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# Mapping of Zero Emission Pilot and Demonstration Projects



February 10, 2021



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## ● About the Getting to Zero Coalition

- Launched in 2018, >120 companies
- Ambition: to have commercially viable Zero Emission Vessels (ZEVs) operating along deep-sea trade routes by 2030, supported by the necessary infrastructure for scalable net zero-carbon energy sources including production, distribution, storage and bunkering
- Workstreams: **Motivating First Movers**, Fuels, Global Opportunities, Closing the Competitiveness Gap





## What is in the mapping?

- Increasing from 66 projects in the [first edition](#), the Mapping of Zero Emission Pilots and Demonstration Projects now includes **106 projects** focusing on zero emission pathways for the maritime industry.
- The projects cover the full value chain, focusing on the different elements needed to facilitate shipping's transition to zero emission fuels. This includes projects focusing on ship technologies, fuel production and bunkering/recharging.
- The projects have been categorized in terms of their geographical focus, project focus, project type, fuel choice, and the existence of public funding.

# The Big Picture



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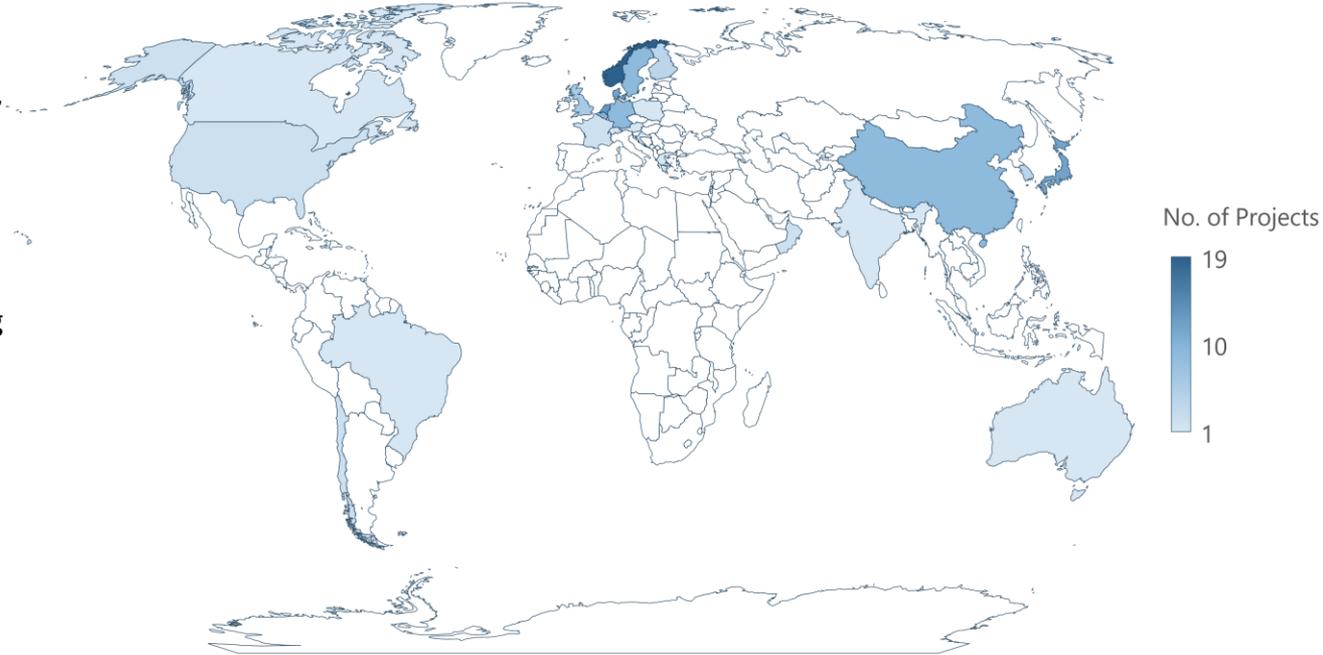
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Country heatmap

● In terms of **geography**, most projects in the mapping have a significant connection to Europe (71), with Norway, the Netherlands, Denmark and Belgium all having over 10 projects in the mapping.

