

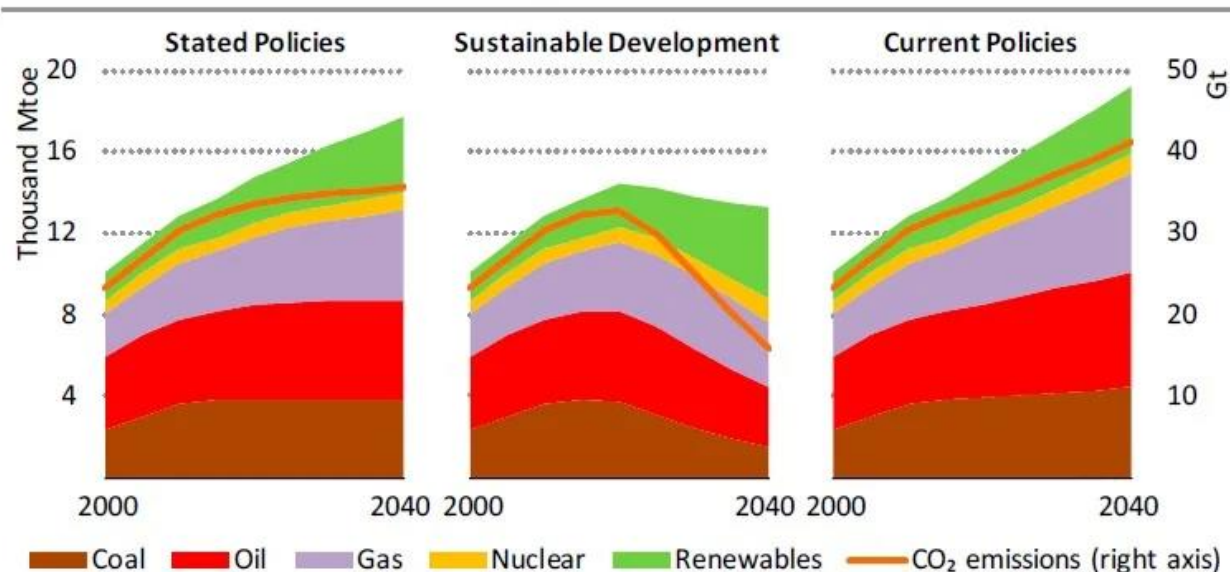
Simon Ivar Andersen, DTU Offshore

Breakout Session I: Water-Energy Nexus in the Energy Transition: Unveiling the Challenges

Water-Energy Nexus - Challenges

Nexus? =an important connection between the parts of a system or a group of things

Figure 1.1 ▷ World primary energy demand by fuel and related CO₂ emissions by scenario

