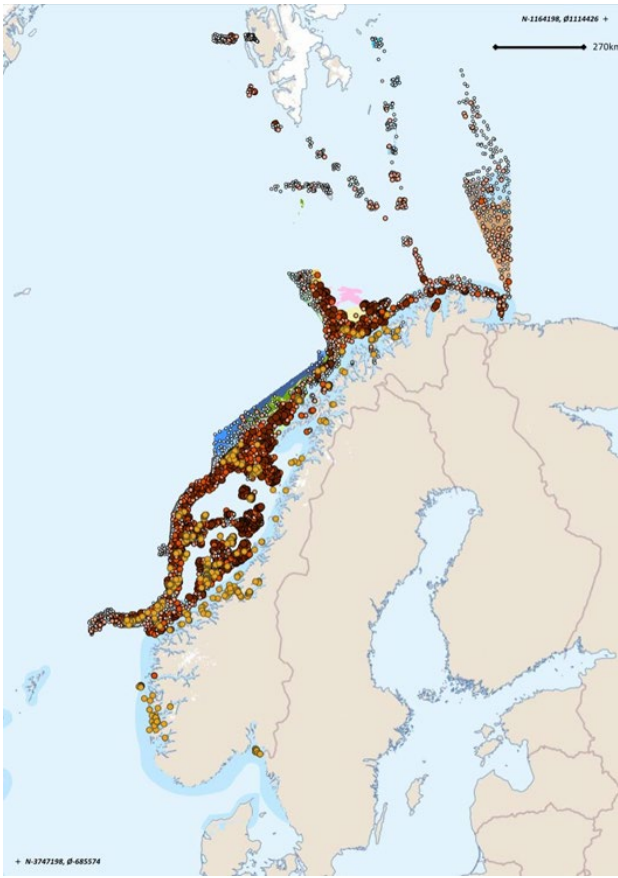
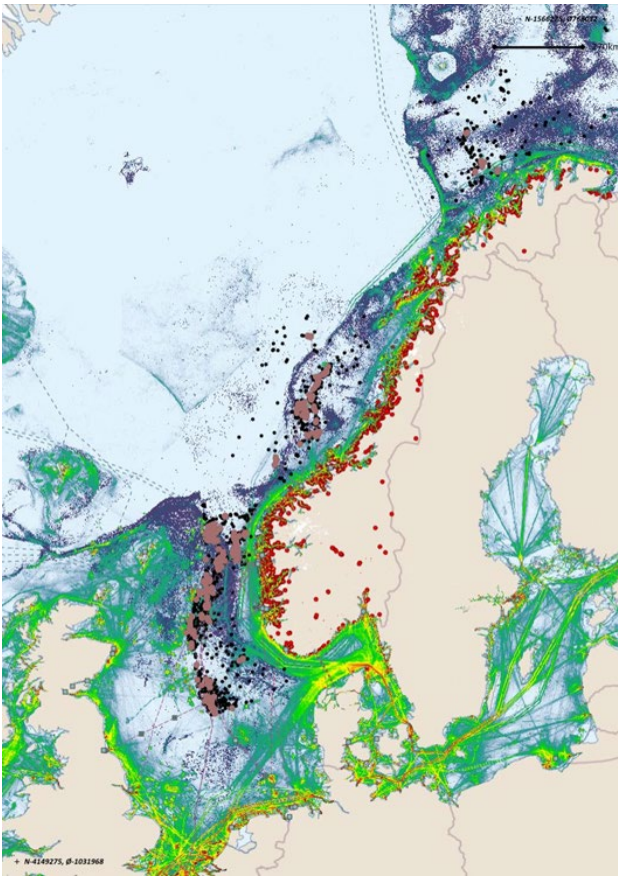
Cross sector responsibility: The Ministry of Climate and Environment

- Responsible for developing cross-sectoral environmental policy and carry out the environmental policy of the Government
 - Acts as a promoter and coordinator to ensure that the authorities in the various sectors implement the environmental policies in their particular areas
 - Subordinate (executive) agency: The Environment Agency
- Cross-sectoral policy is laid down in White Papers
 - **Integrated Management Plans for the Norwegian Seas**
 - Climate Policy
 - Waste Policy
 - Biodiversity

