



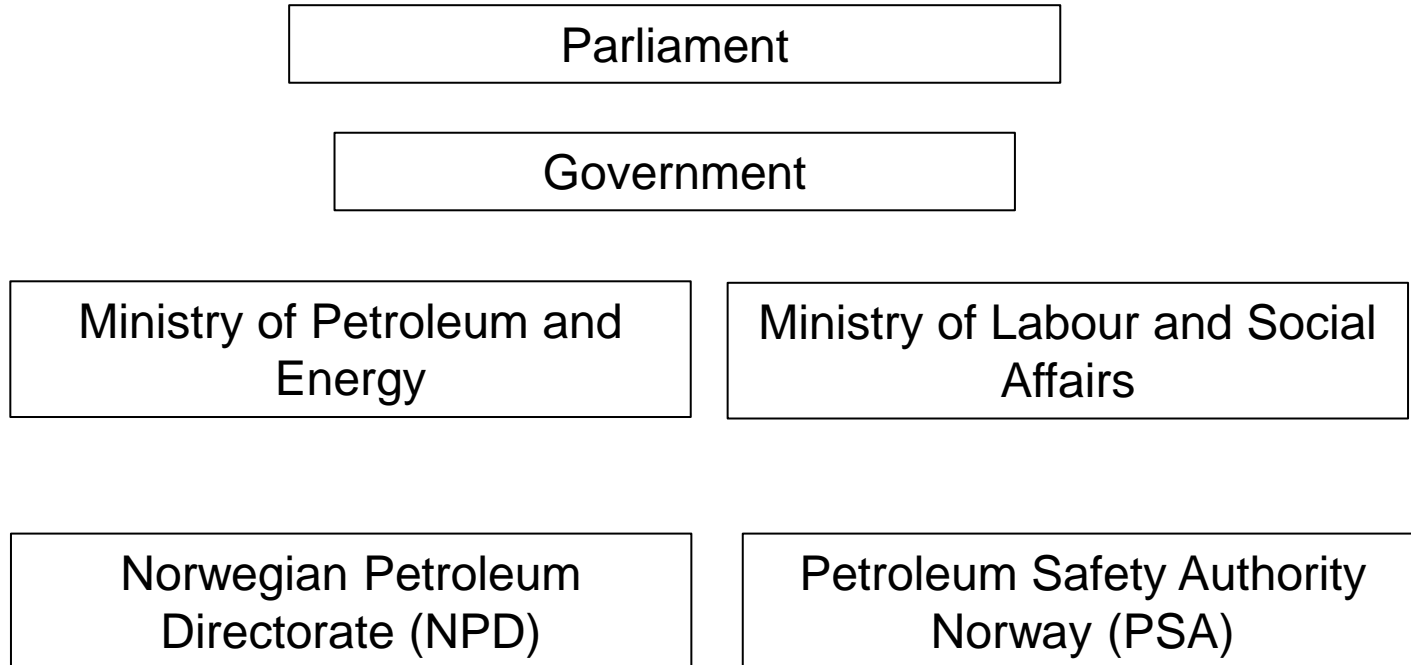
NORWEGIAN PETROLEUM
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Regulator's use of standards, guidelines and other instruments

Based on Norwegian experience

Harald Brekke

Regulator structure, Norway



Instruments available to the regulator

- Acts and Regulations
- Guidelines
- Standards
- Consultations
- Reporting
- Supervision



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Acts and governing principles

Norwegian Acts Regarding the Continental Shelf Resources



- [Act of 21 June 1963 No. 12 relating to scientific research and exploration for and exploitation of subsea](#)
- [Act 29 November 1996 No. 72 relating to petroleum activities](#)
- [Act 22 March 2019 No 7 relating to mineral activities in the continental shelf \(Seabed minerals act\)](#)
- [\(Act 21 December 1990 No. 72 relating to tax on discharge of CO₂ in the petroleum activities on the continental shelf\)](#)

Norwegian Acts Regarding the Continental Shelf Resources



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Performance-based requirements

- Norway's regulations for the petroleum industry are largely based on performance-based requirements, and specify *which* level of safety and operational standards is to be achieved, but not *how* this should be done.
- The companies have great freedom to choose how they are to meet the regulatory requirements, which means that a number of solutions are determined at local level. That emphasizes the importance of all sides having a genuine opportunity to be heard.

Who is responsible for the operation activities?

