

# NEW LOW SULPHUR FUELS, FATE AND BEHAVIOR IN COLD WATER CONDITIONS

## PROJECT PROPOSAL

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PAME I, 2020 OSLO, NORWAY  
JON-ARVE RØYSET, NORWAY

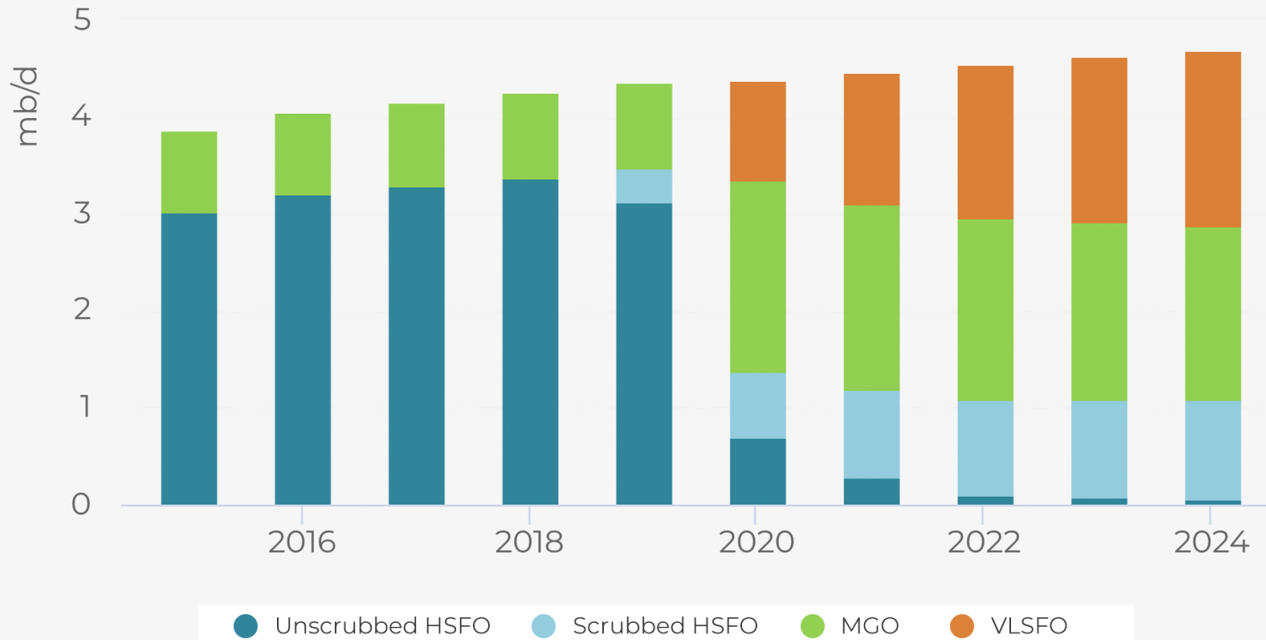
# BACKGROUND

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- Norwegian Coastal Administration project included a characterization study on 3 hybrid/LSFO-fuels and 5 different marine diesel oils (DMA)
- Results:
  - The three hybrid oils had a wide span in properties, and two of them had highly solidifying properties in cold water. One of the oils reduced oil skimmer performance significantly due to solidification.
  - A wide span in toxicity / chemical composition were also revealed

# PARADIGM SHIFT IN FROM 2020 DUE TO THE IMO SULPHUR REGULATION ENTERING INTO FORCE

Marine bunkers product demand  
Oil 2019



# SUB TASK 1: THE FATE OF LOW SULPHUR FUEL OIL WHEN SPILLED AT A COLD SEA SURFACE (EPPR)

- main goal:  
to describe why fuel oil from the same viscosity and ISO class behave differently when spilt on a cold sea surface
- Second question: what measures can be taken to optimize intermediate and hybrid fuel oil for cold water and ice (composition and chemistry of fuel oil).

## SUB TASK 2: ENVIRONMENTAL TOXICITY OF LOW SULPHUR FUEL OILS (PAME)

- Why do we find high toxicity levels in certain fuel oil samples within the same classification (e.g ISO classes), while fuel samples from other batches with the same product, or the equivalent product from other similar producers, may have considerably lower toxicity levels?
  - Is it the crude oil used in the refinery as an input that is decisive for the toxicity level? Or the refinery technology or processes? Or is the toxic substances added for other reasons by the refinery, or by the oil blenders?
  - It is important that the industry corporates and is included in the project
  - What measures can be taken to avoid high toxicity levels in fuel oils in Arctic waters and in other sea areas? Industry involvement will be required for this task.

# DETAILED DESCRIPTION

Fall/winter 2018	The project idea presented to EPPR II-2018 and PAME II 2018
December 2019	A project proposal presented for EPPR II, 2019
December 2019	Application for funding submitted
Januar/February 2020	The project proposal approved intersessional by EPPR HoDs
February 2020	A project proposal presented and approved by PAME I, 2020
March – July 2020	Project preparation
August 2020	The project launched
August 2020 – December 2021	Details will be prepared after approval and clarification about funding

# FUNDING

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- Norway will apply for funding for the project
- We request other partners for possible funding

# LINK TO EPPR MISSION / STRATEGIC PLAN

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- Project was included in PAME's 2019-2021 Work Plan.
- Link to AMSA recommendation II F: Oil Spill Prevention: "That the Arctic states decide to enhance the mutual cooperation in the field of oil spill prevention and, in collaboration with industry, support research and technology transfer to prevent release of oil into Arctic waters, since prevention of oil spills is the highest priority in the Arctic for environmental protection."
- Links to many Strategic Actions from the Arctic Marine Strategic Plan, 7.3.
- Relevant to the PAME 2019 report on Alternative Fuels in the Arctic



# PROJECT DETAILS

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- Lead Organization: Norway – Norwegian Coastal Administration
- Point of Contact: Jon-Arve Røyset
- Joint EPPR – PAME project  
Arctic states, PPs, NGOs and observers would all be important partners
- One joint report from the project

# THANK YOU

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EMERGENCY PREVENTION,  
PREPAREDNESS AND RESPONSE



ARCTIC COUNCIL