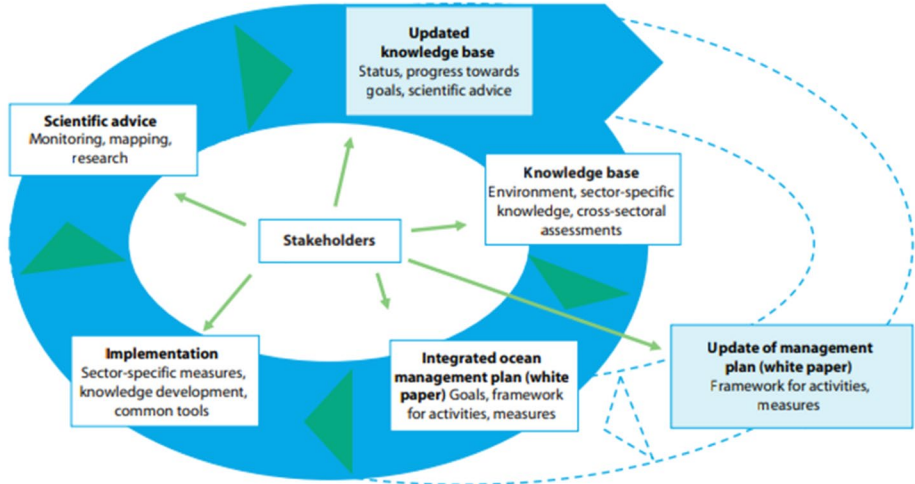
Management plans – why?

- Ensure sustainable use of natural resources and ecosystem services and at the same time maintain the structure, functioning, productivity and diversity of the ecosystem.

