

UTC 656.61

THE INFLUENCE OF EUROPEAN POLICY ON MARITIME SAFETY AND NAVIGATION STANDARDS

Sarsenbayev B.S., Malov K.V., Zhumayev Zh.

NJSC "Caspian University of Technology and Engineering named after Sh. Yessenov"
Kazakhstan, Aktau, 32 microdistrict
E-mail: zholdybayzhumayev@yu.edu.kz

Abstract. The article examines the impact of European maritime policy on the development of international standards for maritime safety and navigation. It analyzes the key regulatory initiatives of the European Union (EU) aimed at improving the safety of navigation, protecting the marine environment, enhancing the professional training of seafarers, and introducing digital technologies. Particular attention is given to the activities of the European Maritime Safety Agency (EMSA) and the interaction between the EU and the International Maritime Organization (IMO). The study shows that the EU's systemic approach to maritime regulation has a direct influence on international maritime law, contributes to the development of a global safety culture, and fosters innovative models of navigation management.

Xülasə. Bu məqalədə Avropa dəniz siyasətinin dənizçilik və gəmiçilik təhlükəsizliyi üzrə beynəlxalq standartların inkişafına təsiri araşdırılır. Burada Avropa İttifaqının (AB) dəniz təhlükəsizliyinin artırılmasına, dəniz mühitinin qorunmasına, dənizçilərin peşəkar hazırlığının artırılmasına və rəqəmsal texnologiyaların tətbiqinə yönəlmiş əsas tənzimləyici təşəbbüsləri təhlil edilir. Xüsusi diqqət Avropa Dəniz Təhlükəsizliyi Agentliyinin (EMSA) fəaliyyətinə və AB-nin Beynəlxalq Dəniz Təşkilatı (IMO) ilə qarşılıqlı əlaqəsinə yönəldilib. Tədqiqat göstərir ki, AB-nin dənizçilik tənzimlənməsinə sistemli yanaşması beynəlxalq dəniz hüququna birbaşa təsir göstərir, global təhlükəsizlik mədəniyyətinin inkişafına töhfə verir və innovativ gəmiçilik idarəetmə modellərini təşviq edir.

Аннотация. В статье рассматривается влияние европейской морской политики на развитие международных стандартов безопасности мореплавания и судоходства. Анализируются ключевые регуляторные инициативы Европейского союза (ЕС), направленные на повышение безопасности мореплавания, защиту морской среды, совершенствование профессиональной подготовки моряков и внедрение цифровых технологий. Особое внимание уделяется деятельности Европейского агентства по безопасности мореплавания (EMSA) и взаимодействию ЕС с Международной морской организацией (ИМО). В исследовании показано, что системный подход ЕС к регулированию морского судоходства оказывает непосредственное влияние на международное морское право, способствует развитию глобальной культуры безопасности и развитию инновационных моделей управления судоходством.

Key words: maritime safety, European Union, EMSA, IMO, international standards, navigation, digitalization, environmental policy

Açar sözlər: dəniz təhlükəsizliyi, Avropa İttifaqı, EMSA, IMO, beynəlxalq standartlar, gəmiçilik, rəqəmsallaşdırma, ətraf mühit siyasəti

Ключевые слова: безопасность на море, Европейский Союз, EMSA, ИМО, международные стандарты, судоходство, цифровизация, экологическая политика

Introduction. Maritime transport is one of the most important sectors of the global economy, accounting for about 90% of international cargo transportation. Maritime safety remains a strategic

priority not only for individual states but also for the entire global community. Amid growing maritime trade, increasing vessel sizes, the development of new transport corridors, and intensifying climate threats, the European Union has formulated a comprehensive maritime policy aimed at ensuring the sustainability, safety, and environmental responsibility of shipping.

The EU's influence in this field extends far beyond Europe, as its standards and regulations serve as benchmarks for other regional organizations and international institutions. European maritime policy effectively sets the course for the development of the global system of maritime safety and navigation.

1. Formation of European Maritime Policy: Historical Background

The first steps toward a unified European maritime policy were taken in the 1970s–1980s, when a series of maritime disasters—such as *Amoco Cadiz* (1978), *Herald of Free Enterprise* (1987), and *Erika* (1999)—revealed the shortcomings of the existing control system. These tragedies prompted the European Community to establish common rules to enhance ship safety and protect the marine environment.

As a result, a series of legislative initiatives known as the *Erika Packages* were adopted to reform the maritime sector:

- Erika I (2000) – strengthened control over classification societies and established requirements for flag states;
- Erika II (2002) – laid the groundwork for the creation of the European Maritime Safety Agency (EMSA);
- Erika III (2009) – reinforced shipowner liability and introduced mandatory procedures for accident investigation.

