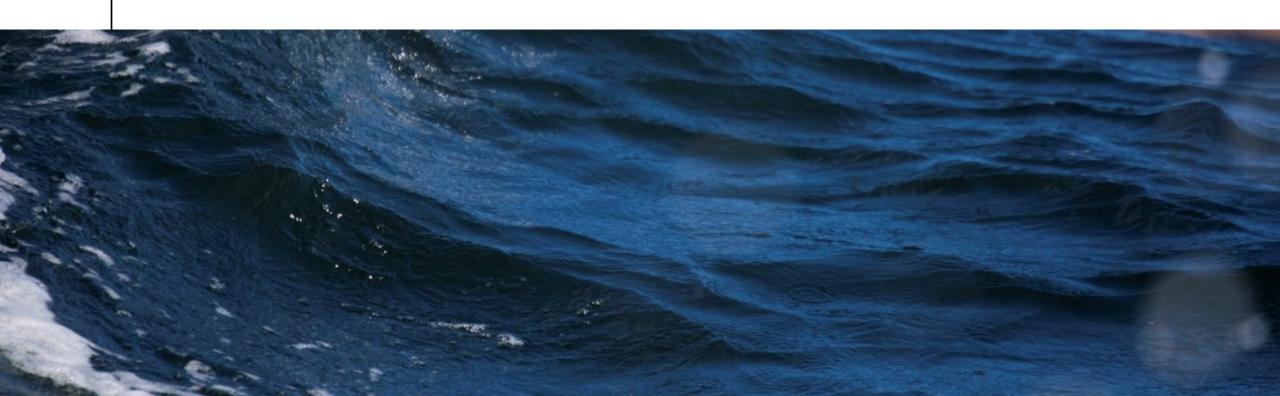


Nordic roadmap for the introduction of sustainable zero-carbon fuels in shipping – Workshop 15 November 2022

Sveinung Oftedal

Specialist Director



06 November 2022 At the opening of COP 27

The global average temperature is about 1.15 °C above pre-industrial times

Earth just had the eight warmest years on record

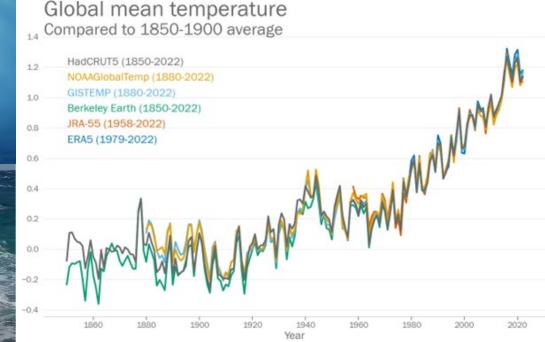


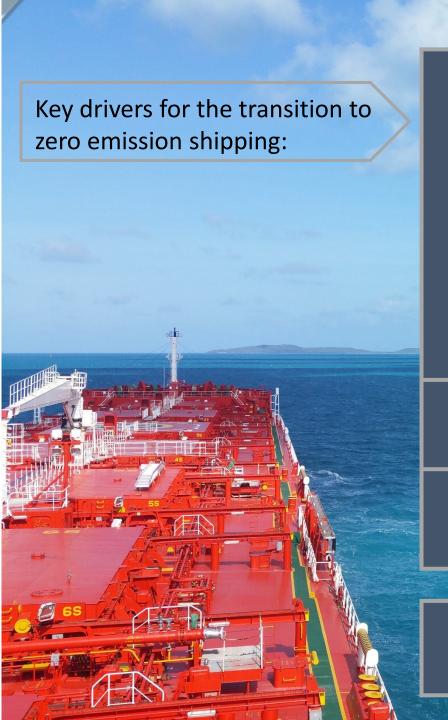
2022 saw unprecedented melt in Europe's glaciers and flooding affected millions and cost billions This will affect everyone and everything on the planet

For hundreds and thousands of years

Ocean heat is at record levels

The rate of sea level rise has doubled since 1993





Regulations/mechanisms established by Governments

- Globally through the International Maritime Organization (IMO)
- Regionally (e.g. through the EU, Nordic Cooperation)
- Nationally
- Collaborative initiatives such as Green Shipping Programme and Zero Emission Shipping Mission etc

Conditions etablished by the market

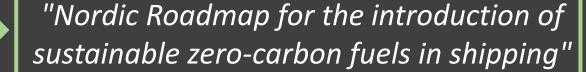
Zero emission shipping to be developed and deployed by the wide Maritime Industry



- A long and stable tradition on green policies
- A complete and innovative maritime cluster
- Strong technical and environmental scientific knowledge hubs
- High capacity in relevant government agencies
- Financial capacities

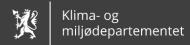
Meaning that we will achieve more by cooperating, and it will be beneficial for our maritime industry.

....if we can't do it, who can?



Three Goals:

- 1. The Nordic countries have gained a technical knowledge base and provided a framework for regulatory development of promising alternative fuels.
- 2. The Nordic countries have established a strategy for infrastructure development and for the use of harbours as green energy hubs.
- 3. The Nordic countries have established a platform for improved cooperation between Nordic industries and companies, and can promote the high level of competence and competitiveness of Nordic companies and institutions when use of carbon sustainable zero-carbon picks up globally.



Oslo 3 May 2022: The Nordic Ministers for the Environment and Climate approved a Declaration on zero emission shipping routes



Agree that a global availability of clean maritime fuels, zero-emission vessels, alternative propulsion systems, and the availability of landside infrastructure to support these, is imperative for a rapid transition to clean international shipping;

Agree also on the benefits of Nordic cooperation taking a leading role in transitioning the shipping sector inter alia through supporting decarbonizing most of the extensive Nordic ferry transport by 2030;

Further agree to support the establishment of zero emission shipping routes for ferry transport between the Nordic countries, and

Decide to establish a pilot project to identify such routes and interested actors from the shipping industry to enter into partnerships to realize zero emission shipping on the identified routes. The pilot project should create conducive conditions for gaining experience with clean maritime fuels.