Sustainable use

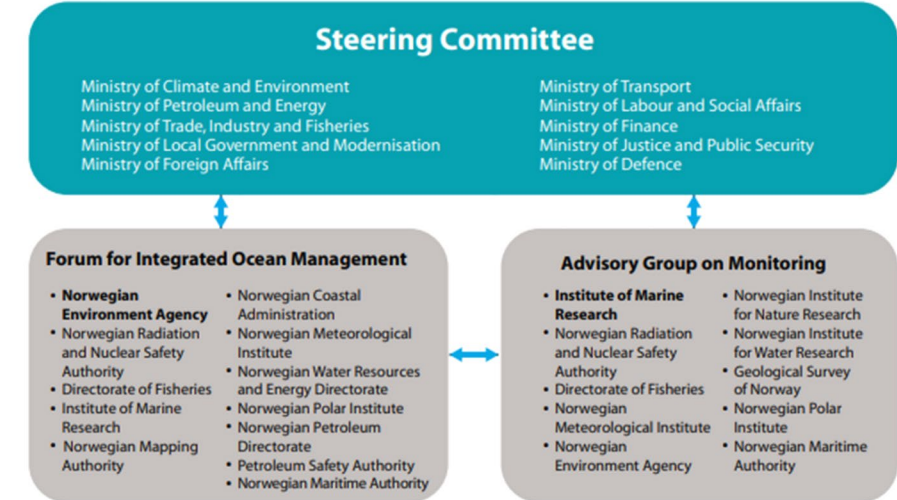


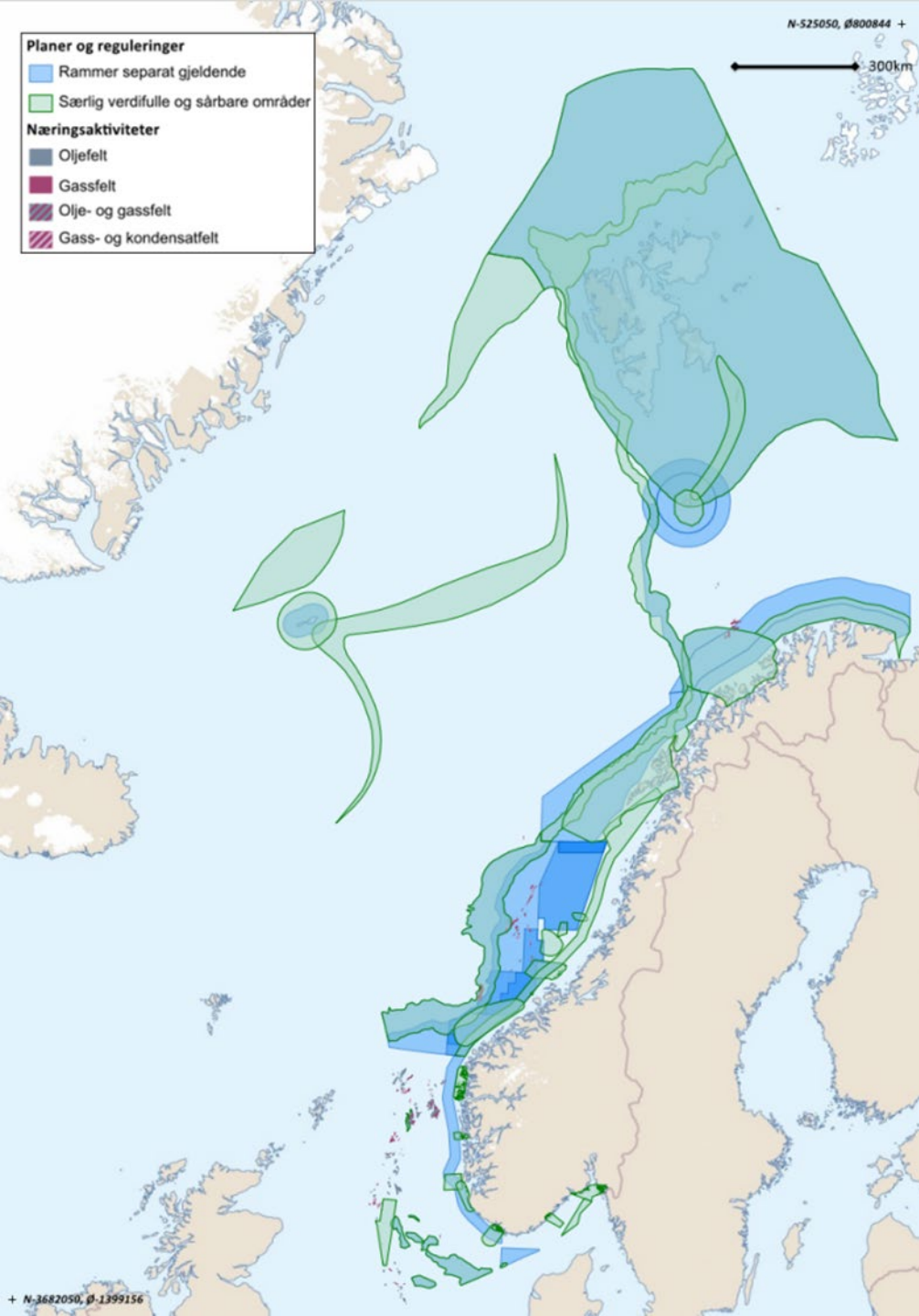
Integrated Management Plan



- Integrated management plans for all Norwegian sea areas (first presented in 2006)

