

How (quickly) can we defossilize the Dutch shipping sector?

Johannes Schürmann

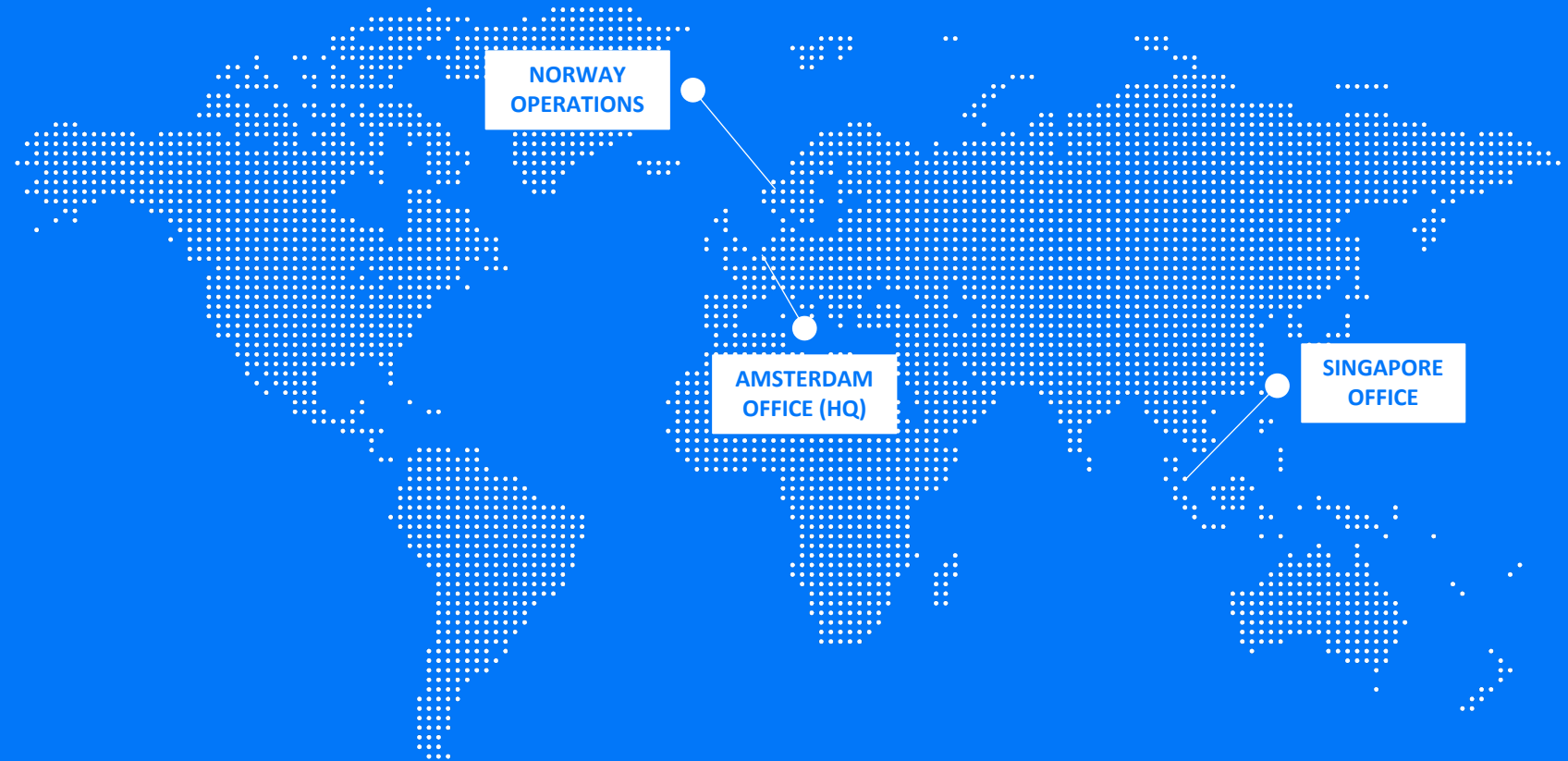


GOODFUELS COMPANY HISTORY

COMPANY HIGHLIGHTS

- 2015: Founding year
- 2015: First HVO delivery
- 2018: First BFO delivery
- 2022: Partnered with FinCo
- 2020: Norway operations
- 2021: > 100 bunkers
- 2022: Singapore Office

**And many
more to
come!**



OUR MISSION

Accelerating the energy transition by offering truly impactful sustainable solutions...