- A clear division of roles and responsibilities is crucial for work on safety and the environment in the Norwegian oil and gas industry.
- Each company is responsible for the safety and conduct of its own operations. This represents a fundamental principle in the petroleum regulations.
- That is because the detailed knowledge, decision-making authority and not least the resources needed to ensure compliance with the regulatory requirements rest with each individual player.
- Licensees who have been awarded production licenses on the Norwegian continental shelf are carefully assessed in advance – in part for their expertise, capacity and willingness to discharge this responsibility.
- Both the regulations and their enforcement are therefore structured to support the sense of responsibility at the companies.

What is the government's responsibility?

- Government define the parameters for the industry and follow up that its activities are pursued in a prudent manner. The duties involve continuous development of the regulations, monitoring that the companies are complying with the requirements, and making appropriate use of our enforcement powers in the event of regulatory breaches.
- A government concern is to ensure that regulatory developments keep pace with general trends in these activities. It also has a responsibility for assessing whether the standards referred to in the regulations are good enough.
- The regulators place great emphasis on communicating knowledge about risk. Experience transfer and reinforcing the accountability of the players are important goals for the overall follow-up of the operations in the petroleum sector.

What are the limits to government responsibility?

- A fundamental principle is that the government ***cannot inspect safety into the industry***. The industry itself is responsible for pursuing its activities prudently and in accordance with the regulatory requirements.
- The division of responsibility in the petroleum sector is crystal-clear – ***the player who owns the risk also owns the responsibility for dealing with it***.
- It is neither possible nor desirable for the government to regulate the industry in detail. One effect of detailed regulation could be to undermine the sense of responsibility at the companies.



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Regulations

Regulations to Act relating to petroleum activities

- **CHAPTER 1. INTRODUCTORY PROVISIONS**
- **CHAPTER 2. SURVEY LICENCES**
- **CHAPTER 2a. IMPACT ASSESSMENTS RELATING TO OPENING OF NEW AREAS FOR PETROLEUM ACTIVITIES**
- **CHAPTER 3. PRODUCTION LICENCES ETC**
- **CHAPTER 4. PRODUCTION ETC OF PETROLEUM**
- **CHAPTER 4a. STORAGE OF CO₂**
- **CHAPTER 5. PRODUCTION FEES AND AREA FEES**
- **CHAPTER 6. CESSATION OF PETROLEUM ACTIVITIES**
- **CHAPTER 7. INFORMATION AND DOCUMENTATION**
- **CHAPTER 8. MANAGEMENT SYSTEMS FOR THE PETROLEUM ACTIVITIES**
- **CHAPTER 9. ACCESS TO UPSTREAM PIPELINE NETWORKS**
- **CHAPTER 10. GENERAL PROVISIONS**

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Impact assessment programme

- A draft programme for the impact assessment shall be prepared describing:
 - the aspects to be addressed in the impact assessment,
 - the assessments needed to establish an appropriate decision base.
- The Ministry shall submit the proposed programme for consultation:
 - to the authorities concerned and industrial organisations
 - make the proposed programme available to the public on the Internet
- A reasonable time limit, not less than six weeks, for submitting comments
- The Ministry stipulates the final impact assessment programme.
 - A report shall be made of the comments received and how these are assessed and reflected in the approved programme.
 - A copy of the approved programme shall be sent those who have commented on the proposed programme.

The Impact Assessment

- The impact assessment shall be based on the impact assessment programme
- The Ministry shall submit the impact assessment for consultation:
 - to the authorities concerned and to central industrial organisations,
 - make the impact assessment available on the Internet,
 - make announcement of the consultation in the Norwegian Gazette.
- A reasonable time limit, normally be set to 3 months but no be shorter than 6 weeks, for comments.
- All relevant background documents and scientific reports shall be made available

If need for additional assessments

- The Ministry shall, on the basis of comments received, decide whether there is a need for additional assessments or documentation on certain aspects. Any additional assessments shall be submitted for consultation to those who have given statements in the previous consultation process. The time limit for additional comments should not be set shorter than 2 weeks.

Proposal to open new area

- The proposal to open a new area for petroleum activities shall be submitted to the Parliament.
- The proposal shall comprise an assessment of the impacts of opening a new area for petroleum activities and of the comments received during the consultation process, as well as an evaluation of the importance given to these comments.
- The proposal shall consider whether the opening should be made subject to requirements for further investigations to monitor and show the factual impacts of the petroleum activities.
- The proposal shall also consider whether conditions to reduce and compensate for significant adverse effects should be set.