- large-scale spatial management tools

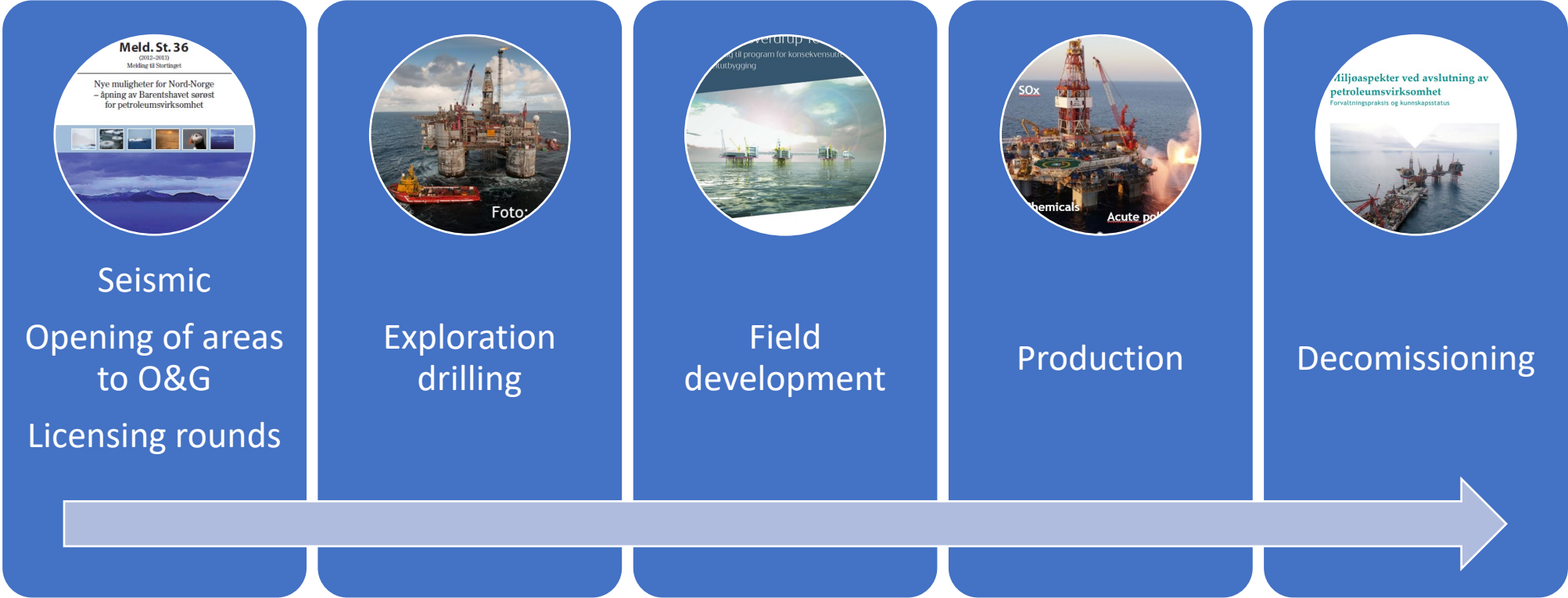




Framework in white papers

- No exploration drilling in oil-bearing formations in the spawning season (1. februar-1. June)
- No seismic surveys during spawning migration/in the spawning season (1. January-1. May)
- Use of technology to deal with drill cuttings and drilling mud on herring spawning grounds
- No new petroleum activities will be initiated in the Iverryggen reef area until an overall marine protection plan for all Norwegian sea areas has been presented to the Storting

