HSE PETROLEUM REGULATIONS - BRICS AND THE ARTIC

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Regulative frameworks in the Arctic

- **National Regulations**

  Each Arctic country has developed national regulations, including their continental shelf.

- **Trans-National Agreements**

  Regulations are developed between two or more Arctic countries.

- **Pan-Arctic Regulations**

  Regulations enforced by international organizations that span all Arctic countries, and that are valid for all whom crosses the Arctic Ocean.

  Each Arctic country is responsible for implementing international regulations, to become legally binding.

Regulative frameworks in the Arctic

Pan-Arctic Regulations

- **The United Nations Convention on the Law of the Sea (UNCLOS III)**
  - Regulative framework for governance of arctic waters.
  - Provides Arctic countries the right to adopt and enforce laws and regulations to prevent, to reduce, and to control marine pollution from vessels and installations in ice covered waters.

- **International Maritime Organization (IMO)**
  - International maritime safety, security and environmental protection.
  - IMO conventions (e.g. MARPOL).
  - IMO- Guidelines *(e.g. Guidelines for ships operating in Polar Waters).*
  - Polar Code.

Regulative frameworks in the Arctic

- **Intergovernmental forum and international regulations**
  - Arctic Council.
    - The Arctic SAR Agreement.
    - Cooperation on Marine Oil Pollution Preparedness and Response in the Arctic.
    - Arctic Council's Emergency Prevention, Preparedness and Response (EPPR).
  - International Convention on Oil Pollution Preparedness, Response and Co- operation (OPRC) in the Arctic.
- **Regional and bilateral arrangements**
  - Provides a framework for cooperation among two or more Arctic countries.
    - Delimitation line in the Barents Sea.

Regulatory regimes

- Regulatory regimes are laws that govern offshore petroleum activities and regulations that provide details for how to follow the laws.

- Regulatory regime applies to aspects such as environmental protection, safety, employment standards and work environment, health protection, emergency planning, oil spill response, and liability for accidents.

(The Penimba Institute)

National regulations

– models and strategies used by the regulators

National regulative approaches:

- **Prescriptive:** the regulatory standards specify how the regulated entity must act or what it must do.
- **Performance-based:** regulatory standards require achievement of a pre- defined outcome, but leave the means of achievement to the regulated entity.
- **Management-based:** the regulated entity is required to engage in certain analyses, planning, and reporting activities (e.g. annual risk analyses), but is not assessed according to a pre-defined performance outcome.
- **Self-regulation:** the regulated entity is expected to follow industry norms and consensus on standards, such as those of private standard-setting organizations (e.g. DNV-GL, 2016).

Comparison with Brazilian HSE regulations

Similarities:

• Brazil is not in the Arctic, but have some common features which are central in regards to regulations:

- Offshore petroleum activity
- Brazil has developed safe environmental technology for deep water which can be used in the Arctic
- Oil spill as a central issue in the regulations.

Differences:

• Operational risks in the Arctic. e.g. those related to icing on vessels or installations due to low air temperatures, fog, darkness, polar lows and lack of infrastructure that may influence the effectiveness of the response of a possible oil spill.

Importance of cooperation in the Arctic for oil and gas

- Even if there are different HSE regulations in the oil and gas sector, an important element for the realization of the oil and gas resources in the Arctic is how cost- effective the industry and technology is, at the same time which is environmental friendly and towards to reduce carbon footprint. This is a common feature for all Arctic countries.

- Oil prices and reduced investment budgets from operators in 2014 and 2015 increased the pressure to find cost- effective solutions/technology, especially in the Arctic where development costs are expected to be greater than in other markets.

- Cooperation may here be a keyword, as cooperation for area developments in the North, collaboration in the supply chain, cost-sharing and commercial research cooperation. (Intsok, 2016)

Example of collaborative industry projects involving Norway and BRICS countries in the Arctic

- The RU-NO Barents Project: Through industry cooperation and knowledge of Arctic technology needs, to contribute to the growth of the Russian and Norwegian industry participation in future petroleum endeavors in the High North.

- Barents 2020 project: Aims to create dialog between relevant Norwegian and Russian stakeholders regarding safety of petroleum related activities in the Barents Sea.

- Arctic and Cold Climate Solutions: The aim of this project is to facilitate Norwegian industry, delivering world class technology/solutions for arctic and cold climate capital development projects.

Possible joint initiatives in the Arctic – with Brazil

- Brazil has a research agreement with Norway.
- BN-21:
  - Collaboration between the Brazilian Ministry of Science and Technology and Innovation and Royal Ministry of Petroleum and Energy in the field of oil and gas research and technology and exchange of human resources.
  - Brazil and Norway face similar research challenges in the field of Exploration, Development and Production of offshore oil and gas activities, and share a common interest in the exchange of experience and best practices within related sciences and technology innovation and the joint development of leading experiences. (Forskningsrådet, 2014)

Suggested joint initiatives

Comparative analysis of HSE regulations.
-Case of developed and emerging markets.

Purpose: Comparative analysis of HSE regimes in developed and emerging markets, and investigate implications for risk management models in multinational companies.

Background and problematisation:

- HSE regimes denote the prevailing formal laws and regulations, and informal norms and culture of a market that holistically shape HSE regimes

-As the logic of formal and informal institutions differ in context, HSE regimes is expected to differ in developed and emerging markets, imposing challenges of adapting and implementing risk management models in companies operating under both HSE regimes.

Research aim: To describe and explain variations in HSE regimes in the developed markets Norway and United Kingdom and the emerging markets Russia and Brazil, by applying HSE in the oil and gas industry as an illustrative case.

Comparative analysis of HSE regulations.
- Case of developed and emerging markets.

Preliminary analysis:

Developed markets	Norway	UK	Normative regimes: - Self-regulated - Best practice - Developed by industry - Self-regulation - Performance control
Emerging markets	Brazil	Russia	Regulative regimes: - Self-regulated and prescriptive - Technical requirements - Enforced by government - Compliance control

Possible joint initiatives in the Arctic - with Brazil

- Comparison of regulatory regimes for the petroleum industry between Norway, Brazil and Russia.

- Sub sea technologies that can also be used in the sub salt may help in the development of new technologies in the Arctic.

- A comparative analysis will give knowledge of the regulatory regime, and it will benefit the understanding of similarities and not least differences of different regulatory approaches to ensure safe operations in the Arctic.

Thank you!