PSA regulations (drawn from several acts)

- **The framework regulations** (Regulations relating to health, safety and the environment in the petroleum activities and at certain onshore facilities)
- **The management regulations**
- **The facilities regulations**
- **The activities regulations**
- **Technical and operational regulations**
- **The Working Environment Regulations**

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The Activities Regulations



Chapter I - Introductory provisions (§§ 1 - 3)

Chapter II - Arrangements pursuant to the working environment act (§§ 4 - 7)

Chapter III - Health related matters (§§ 8 - 14)

Chapter IV - Preliminary surveys and installation (§§ 15 - 16)

Chapter V - Transport and stay (§§ 17 - 19)

Chapter VI - Operational prerequisites for start-up and use (§§ 20 - 28)

Chapter VII - Planning and execution (§§ 29 - 32)

Chapter VIII - Working environment factors (§§ 33 - 44)

Chapter IX - Maintenance (§§ 45 - 51)

Chapter X - Monitoring the external environment (§§ 52 - 59a)

Chapter XI - Emissions and discharges to the external environment (§§ 60 - 71)

Chapter XII - Waste (§ 72)

Chapter XIII - Emergency preparedness (§§ 73 - 79)

Chapter XIV - Communication (§ 80)

Chapter XV - Drilling and well activities (§§ 81 - 89)

Chapter XVI - Maritime operations (§ 90)

Chapter XVII - Electrical installations (§ 91)

Chapter XVIII - Lifting operations (§ 92)

Chapter XIX - Manned underwater operations (§§ 93 - 94)

Chapter XX - Concluding provisions (§§ 95 - 96)

Reference list to guidelines

Monitoring the external environment



- **§ 52 General requirements to environmental monitoring**
- The operator shall monitor the external environment, cf. the [Framework Regulations Section 48](#).
- The monitoring shall be adapted to the existing pollution risk, be able to prove and map pollution of the external environment, and indicate development trends in the environmental condition.
- The environmental monitoring of pollution from regular emissions and discharges shall include both benthic habitats (the sediments, soft and hard sea bed fauna) and the water column, and shall be performed and reported in accordance with the [Guidelines for environmental monitoring of the petroleum activities offshore \(M-300\) \(in Norwegian only\)](#).
- The operators shall cooperate on monitoring.
- Personnel with monitoring functions shall at all times be able to efficiently gather and process information from monitoring.
- The operators shall, as part of the external monitoring, contribute to developing new methods for monitoring sediments, benthic fauna and water column.
- The **Norwegian Environment Agency** and the **Norwegian Radiation and Nuclear Safety Authority** can, in special cases, set additional requirements for monitoring beyond the prevailing guidelines.

Monitoring the external environment

- **§ 53 Baseline surveys**
- **§ 54 Environmental monitoring of benthic habitats**
- **§ 55 Environmental monitoring of the water column**
- **§ 56 Follow-up of monitoring results**
- **§ 57 Detection and mapping of acute pollution**
- **§ 58 Environmental surveys in the event of acute pollution**
- **§ 59 Characterisation of oil and condensate**
- **§ 59a Analysis of radioactivity in formation water**



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Guidelines

NPD guidelines (21)

- [Annual status report for fields in production PDF](#)
- [Annual status report for fields in production DOCX](#)
- [Classification of petroleum resources on the Norwegian Continental Shelf PDF](#)
- [Commercially available data PDF](#)
- [Consent for commencement and continuation within the resource management area.PDF](#)
- [Development of trans-boundary oil and gas fields PDF](#)
- [Fiscal measurement of oil and gas PDF](#)
- [Geochemical analysis PDF](#)
- [Geophysical data - Guidelines for reporting \("Yellow book"\) PDF](#)
- [Geophysical data - Yellow book table S-1 XLSX](#)
- [Guidelines application for production permit PDF](#)
- [Guidelines for Annual Status Report for Fields in Production PDF](#)
- [Guidelines for plan for development and operation of a petroleum deposit PDF](#)
- [Implementation of seismic surveys on the Norwegian Continental Shelf PDF](#)
- [Standards relating to measurement of petroleum for fiscal purposes and for calculation of CO2-tax PDF](#)
- [Status report before start-up of production PDF](#)
- [Status report in connection with surrender, lapse or expiry of a production licence PDF](#)
- [Status report in connection with surrender, lapse or expiry – Table 5 Prospect Data XLSX](#)
- [Wells - Guidelines for reporting \("Blue book"\) PDF](#)
- [Wells - Blue book table A-1 XLSX](#)
- [Wells - Designation of wells and wellbores PDF](#)