O & G lifecycle





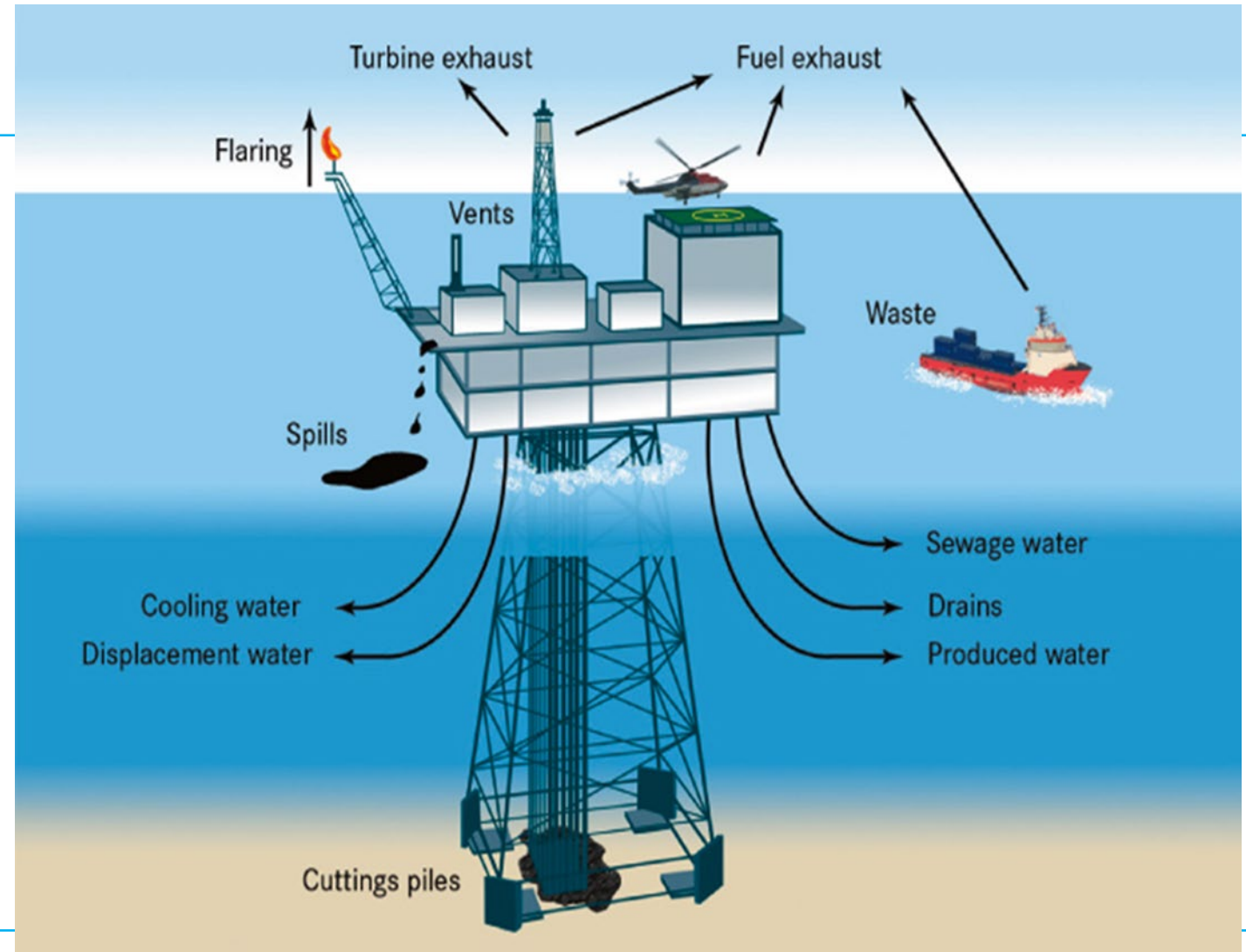
Framework in white papers

- It is important to ensure that the environmental aspect is managed in all the different phases of the oil and gas life cycle

