

A large flock of seagulls is captured in flight over a vast, blue ocean. The birds are in various stages of their wing strokes, with some showing white plumage and others dark wingtips. The ocean has a textured surface with small waves. In the far distance, a few small sailboats are visible on the horizon under a pale, clear sky.

Green Shipping Corridors



Mærsk Mc-Kinney Møller Center
for Zero Carbon Shipping

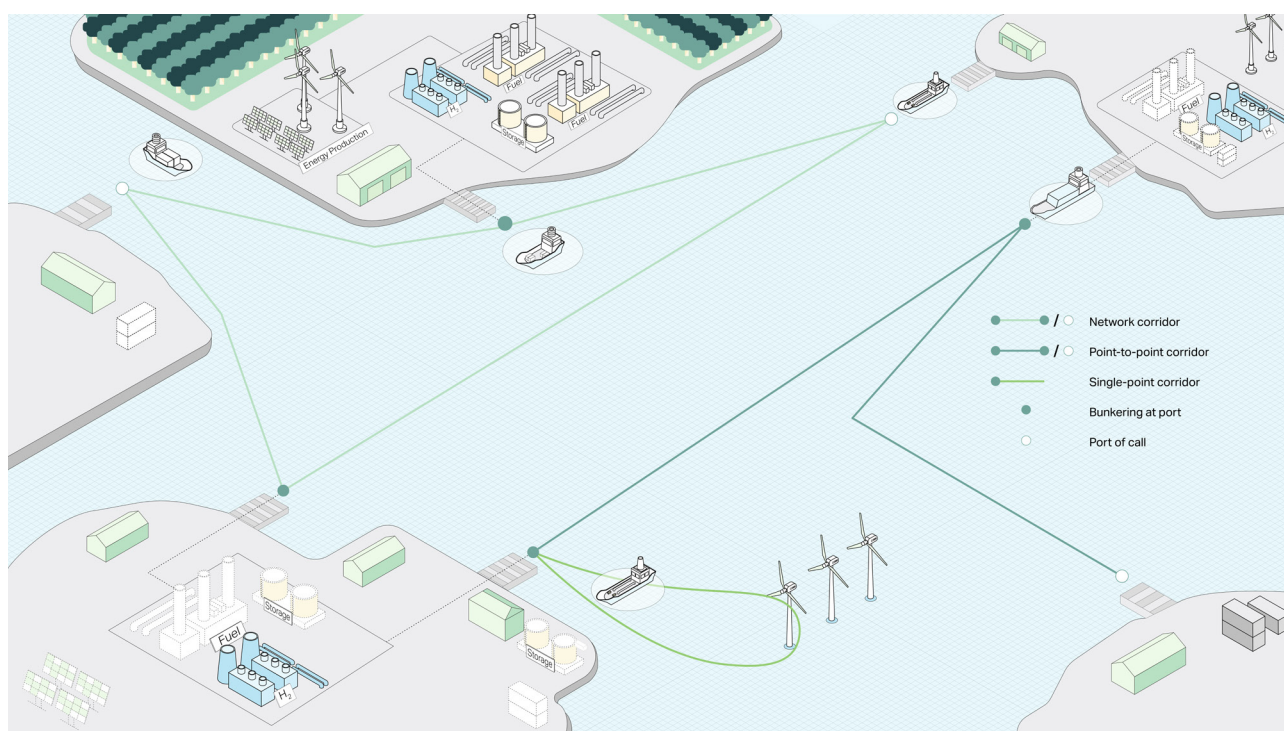
Green shipping corridors

The global maritime industry currently supports 90% of international trade.¹ In the future, we will continue to depend on shipping for a connected world and economic growth. But something must change to take shipping sustainably into the next centuries of trade.

Today, 99% of the global commercial fleet operates on fossil-based low-sulfur fuel oil (LSFO)², which accounts for around 3% of global greenhouse gas emissions. Transitioning the maritime industry towards a decarbonized future will involve replacing LSFO with low-carbon alternatives. This depends on the maturation of several alternative fuels and coordinated action across multiple sectors to ensure their adoption.

Green shipping corridors enable early-stage demonstrations of the transition to alternative marine fuels. They pilot the collaborative solutions required and provide valuable insights that can be scaled to accelerate the transition. This potential was recognized at COP26 in Glasgow when 22 governments signed The Clydebank Declaration for green shipping corridors, confirming their willingness to support the establishment of green corridors by the middle of this decade.

