

Abstract

Maritime transport faces a significant challenge in decarbonizing its operations over the coming decades. The International Maritime Organization (IMO) has set a target to decarbonize the sector by 2050. However, there is considerable uncertainty about how this goal can be achieved. Many stakeholders in the maritime industry recognize the need to both make sense of the future and actively shape it to address the challenges ahead. One clear indication of this effort is the abundance of future-oriented and strategic reports published in recent years, which seek to map potential pathways toward a zero-carbon future.

These reports are presumed to reflect, at least to some extent, how individuals and organizations within or closely associated with the maritime industry perceive the future. This research analyzes these reports to examine how the challenge of decarbonizing maritime transport is viewed and presented. The analysis focuses on how the nature of change and the potential for transformation are perceived from two distinct perspectives:

1. The viewpoint of industry stakeholders (as presented in industry reports).
2. The perspective of sustainability transition studies.

Key aspects under consideration include: What are the primary challenges and solutions for decarbonization? What uncertainties and risks does the transition entail? What is the anticipated pace of change? In what areas does the industry perceive itself as having the agency to drive transformation?

The aim is to compare the practical perspective found in industry reports with the theoretical perspective presented in sustainability transition studies, identifying differences and highlighting aspects that industry reports might benefit from exploring in greater depth. This research contributes to discussions on decarbonization in the maritime sector, specifically by examining how the industry perceives its role and agency in the transition.

Implications for sustainable maritime operation

Comparing and analyzing both theoretical and practical approaches to decarbonization in marine traffic may provide valuable insights for maritime stakeholders by broadening perspectives on what constitutes a successful sustainability transition. Industry viewpoints, as presented in futures reports published by maritime actors, often exhibit a narrow scope, with the agency of industry players frequently perceived as limited. A richer, more systemic perspective on transitions could highlight critical aspects such as the growing need for collaboration, the significance of regime segmentation in identifying viable sustainability solutions, and the potential vulnerabilities within

prevailing industry forecasts. Overall, this approach can enhance the understanding of change dynamics in the marine traffic sector.