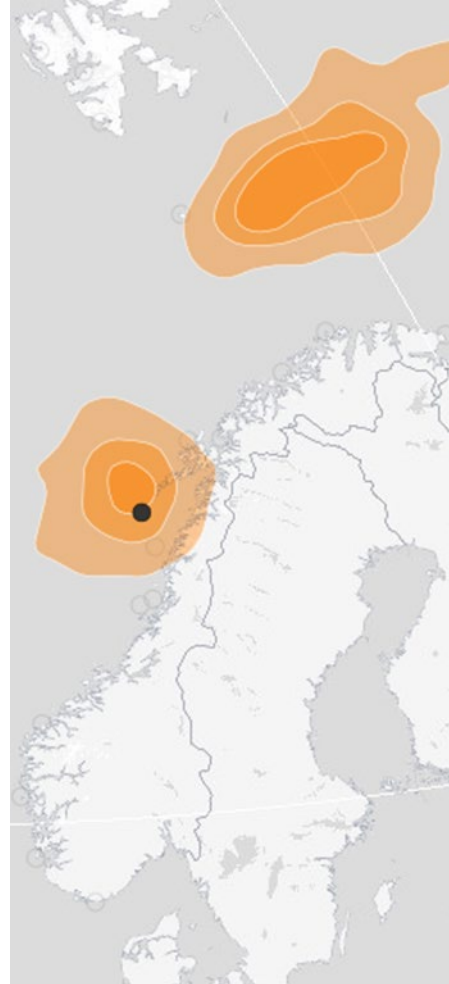
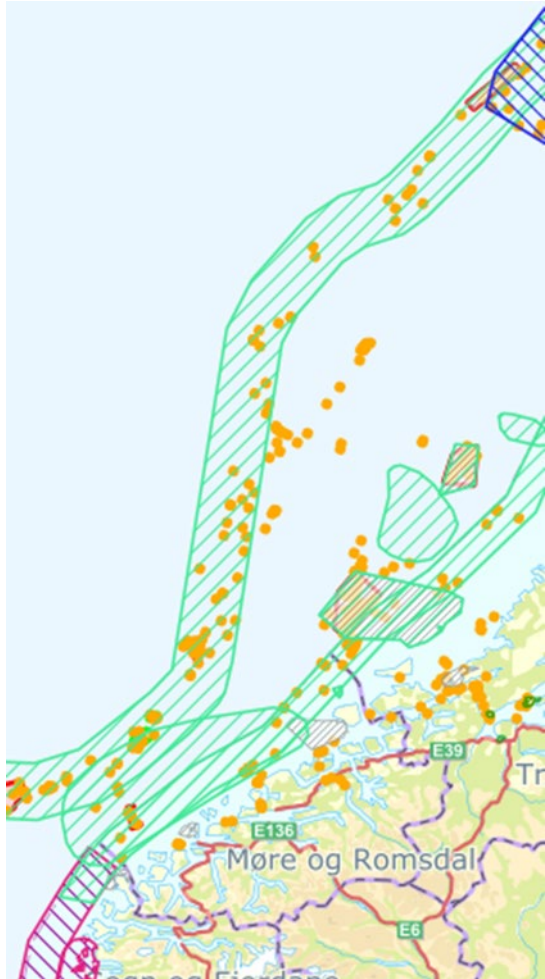
Photo: Ministry of
Petroleum and Energy

What do we regulate?

- Chemicals
- Oil and water based mud and handling of cuttings
- Oily water
- Emission to air
- Energy management
- Waste handling
- Emergency preparedness



Location and area of influence



- Geographical location
- Topography
- Results from baseline surveys
- Biological resources in the area
- Distance to coast or vulnerable areas

A case example: Morvin

Morvin field located in an area with high abundance of cold water coral reefs.

- Requirement in original permit: Zero discharge of cuttings and mud.
- New requirement after complain from operator: Cutting transport system had to be used to transport mud and cuttings away to minimize effects on corals and environmental monitoring had to be carried out during and after drilling.