● Since the first edition, the geographical spread of the mapping has become more representative, which is reflected in the increase of Asian projects from 16 in the first edition to 31 in the second.

● The mapping has further seen an expansion in terms of new geographies now pursuing zero emission pilot projects.



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# Emerging trends

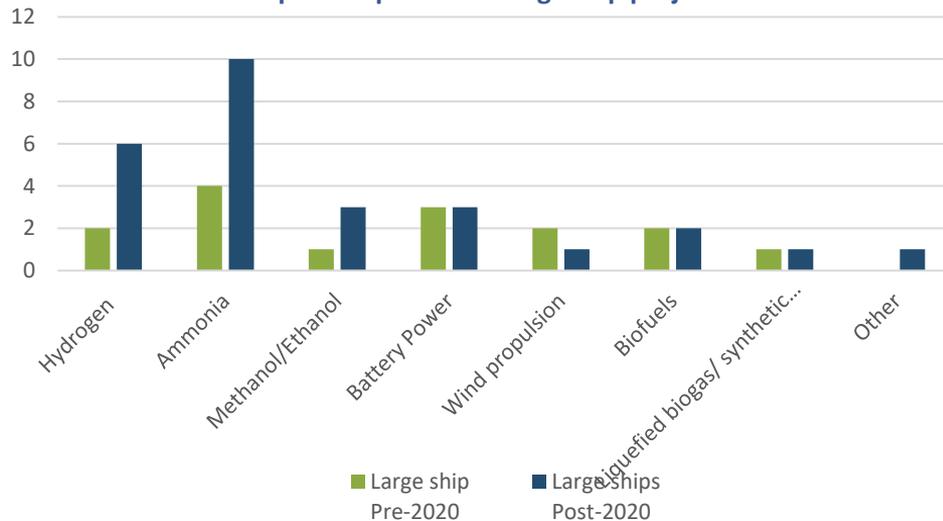


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- For **large ship projects**, one notable trend we are seeing is a post-2020 increase in the uptake of large ammonia vessels, with the mapping receiving 4 additional large ammonia demonstration projects since the first edition.

Fuel focus for pre- vs. post-2020 large ship projects



# Emerging trends



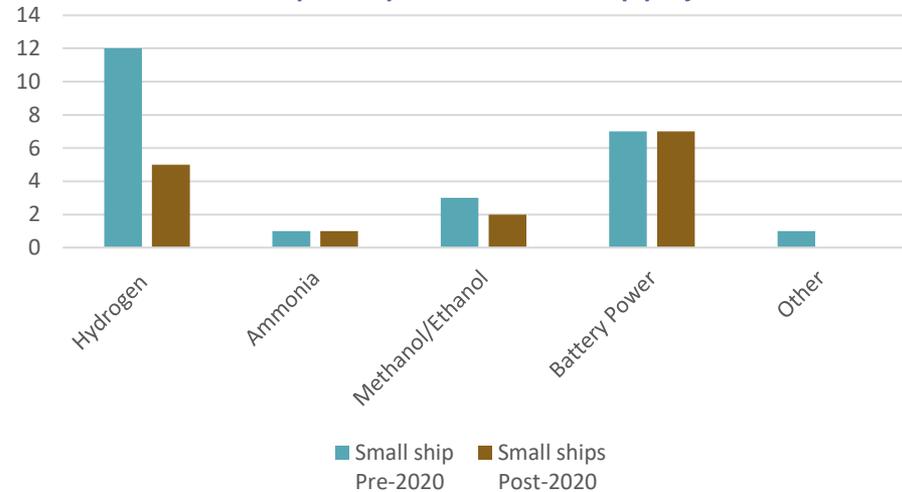
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- For **small ship projects**, there appears to be a continuing preference towards using hydrogen, battery power or a combination of the two onboard small ships.