... By co-developing and commercialising truly sustainable alternatives for fossil fuels

GoodFuels develops and offers renewable fuels for heavy transport owners

Renewable solutions / alternatives



... By empowering cargo owners to switch to sustainable fuel and together change industry

GoodShipping offers a fuel switch impact service for cargo owners

Decarbonisation service / carbon insetting





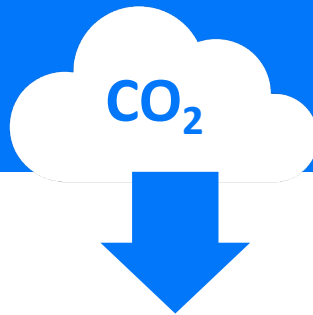
HOW TO, FULFIL THIS MISSION?



GOODFUELS AMBITION

CHALLENGE

Our clients facing a growing demand for defossilization in shipping (regulatory and voluntary) and are looking for the best solution for the foreseeable future



SOLUTION

We develop fuels and fuel blends in-house and together with our close partners. We test these fuels on their operational performance and when required adapt the fuel based on any potential specific customer requirement through for example upgrading or additives

We are the most experienced player in the market, sharing our technical expertise along the client's journey

RESULT





Have a real impact in the industry

Seen as a sustainable frontrunner

Show this to their clients which leads to having a competitive advantage



CURRENT MARINE PRODUCT OFFERING

	Petroleum-derived fuels	Renewable Fuel alternatives	Renewable fuel fraction	0,5% sulfur compliant	0,1% sulfur compliant	Product availability	HFO installation?	LOCAL emission reduction
	Residuals (HFO/ LSFO)	Bio-residual fuel Biofuel Oil	100%	Yes	Yes	+	Yes	+/-
		MDF1-100 Bio-distillate fuel	100%	Yes	Yes	+++	Yes	+/-
		MDF1-blends with fossil fuel oil (HSFO)	blends	No	No	+++	Yes	+/-
		MDF1-blends with fossil fuel oil (VLSFO)	blends	Yes	No	+++	Yes	+/-
		MDF1-blends with fossil gas oil (MGO)	blends	Yes	Yes	+++	Yes/ no	+/-
	Distillates (MGO)	MD1-100 Bio-distillate fuel Hydrotreated Vegetable Oil	100%	Yes	Yes	++	No	++
		MD1-blends with fossil gas oil (MGO)	Blends	Yes	Yes	++	No	+



OUR SUSTAINABILITY BOARD

GoodFuels has a wonderful corporate goal: to get rid of fossil fuels. We are proud to partner with game-changers such as GoodFuels

— Barbara Bramble, former (retired) sustainability board member, National Wildlife Conservation and former founder/ chairman of RSB

Sustainability board



**ANNE MARIT
POST-MELBYE**

Head of industry policy
Miljøstiftelsen ZERO



**MARTIN
JUNGINGER**

Full Professor
Bio-Based Economy
Utrecht University



**PATRICIA
OSSEWEIJER**

Professor of Sustainability
TU Delft



**ANY
CHALLENGES?!**



CHALLENGES FOR SCALING

ECONOMIC

Biofuels are still **more expensive** than fossil fuels.

TECHNICAL

There is a **lack of fuel standards** for marine biofuels. This has influence on:

- Insurance
- NOx emissions
- Carbon reporting
- Engine maker acceptance

REGULATORY

The shipping sector is behind with industry wide **defossilization targets**.