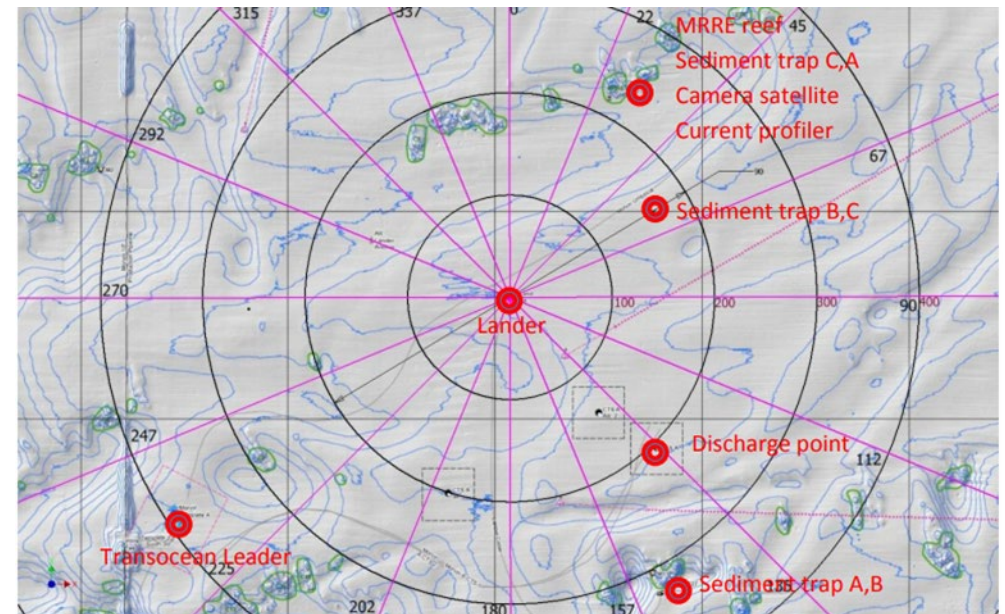
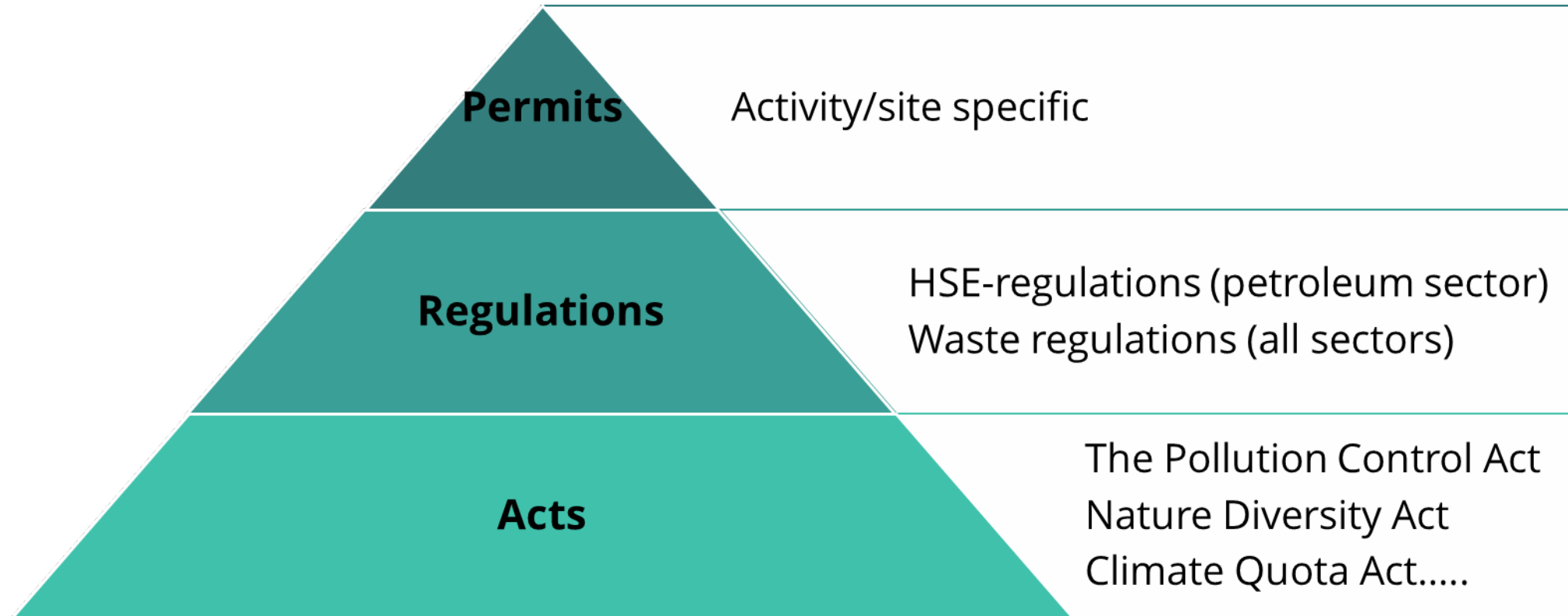


Figure 3 Overview of the Morvin field showing the rig Transocean Leader, the discharge point, the lander, the camera satellite and the three sediment traps. Green circles indicate the position of coral reefs.