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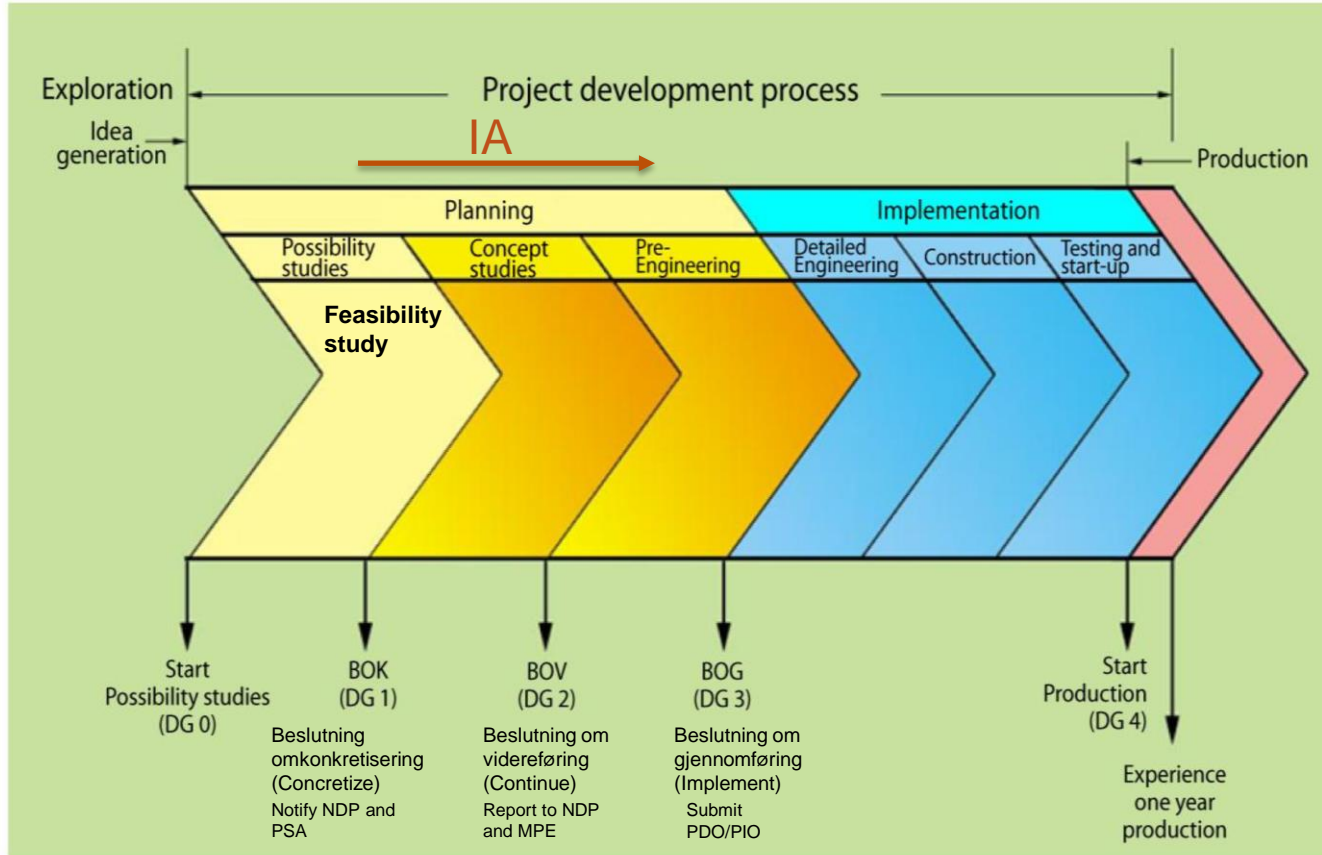
Guidelines for PDO and PIO

- The Ministry of Petroleum and Energy (MPE) and the Ministry of Labour (AD) have issued guidelines for plans for development and operation of a petroleum deposit (PDOs) and plans for installation and operation of facilities for transport and utilisation of petroleum (PIOs).

