

/ NORDIC WEST OFFICE



# Practical Playbook for Maritime Decarbonisation

**- Value chain-based pathways towards zero-emission shipping**

Executive summary

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# Executive summary

How to speed up the transition to a more sustainable and more profitable maritime ecosystem? How to accelerate the decarbonisation of shipping? Answering these two questions brought together a diverse group of contributors from different parts of the maritime industry and the global decarbonisation ecosystem. The participants included representatives from 13 companies, five international organisations and one academic institution. We have been motivated by a strong commitment to work together for a better future for the oceans and the globe.

Initially, we developed three scenarios that describe three plausible future worlds. Then, we developed pathways and recommendations on how to reach the best possible scenario from a decarbonisation perspective. We set ourselves two timeframes. First, we looked at what could happen to climate change in each of the three scenarios during this century. Second, we analysed what needs to happen in the maritime industry during this decade to produce the best possible outcome.



Illustration: Sandra Haraldson

The reference points to measure the outcome of each of the three scenarios are the IMO 2018 ambitions and the Paris climate goals. The International Maritime Organization (IMO) has challenged the shipping industry to cut annual greenhouse gas (GHG) emissions by at least half by 2050, compared to 2008. The 2015 Paris Agreement commits countries to limit the global average temperature rise to well below 2°C above pre-industrial levels, and to aim for 1.5°C.



## Storms

The different scenarios produce different results. The worst outcomes are produced by a scenario labelled Storms. This is a world of nationalism, geopolitical conflicts, and a worsening climate crisis. In this scenario the Paris climate goals, and the IMO 2018 decarbonisation ambitions are both missed.



## Swells

The moderately good scenario is called Swells. Swells is a nautical term that refers to the slow up and down movement of the sea with large but smooth waves. In the beginning, businesses and governments concentrate on growth. Everything looks good for a while. Decarbonisation is advancing slowly. Then the climate crisis intensifies increasingly disrupting shipping services and ports. Quick, abrupt changes are needed and finally initiated. But these are costly and cause significant disruptions. Yet, late but accelerated decarbonisation is not enough to reach the IMO 2018 ambitions but eventually the Paris goals are met.



## Clear Sky

The best outcomes from a decarbonisation perspective produces a scenario named Clear Sky. Politicians, business leaders, citizens, and investors worldwide are aligning to reach the Paris climate goals and IMO 2018 ambitions.

The private sector takes initiative individually and collectively, and policymakers are supporting the efforts with policies and regulatory frameworks and through promoting sustainable business and innovation. In this scenario, the Paris goals are met but the IMO 2018 ambitions are still missed. Consequently, even in the fastest moving decarbonisation scenario considered, the current state-of-play of enablers, and the progress anticipated, indicates that a move onto the front foot now is not only a non-regret strategy but an indispensable step. This is the only way for the maritime industry to ensure that the maritime industry aligns with the Paris agreement and exceeds the IMO 2018 ambitions.

The participants in the study generally believe that we are living and operating in a Swells environment with increasing tendencies towards Storms. But the group sees also a pathway towards Clear Sky. An initial bundle of actions is summarised in the following seven recommendations for public and private sector stakeholders to act upon.

### **⚙ Recommendation #1: Build scenarios to stress-test current decarbonisation strategies per value chain and across clusters**

**Underlying finding:** Scenario thinking, and their sharing, helps to manage risks for example to avoid stranded assets and develop understanding across the cluster of maritime value chains of different pathways to the future and to outline their implications for decarbonisation

**Conclusion:** We can leverage the strategic context which the different scenarios provide

### **⚙ Recommendation #2: The maritime industry to urge IMO member states' governments to support' the proposed "zero by 2050" plan<sup>i</sup> and follow through the current roadmaps with detailed targets**

**Underlying finding:** All developed scenario pathways show that we don't get anywhere near the 2018 IMO decarbonisation ambitions, and yet indicate the potential competitive and commercial advantages from acceleration

**Conclusion:** We need a stronger ambition and more aggressive pathway based on accurate GHG calculation and monitoring

### **⚙ Recommendation #3: Establish cross-value chain coordination, e.g., through partnerships and zero-emission corridors / networks**

**Underlying finding:** We face bottlenecks and gaps in decarbonisation across interdependent value chains, e.g., we have dual-fuel engines but not enough alternative fuel

**Conclusion:** We need a holistic approach to decarbonisation and a cluster view on value chains of fuel, shipbuilding, and operations

**⚙ Recommendation #4: Every actor and sector in the industry needs to identify and focus on its relevant enablers across their respective value chains to achieve company, industry, and country milestones**

**Underlying finding:** There is no single silver bullet, however this is not a curse but a cure in our diverse world in different stages of development

**Conclusion:** We need to remain flexible and develop the “37 enablers” for different cases and sustainable profitability

**⚙ Recommendation #5: Create a global public-private coalition of the willing to identify / activate scalable enablers across all chains**

**Underlying finding:** Given all circumstances regulators are ill-prepared to decide or guide the maritime sector in respect to what enablers to activate along and across the chains

**Conclusion:** Leading players in the industry need to take initiative and show what works and what doesn't so that other public and private actors are better informed for their own decisions; but what works for one may not work for others

**⚙ Recommendation #6: Establish sufficient, transparent, and predictable financing and pricing mechanisms, like a levy on high carbon marine fuels and subsidies for low carbon solutions**

**Underlying finding:** Making decarbonisation in the maritime industry work requires pathways that are financially incentivised and viable across all chains

**Conclusion:** We need to find ways to trigger and finance the change

**⚙ Recommendation #7: Act now! In our self-interest to avoid exponential decarbonization costs**

**Underlying finding:** Many decarbonisation enablers are ready to use, and decarbonising shipping is a complex and costly task that will become more costly if further action is delayed

**Conclusion:** We can already activate a range of decarbonisation enablers across the maritime value chains and accelerate developments that are in the broader self-interest of all stakeholders

*The full report is to be found at [nordicwestoffice.com/maritime](https://nordicwestoffice.com/maritime)*