Good governance requires fair legal framework

Legal Framework



Principles laid down in the environmental legislation to ensure good environmental practice

Polluter pays

Precautionary principle

Best Available Techniques

Risk reduction

Continuous improvement

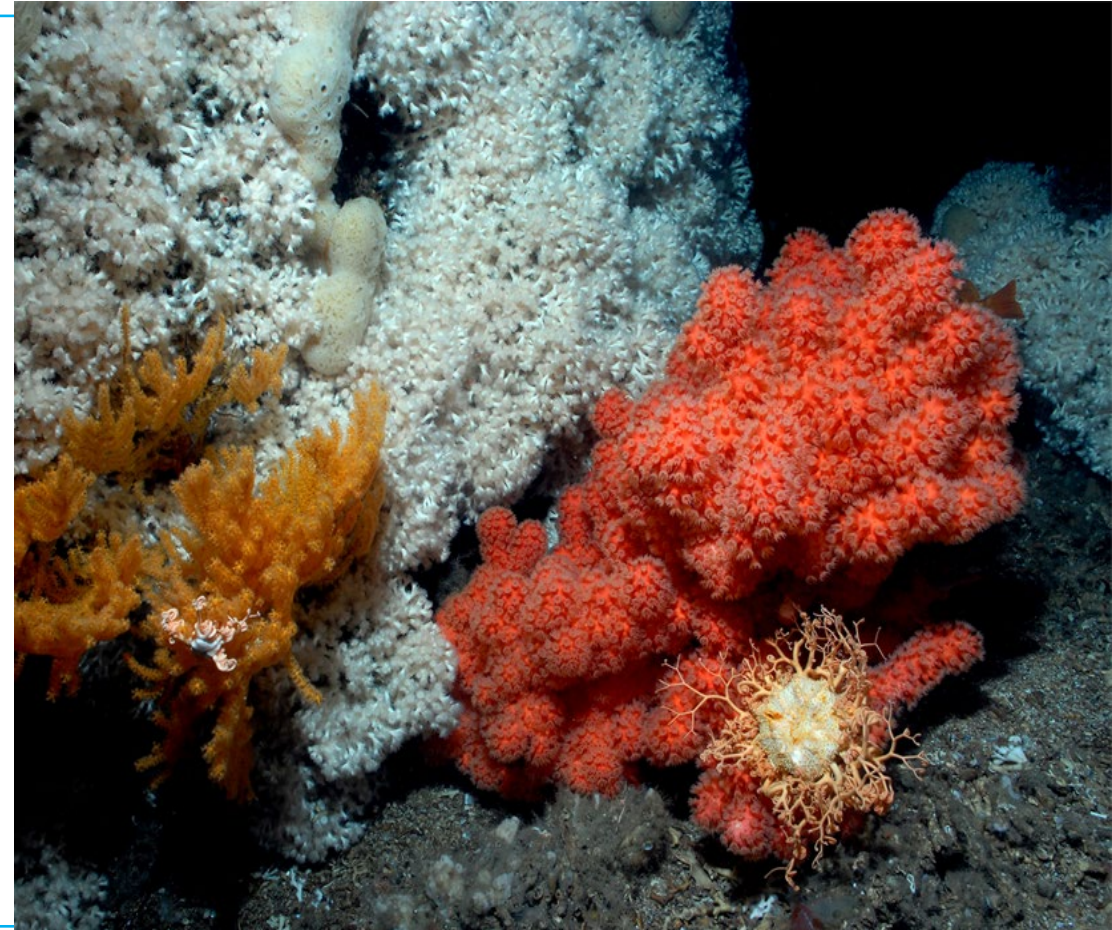
Principle of substitution of haz chemicals

Compliance monitoring

Sanction tools

Nature Diversity Act

- Purpose is to protect biological, geological and landscape diversity and ecological processes
- Management objectives for habitat types, ecosystem and species
- Principles that shall serve as guidelines for the exercise of public authority. Decisions shall state how these principles have been applied in an assessments.





Dialogue and transparency

Authorities/oil companies have mutual utility of dialogue and openness:

- Learning
- Respect
- Transparency
- Legal right to complain

Requires efficient and professional compliance monitoring

Dissemination of knowledge, environmental status and challenges

Annual seminars on particular topics

Feedback to each operator on their annual reports

Publishing trends (summary results from the annual reports)

Website «Environmental status»- oil and gas sector + Norwegian PRTR

Studies on specific topics are published

Meeting with environmental NGOs

Meeting with the operators and their association

News on the petroleum sector on our website can be subscribed to

The applications for permit put on our website as part of the consultation procedures. Key stakeholders notified directly by email

Thank you