Fuel focus for pre- vs post-2020 small ship projects



# Emerging trends



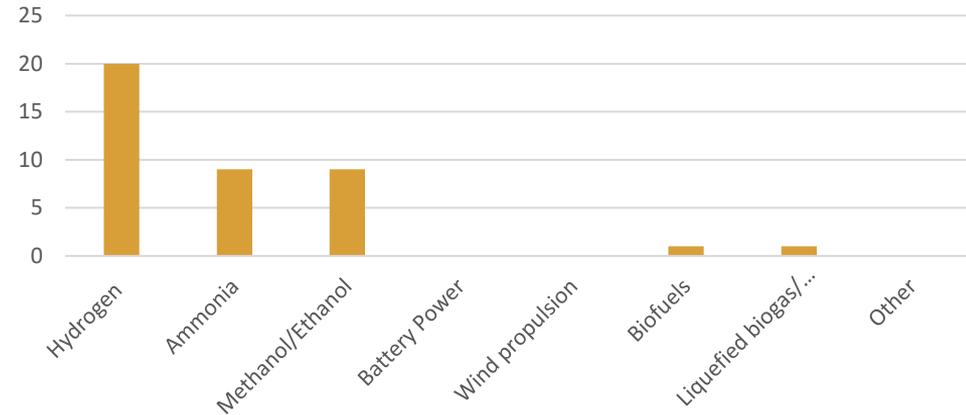
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- For ***fuel production projects***, the mapping shows a preference towards Power-to-X fuel production with hydrogen as an input.

Fuel focus for fuel production projects





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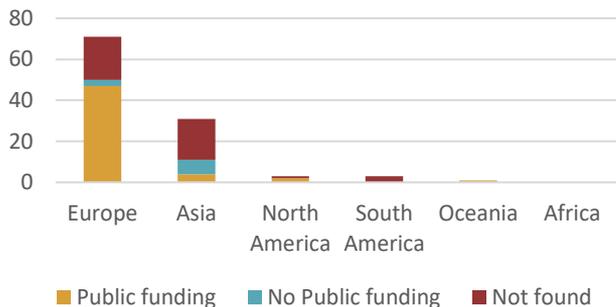
# Project type and developments →

● In the last 6 months, we have seen around 10% of the projects from the first edition announce new phases of development, increases in size or ambition or move from concept study stage to demonstration stage.

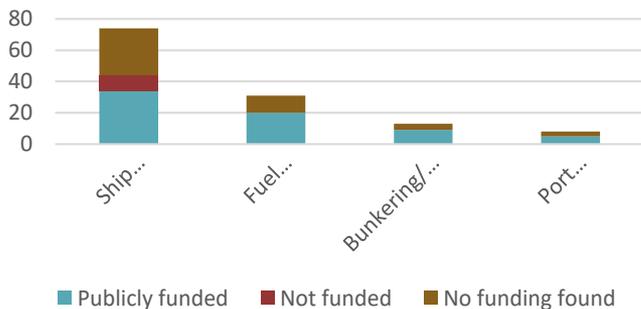
● Of the 106 projects in the mapping, just over half (54) received some amount of **direct public funding** to the project. The majority of this funding originates in Europe.

● The largest awards of public funding in the mapping continue to go to large scale fuel production projects.

### Public funding by geographical focus



### Funding status of different project focus





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## What Next?

- The second edition of the mapping will be made publicly available at the **beginning of March**, including the full list of projects with links to further information.
- It is hoped that by making the second edition **publicly available**, the mapping can provide support to potential first movers in helping them to draw upon learnings from other projects and improving confidence in undertaking these initiatives.
- The mapping will be updated on a continuing basis by the Getting to Zero Coalition, with future reports being released biannually.

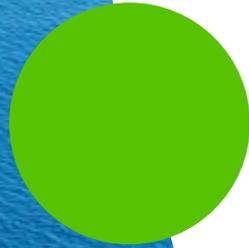




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# Thank you →

If you'd like to know more, please contact Jesse Fahnestock  
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