PDO and IA, guidelines, Norway

- A PDO describes the development of a petroleum deposit with the aim of production (development section), and the consequences the described development activities will have (impact assessment section). A PDO is prepared by the licensees in the production licence(s) where the deposit is located. PDOs must be approved by the MPE.
- The purpose of impact assessments (IAs) is to clarify the effects of a development or a facility, and the operation of same, on the environment, including cultural monuments and cultural milieus, natural resources and the society. IAs are prepared to ensure that these effects are taken into consideration in the decision process. *To be put to consultation with relevant bodies, interested groups and public.*

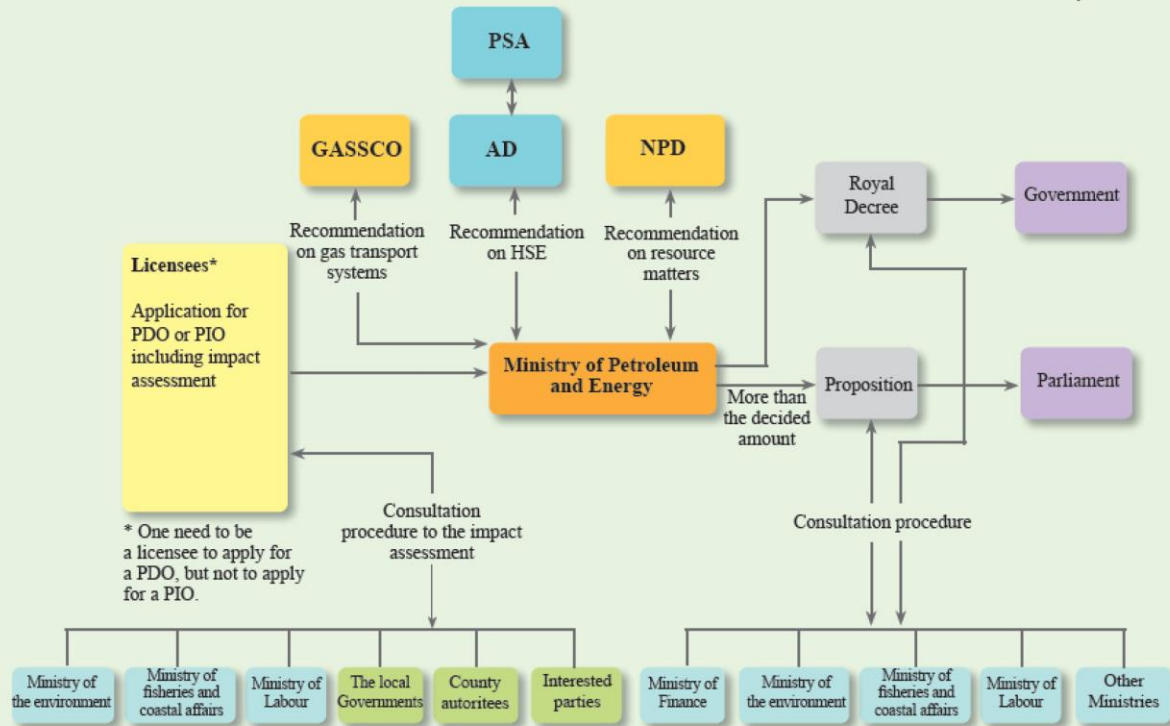
PDO (including IA) and PIO, Norwegian Guidelines



Guidelines for plan for development and operation of a petroleum deposit (PDO) and plan for installation and operation of facilities for transport and utilisation of petroleum (PIO).

Administrative procedure PDO and PIO

Time frame: From 2 to 6 months depending on whether the applications is treated by the Government or the Parliament



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Standards

Use of Standards

- Standards do not come on their own.
- They are referred to in regulations and guidelines.
- Sometimes guidelines in effect become standards
- Standards may be issued by the authorities, professional bodies, or industry

PSA-related regulations, guidelines and standards

- **Regulations issued by the authorities (20)**
- **The Ministry of Labour and Social Affairs**
- **The Ministry of Labour and Social Affairs, the Ministry of Justice and Public Security**
- **The Ministry of Labour and Social Affairs, The Ministry of Justice and Public Security, The Ministry of Climate and Environment**
- **The Ministry of Health and Care Services**
- **The Ministry of Climate and Environment**
- **The Ministry of Justice and Public Security**
- **The Ministry of Labour and Social Affairs, the Ministry of Justice and Public Security, the Ministry of Agriculture and Food, the Ministry of Climate and Environment**
- **The Ministry of Justice and Public Security, the Ministry of Health and Care Services**
- **The Directorate for Civil Protection and Emergency Planning**
- **The Civil Aviation Authority**
- **The Norwegian Petroleum Directorate**
- **The Norwegian Maritime Authority**

