

Editorial

# Marine Policy

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The volume of international maritime transport is continuously increasing due to worldwide economic growth and the sophistication of the global supply chain. In 2021, world container flow was recorded as the highest ever, such as 168.2 million TEUs. Vessel size has also continued to increase. As of 2022, the largest container vessel exceeded twenty-four thousand TEUs, which impacts global maritime transport and its management. In addition, port infrastructure planning affects the accommodation of such ultra-large vessels, which is a concern for port practitioners. On the other hand, academicians are also interested in developing new forecasting models and simulators to forecast future cargo demand and flows. Moreover, the environmental issue is becoming important for maritime industries, including maritime transport and port operations. Introducing the idea of a carbon-neutral port forces port authorities and port operators to produce new marine policies. Therefore, marine policy is becoming an increasingly important issue in the maritime industry. To accommodate marine policy for these recent maritime topics, it is important to form appropriate marine policies to achieve sustainable development and further economic growth. Thus, it is important to acquire the necessary knowledge to enable the harmonious and sustainable use of marine resources. Marine policy covers a wide-ranging area, including governance, international relations, economics, environment, and operations. Under this theme, we will explore various theories and methods related to creation and innovation in infrastructure design, multi-modal transportation synchronization, transportation technology, information technology, and management concerning marine policy. We will also discuss approaches to collecting, processing, managing and using any information efficiently and effectively; thus, the research papers published in this Special Issue are expected to contribute to improving the development of appropriate marine policy and value in the face of global challenges in transportation and marine issues. We would like to thank all the authors for their contributions to this Special Issue.

In the modern era, with the rapid development of globalization, maritime transportation has become one of the most important driving forces for global economic development and cultural exchange. Countries around the world are working hard to develop maritime transportation technology and improve port facilities to cope with the rising demand for maritime logistics. Vega-Muñoz et al. [1] observed in the literature that these are related to coastal sustainability and coastal management. Complementing previous studies on coastal zone management and marine territorial planning, coastal systems governance was added as a topic to show its rising importance.

Regarding the international trading situation, Traiyarach and Banjongprasert [2,3] demonstrated the importance of promoting the export of craft products due to the increase in global sales, which is crucial for international commerce. These studies also examined the strategies and competitiveness of exporting craft products by analyzing the results of questionnaires and structural equation modeling (SEM) data.

However, further challenges affect the maritime industry in this dynamic generation. The sudden outbreak of COVID-19 in late 2019 brought significant losses to the world, and the consequences stunted the development of the maritime industry. Sun and



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Zhang [4]; Zhang and Sun [5] presented how the maritime industry responded to the crisis and simultaneously shouldered its respective responsibility in the world's fight against the pandemic. They demonstrated how this is worth exploring in depth, and how international organizations, International Maritime Organization (IMO) member states, and associate members embarked on maritime management (MM) measures to address dire situations in the context of the COVID-19 pandemic.

Apart from the COVID-19 crisis, safety issues are also considered one of the challenges to the maritime industry. Hsu et al. [6] pointed out a risk assessment of navigation safety for ferries; the proposed approach may provide useful references for related research in the safety management of short-distance passenger ships. At the same time, Mišković et al. [7] discussed the theoretical and practical implications of the results in terms of improving the quality of safety supervision in the maritime industry.

However, global climate changes caused by carbon emissions are considered one of the main issues that affect the maritime industry's development. Li et al. [8] offered valuable insight into the energy conservation and emission reduction in marine fisheries while enhancing the ecological benefits of their carbon sinks and helping to achieve the carbon neutrality target. This can reduce the negative impacts and limitations of Chinese cruises that have unfolded in the Arctic cruise market, as mentioned in the study by Lau et al. [9].

Correspondingly, the difficulties of implementing blockchain (BC) technology in maritime developing countries were raised by Kapidani et al. [10], together with the uncertainties in liner shipping operations and ship schedule recovery in response to the disruptive events mentioned by Elmi et al. [11]. Additionally, Jeon et al. [12] commented that increasing marine accidents due to inappropriate communication between crew members are one of the threats to the shipping industry, and this paper established a need to develop Standard English for engineers in order to reduce the incidents caused by their lack of English skills. More concerns have been pointed out, which require solutions to prevent the regress of development in the shipping industry.

The above studies highlight the importance of management and efficient dilemma response capability in the event of a crisis. As a main hub in the maritime transportation system, ports are vulnerable to events such as terrorist attacks, security accidents, and poor weather. The failure of port nodes to function effectively affects the connectivity and efficiency of the shipping network and impedes trade between countries. Yang and Liu [13] provided a scientific basis for ensuring the structural resilience of the Maritime Silk Road shipping network.

To better manage and maximize the benefits generated by the maritime industry, successful planning is necessary. Saito et al. [14] used graph theory to perform an empirical investigation into the development of international maritime container transport networks, with a primary emphasis on the 1970s. The authors examined the changes in the container shipping networks before and after the reopening of the Suez Canal in 1975, in addition to assessing the changes in overall network architecture over the long term (from the 1970s to the present) and mid-term (in the 1970s). This contributes to accumulating empirical knowledge on the vulnerability analysis of the present and future maritime container shipping networks.

Furthermore, Kawasaki et al. [15] clarified the impact of port developments and an increase in container cargo demand from the source country on maritime network selection from the perspective of shipping lines, by developing a mixed-integer linear programming model to describe vessel deployment, using the example of transshipment via the Colombo port and direct shipment in Indian ports. The article also highlights the importance of maintaining the port as a logistics and transportation hub and details how to increase the demand for cargo.

To conclude, the maritime industry is rapidly developing in a dynamic environment, acting as an important characteristic to boost the trading economy all over the world. At the same time, it also faces many risks and challenges. A comprehensive management

system and efficient reaction to external threats is needed to maintain its competitiveness and ensure its smooth operation.

**Conflicts of Interest:** The author declares no conflict of interest.

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