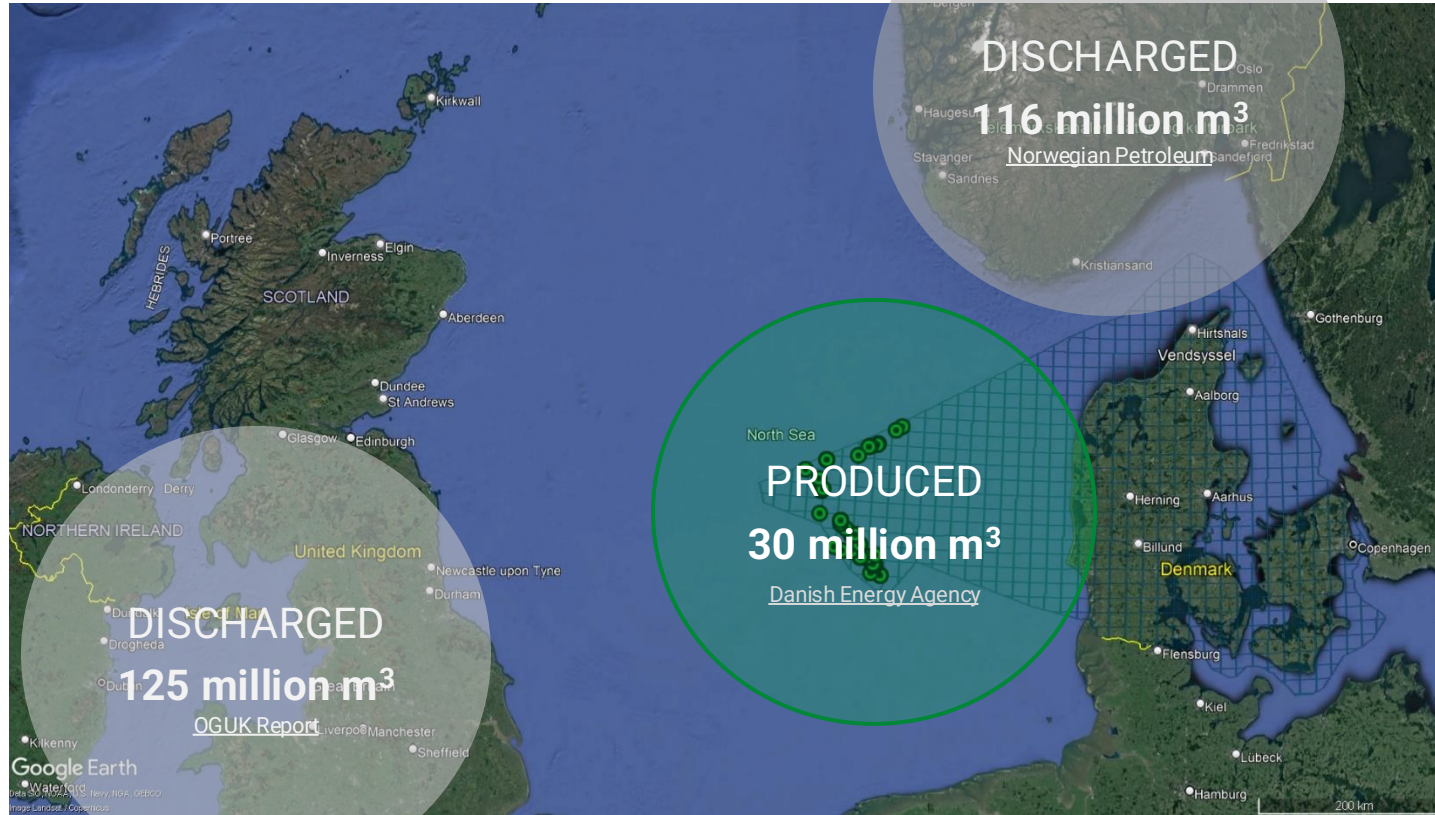
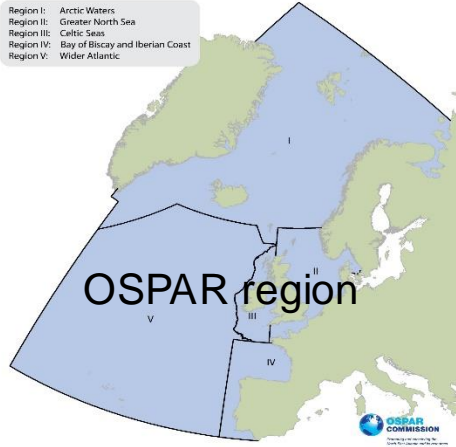


Water use = f(Energy use)

Energy production = water utilization and/or waste streams

DTU Offshore's background in water research

➤ Produced water from oil and gas production...needs cleaning.



