

# Hydrogen as a cargo

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# The problem

- Lack of technical solutions.
- No international rules – IMO is working on it.
- Risk vs. wish to promote hydrogen.
- **Legal problems have not been identified.**



# A system of problems

Legal problems can be divided into groups:

- Ship safety
  - Personnel
  - Cargo
  - Ship itself
- Environment
- Climate
- Safety of the general public



# Environment and climate

## MARPOL convention

- Hydrogen as a greenhouse gas
- Impact on the sea and life in it
- Risk for the marine environment compared to risk of explosions



# Ship safety

- International Maritime Dangerous Goods (IMDG) Code
- General rules:
  - construction, equipment and operation of ships; loading, unloading, and stowing of goods (SOLAS)
  - manning (STCW)
- Do the general rules provide sufficient authority to deny hydrogen carriage?



# Onshore safety

- Passage close to shore could put people, animals, nature, infrastructure, etc. at risk.

<https://www.fjordtours.com/no/tin-g-aa-gjoere-i-norge/sightseeing-og-guidede-turer/trollfjord-cruise-med-hurtigruten-i-lofoten/>



# International law

## **UNCLOS art. 21 (1)**

*The coastal State may adopt laws and regulations, in conformity with the provisions of this Convention and other rules of international law, relating to innocent passage through the territorial sea, in respect of all or any of the following:*

...

*(f) the preservation of the environment of the coastal State and the prevention, reduction and control of pollution thereof;*

...





# International law (continued)

## **UNCLOS art. 21 (2)**

*Such laws and regulations shall not apply to the design, construction, manning or equipment of foreign ships unless they are giving effect to generally accepted international rules or standards.*

- territorial sea
- internal waters
- emergencies



THANK YOU FOR YOUR ATTENTION!

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