Figure 1: Green shipping corridors involve the entire value chain



What is a green shipping corridor?

A green shipping corridor is a shipping route operated by commercial vessels using alternative, low-emission fuels or other means of propulsion like electricity. Green corridors enable low-emission maritime transportation in a premature market where there are no immediate commercial benefits of switching to alternative fuels. Once the market matures and alternative marine fuels become more widely available, green shipping corridors will become part of the new business as usual.



At the Mærsk Mc-Kinney Møller Center for Zero Carbon Shipping, we are developing three types of green corridor:

- **Network corridor:** A shipping route between more than two ports that facilitates the operation of vessels using alternative fuels.
- **Point-to-point corridor:** A shipping route between two ports facilitating the operation of vessels using alternative fuels.
- **Single point corridor:** A shipping route that operates from and to the same port facilitating the operation of vessels using alternative fuels.

In this context, the term 'port' covers a wide selection of stakeholders including port authorities, operators, owners, landlords, and other relevant parties on land. These decision makers play vital roles in preparing the ports for facilitating a multi-fuel future.

The role of green corridors in the green transition

Phasing out fossil marine fuels is pivotal for realizing the International Maritime Organization's (IMO) goal of maritime decarbonization by around 2050.³ Previous industry transitions such as the shift to wind energy and electrical vehicles, etc. have shown that maturing technology, fully transforming supply chains, and making new technologies profitable can take decades. We also know that the early transition stages are particularly challenging and that the lack of a clear business case can limit investments.

Unfortunately, as we transform the shipping industry, we do not have the luxury of time. Preventing further damage to our planet requires immediate action, risk tolerance, and new ways of collaborating.

Green corridors can act as transition accelerators by 'testing and demonstrating' future scenarios and evaluating a variety of technological options. They cover the full end-to-end technical and regulatory complexity of the maritime transition, but within a limited geographical area that makes demonstration possible. The solutions that get tested and developed through green shipping corridors can later be scaled and create certainty in a maturing market.

The value proposition for a green corridor will differ based on regional opportunities and circumstances. Regardless of the variety of alternative fuels, technologies, and scenarios the corridor might include, it will require a coalition of private and public climate leaders who are willing to look beyond commercial viability and who are ready to invest in these first mover projects that can pave the way for broader decarbonization.

Key benefits of green shipping corridors

Eventually, the main beneficiary of a green corridor will be the planet as green corridors are steps towards a decarbonized and more sustainable maritime industry. More near term, green corridors provide opportunity for companies and local communities that seek to decarbonize their supply chains. Green corridors can also act as test facility for compliance with regulations on shipping decarbonization, and they can facilitate the development of new and more collaborative business models which are better suited to a new economy built around alternative fuels rather than fossil fuels. However, it is critical to remember that this insight comes with a cost, as the needed first projects will have challenging business cases.

Once operational, green corridors will:

- Contribute to the initial development of alternative fuel supply chains and offtake agreements
- Accelerate upscaling by offering real life demonstrations of solutions and technologies as well as providing guidance on developing new regulatory frameworks
- Unite individual first mover actions across the value chain and develop new business models
- Secure the support and funding required for decarbonization projects



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About the Mærsk Mc-Kinney Møller Center for Zero Carbon Shipping

The Mærsk Mc-Kinney Møller Center for Zero Carbon Shipping (MMMCZCS) is a not-for-profit, independent research and development center looking to accelerate the transition towards a net-zero future for the maritime industry. We drive and facilitate the development and implementation of new technologies; build confidence in new concepts and mature viable strategic ways to drive the required systemic and regulatory change.

As we set the course for a sustainable transition, the Center consistently assesses, informs and guides the industry transition journey and is recognized as a change leader, trusted adviser and leading knowledge hub for maritime decarbonization. The Center has leveraged this role in its work on green corridors projects by guiding governments and industry players. Based on these learnings, the Center has developed methodologies that provide guidance on how to perform the initial pre-feasibility assessment of potential green corridors. The framework is based on learnings from existing corridor projects and this tool provides a structured approach to collecting the necessary data and making the right analyses.

References

1. [Our economy relies on shipping containers. This is what happens when they're 'stuck in the mud'](#), World Economic Forum, 2021
2. IMO Ship Fuel Oil Consumption Database in Global Integrated Shipping Information System (GISIS) reporting year 2023, International Maritime Organization, 2023
3. [2023 IMO Strategy on Reduction of GHG Emissions from Ships](#), International Maritime Organization, 2023

The project team

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