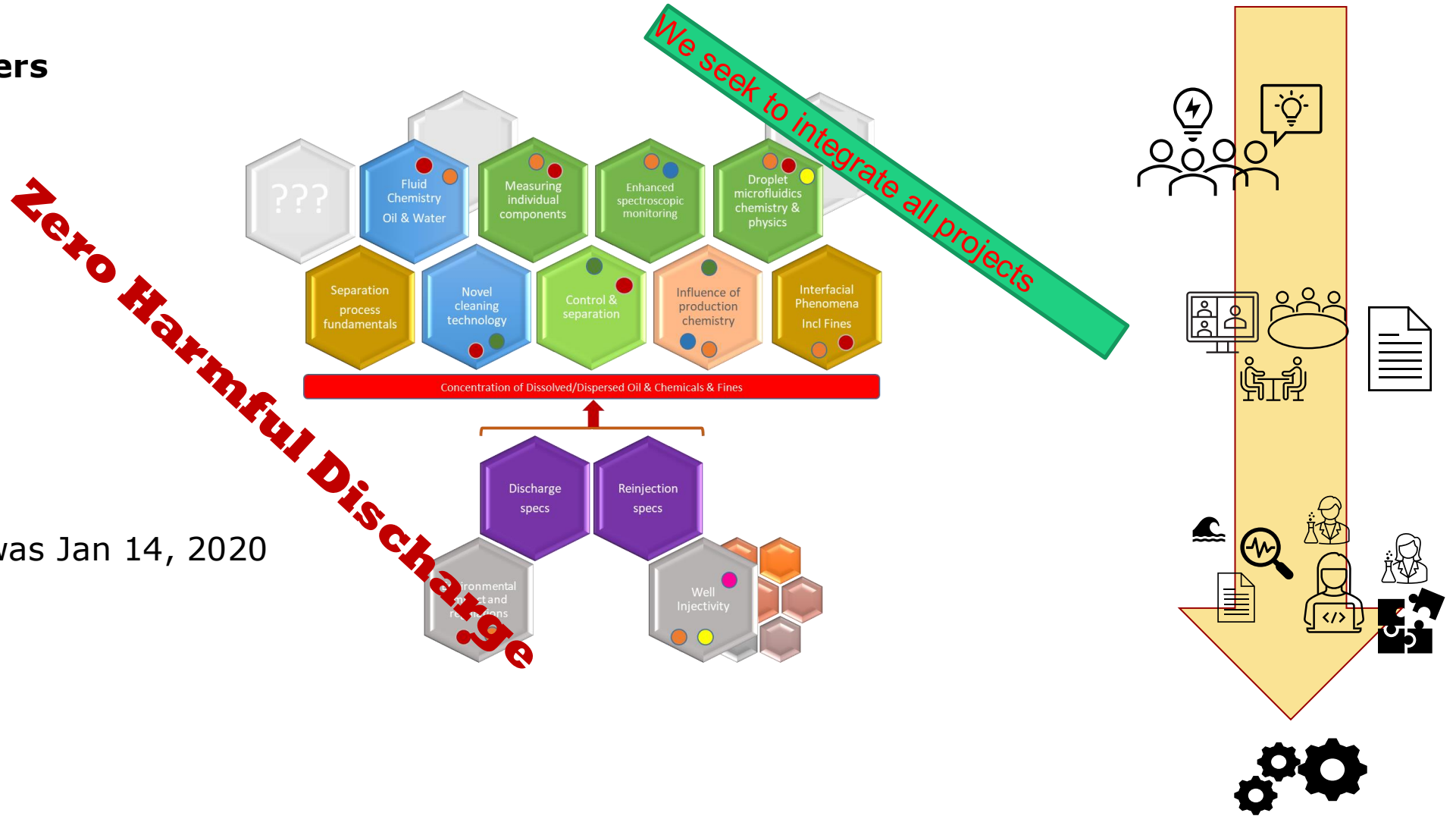
In DK 1:7 ish



2019 Produced water management programme starts

PW Uni Partners

- KU ●
- AAU ●
- DTU ●
- AU ●
- NTNU ●
- DOTC ●



1st Application call was Jan 14, 2020

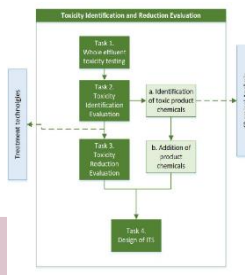
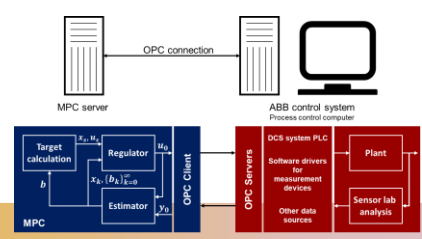
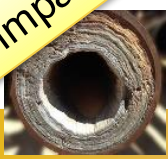
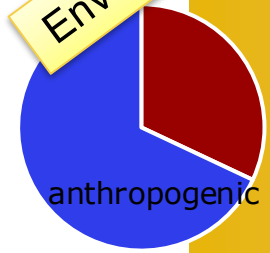


Produced Water Management Reduction of Environmental Impact and Foot Print of O&G

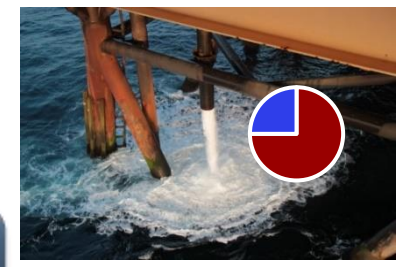
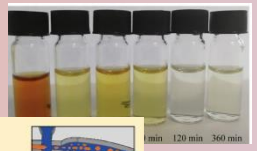
Management of PW discharge is an increasingly important aspect of O&G operations.

DTU Offshore PWM program **35 projects** targeting all aspects of the water cycle

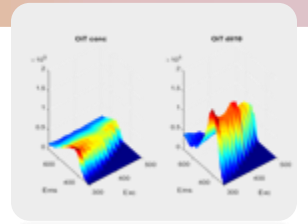
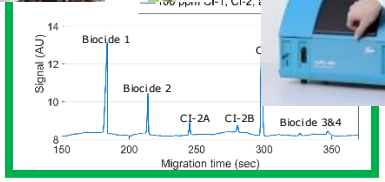
Environmental impact



Zero Harmful Discharge
Efficient control
Reuse



PWRI



CO2 storage

Rare earth minerals

Reduced CO2 foot print

The DOTC PWM Conference May 2024



It takes and effort....