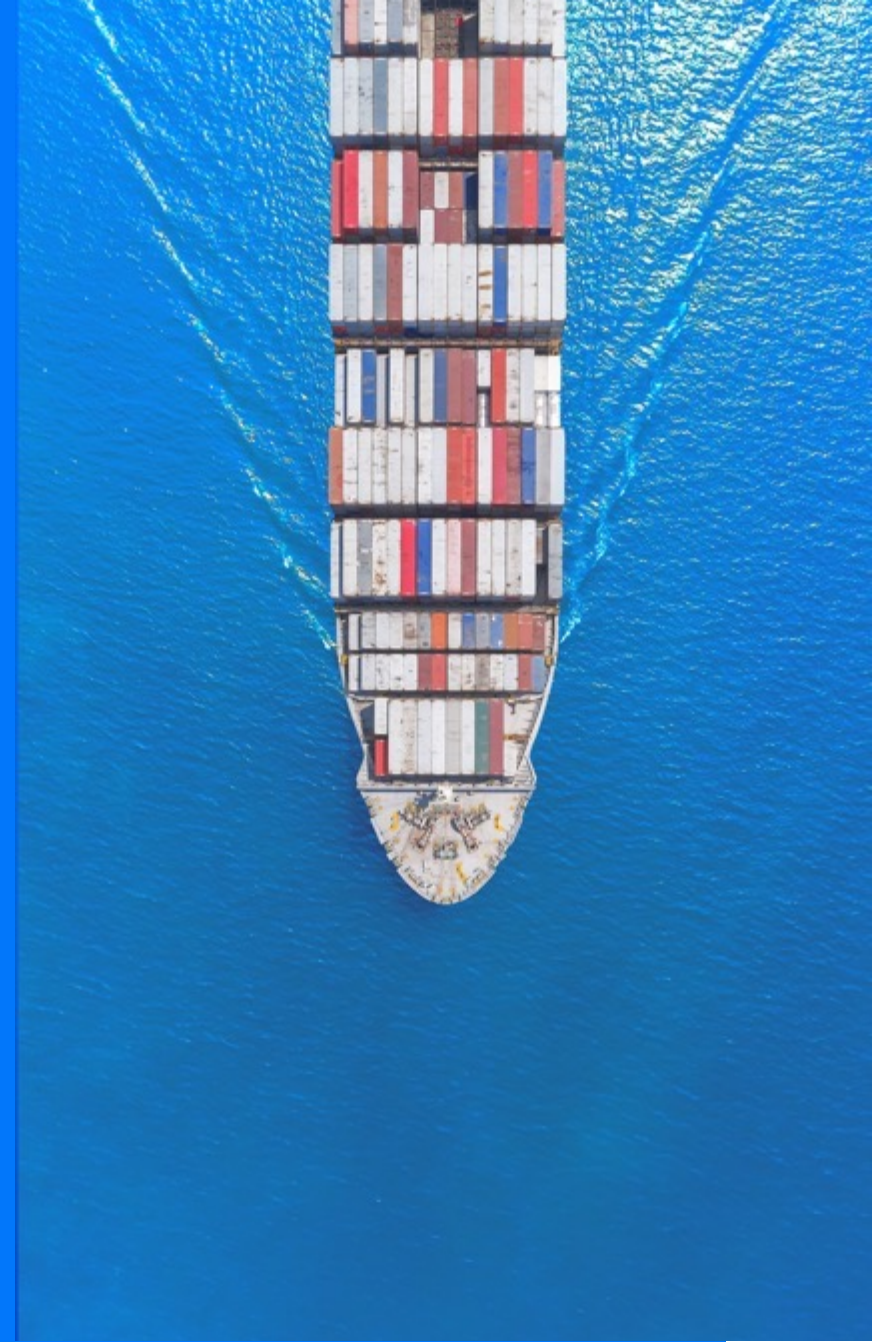
Only the **Netherlands** has a system to incentivise marine biofuels.

Operational and safety regulations are more strict for biofuels than fossil fuels

Sustainability is closely linked to regulations and might differ dependent on the geographical location.



LET'S
MAKE
WAVES



GOODFUELS CLIENTS

Customers that opt out of the fossil default and choose GoodFuels' sustainable biofuels.