PSA-related guidelines

- **Guidelines issued by the authorities (9)**
 - The Norwegian Environment Agency
 - The Norwegian Board of Health
 - The Norwegian Radiation and Nuclear Safety Authority

- **Recommended guidelines issued by the industry (10)**
 - Norwegian Oil and Gas Association
 - Norwegian Shipowners' Association

PSA-related standards

- **Professional Standards and Guidelines (42)**
- American Petroleum Institute (API) (1)
- DNV GL (7)
- European Diving Technology Committee (EDTC) (1)
- European Standard (EN) (1)
- International Electrotechnical Commission (IEC) (3)
- The International Marine Contractors Association (IMCA) (1)
- International Maritime Organization (IMO) (1)
- International Organization for Standardization (ISO) (5)
- Norwegian Standard (NS) (8)
- NORSOK standards (14)



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Consultations

Procedural consultations (Hearings)

- Cases for consultations with the industry, relevant Government bodies, interested groups, and the public:
- Acreage to be announced for exploration applications
- Impact assessment for opening of new areas (plans and final assessment)
- Regional impact assessment as part of a PDO (plans and final assessment)
- Field specific impact assessment as part of a PDO (plans and final assessment)

Prequalification (Dialog)

- New companies wanting to conduct petroleum activities on the Norwegian continental shelf (NCS) must undergo a prequalification process before they can be approved as a licensee or operator.
- A player wishing to participate in petroleum operations on the NCS as a licensee or operator must contribute to increased value creation there. The company must have HSE competence which helps to strengthen safety in the Norwegian offshore sector. Assessing potential new entrants is the responsibility of the PSA and the NPD, on behalf of their parent ministries.

Prequalification

- The purpose of the prequalification scheme is to help improve predictability for a new company wishing to become a participant on the NCS. It provides this applicant with an advance assessment of its suitability for such participation.
- A final assessment takes place when the company is in line to take part in a production license, either through a licensing-round award or by farming in.
- The regulators submit their technical assessments to the Ministry of Petroleum and Energy. The latter decides whether applications for prequalification are to be approved.

Expertise and capacity

- A key requirement in the Norwegian Petroleum Act is that companies have the necessary competence and organization in Norway:
- An adequate management system
- Financial strength (assessed by the NPD and the Ministry of Finance).
- Licensees must have a minimum staffing of eight-nine people in Norway with technical expertise in relevant disciplines which equips them to evaluate, understand and follow up activities in a production license.
- Relevant disciplines are: Geology and geophysics; Reservoir technology; Production methods and other relevant technology; Health, safety and the environment (HSE).

Expertise and capacity (contd)



- **Operators** must in addition have their own organization in Norway that is capable of dealing with the assignments they face at any given time. Since stepping up from the licensee role to taking on an operatorship presents major challenges, additional expertise and capacity must be in place in order to do this work in a prudent manner.

Involvement of workforce

- Worker participation (or industrial democracy) is a regulatory requirement in Norway. The principle is that the party exposed to risk should participate in decisions related to HSE.
- Workers in the industry have an important role to play in safety work, one which both confers rights and imposes duties.
- One aim is to use the overall knowledge and experience of the workforce to ensure that issues are adequately clarified before decisions are taken.
- The companies must lay the basis for genuine worker participation, and ensure that structures enshrined in legislation – such as the working environment committee and the safety delegate service – are used in a good and constructive manner.



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Supervision

Supervision

- Supervision covers all the activities which allows a regulator to assess whether the companies are pursuing their operations prudently and in accordance with the regulations, and to follow this up:
 - Audits and verifications on facilities
 - Dialogue and meetings with the industry
 - Data acquisition concerning risk, accidents and incidents
 - Investigation of accidents
 - Consideration of consent applications
 - Assessment of development plans
 - Applications of consent (AoCs) for mobile facilities
 - Player assessments and licence awards
 - Use of enforcement powers



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End remarks

Questions

- The Norwegian regulatory system designed to enforce and encourage a prudent manner of activities and resource management.
- The governing principle is to make the industry the owner of its own risk and accountable for its own activity
- Can and should this be adapted to the activities in the Area?
- In that case, what will it mean for the role of the supporting Government and the choice of contractor?
- If not, what are the alternatives?