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OLDENDORFF



subsea 7



Ministerie van Defensie



Koninklijke Marine

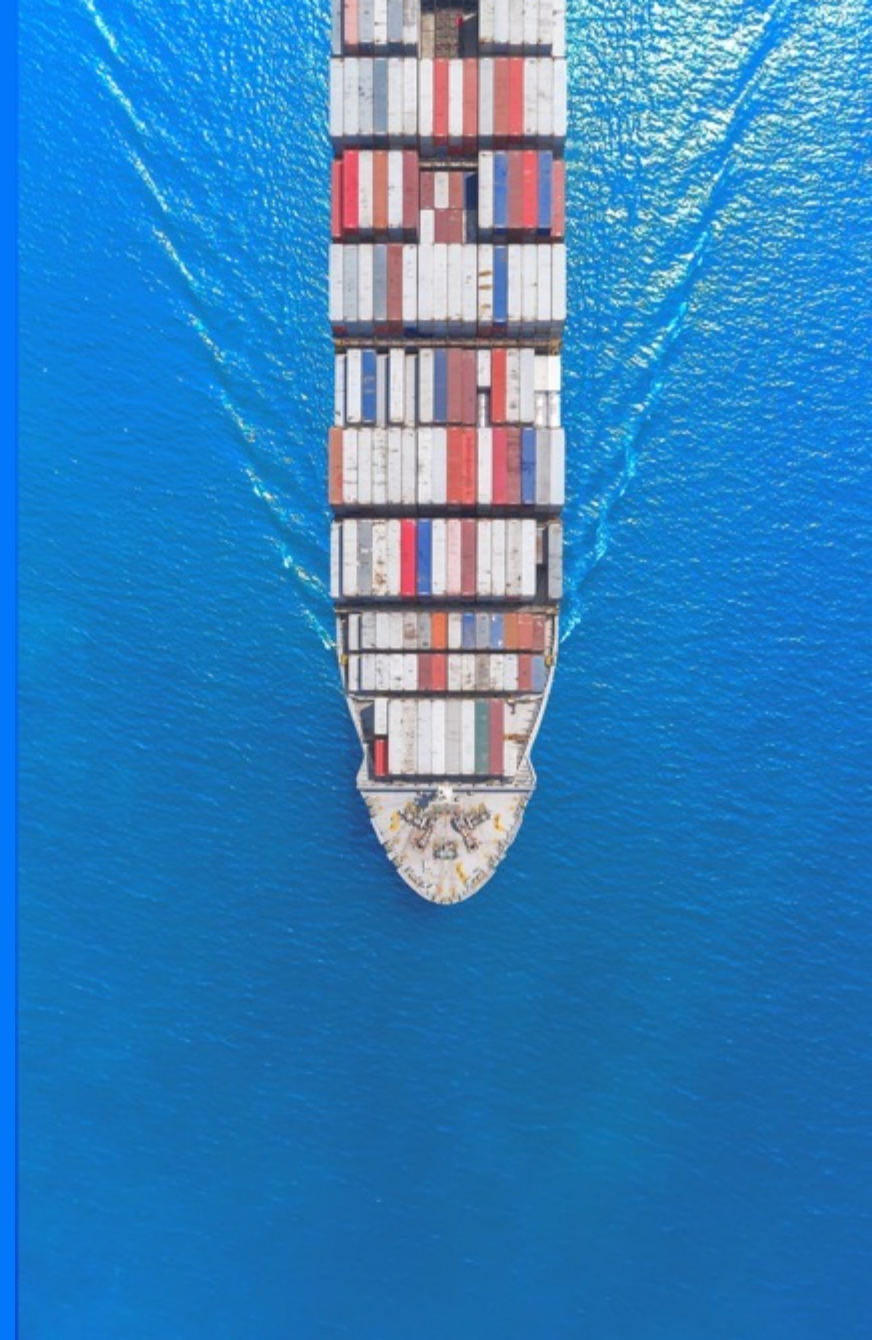
BHP



NORDEN



**THE MOST
EXPERIENCED
PLAYER IN THE
MARKET**



Fuel Laboratories

- Global collaboration with **well established** fuel labs
- **Mutual understanding** on biofuels
- Development of **new test methods**
- Critical feedback on current testing practices



Engine testing

- Development of **drop-in** fuels
- Engine performance testing
 - Combustion behaviour
 - Power output
 - Emission performance (NO_x, PM)
 - Corrosion



Engine and fuel system makers

Engine makers

- Collaboration on fuel requirements
- Support to end customers
- Engine testing of new fuels
- Advising ISO committee on fuel standard



Fuel system makers

- Trouble shooting currently used system
- Development of new fuel system components



Inhouse fuel system testing



Fuel system testing that labs and engines test facilities cannot offer



Located at Prodock, the **innovation hub of the port of Amsterdam**



Classification societies

- Continuous collaboration with classification societies
- GoodFuels provides expert input and measurements data





THANK YOU!