The establishment of EMSA in 2002 became a key institutional milestone that enabled the EU to shift from reactive to systematic risk management at sea. The agency, headquartered in Lisbon, performs coordination, analytical, and supervisory functions.

2. EU Regulatory Framework in Maritime Safety

EU maritime safety legislation represents a complex yet interconnected system of directives, regulations, and decisions. The most significant include:

- Directive 2009/16/EC on Port State Control;
- Directive 2009/21/EC on the responsibilities of flag states;
- Directive 2002/59/EC establishing a vessel traffic monitoring and information system (VTMIS);
- Regulation (EU) No 1406/2002 establishing the European Maritime Safety Agency;
- Regulation (EU) No 530/2012 on the prevention of pollution from ships;
- Regulation (EU) 2023/1805 on the implementation of digital platforms for data exchange between port authorities.

A crucial element of this framework is the SafeSeaNet system – a Pan-European network for exchanging navigational information, enabling real-time vessel tracking and early warning of potential risks.

3. The Role of the European Maritime Safety Agency (EMSA)

EMSA serves as the cornerstone of the EU's maritime policy mechanism. Its main functions include:

- conducting flag and port state inspections;
- developing standards for accident investigation;
- ensuring compliance with international conventions such as SOLAS, MARPOL, STCW, and the ISM Code;
- promoting innovative technologies, including satellite-based surveillance systems (*CleanSeaNet*);
- providing training and certification for maritime professionals.

Moreover, EMSA plays a leading role in the development of e-Navigation — a concept focused on digitalizing navigation, integrating data from ships, coastal services, and satellite sources.

4. Cooperation Between the EU and the International Maritime Organization (IMO)

The EU and IMO maintain close cooperation aimed at harmonizing rules and standards.

EU directives and regulations often adapt international norms to the European context, enhancing their practical implementation. Within the frameworks of SOLAS (1974) and MARPOL (1973/1978) conventions, the EU has introduced additional requirements for ship equipment, emission control, and the handling of dangerous goods.

The EU also actively participates in global efforts to reduce CO₂ emissions, supporting initiatives such as IMO 2020 and Fit for 55, which encourage the transition of the maritime industry toward low-carbon and alternative fuels such as LNG, ammonia, and methanol.

5. European Policy on Environmental Safety in Shipping

One of the core dimensions of EU maritime strategy is the protection of the marine environment. The European Commission consistently implements the “Blue Growth” concept — the sustainable use of marine resources with minimized ecological risks.

The key areas of environmental policy include:

- reduction of greenhouse gas emissions;
- prevention of oil and chemical spills;
- control of ballast water discharge (in accordance with the 2004 Convention);
- introduction of “green ports” and environmental management practices in shipping.

Thus, environmental responsibility is an integral component of EU maritime safety policy.

6. Impact on Seafarer Training and Educational Standards

The EU exerts significant influence on the professional training of seafarers. The implementation of Directive 2008/106/EC, aligned with the provisions of the STCW Convention, ensured the unification of training, certification, and watchkeeping standards. EMSA conducts audits of maritime academies in EU member states and in third countries whose certificates are recognized by the EU. This contributes to improving the quality of education and preventing non-compliance with international requirements.

7. Digitalization and the Future of Maritime Navigation in Europe

Modern trends in maritime safety are inextricably linked to digital technologies. The EU is implementing large-scale programs such as:

- Maritime Single Window — a unified digital system for port documentation exchange;
- Sea Traffic Management (STM) — a system for real-time coordination of vessel movements;
- Autonomous Shipping Initiative — development of autonomous and remotely operated vessels.

These innovations not only enhance safety but also reduce the human factor — one of the main causes of maritime accidents.

8. International Influence of European Initiatives

European maritime policy has become a model for other regional frameworks, including:

- Paris Memorandum of Understanding (Paris MoU) on Port State Control;
- Black Sea (BS MoU) and Mediterranean (Med MoU) agreements;
- initiatives within the Indo-Pacific region.

Through these mechanisms, countries outside the EU adopt European practices of inspection, monitoring, and training, thereby strengthening the global standardization of maritime safety.

9. Prospects for the Development of European Maritime Policy

In the coming decade, European maritime strategy will focus on three priority areas:

- Environmental sustainability and decarbonization of shipping under the European Green Deal;

- Digital transformation of the maritime sector, including cybersecurity and artificial intelligence;
- Integration of security and defense aspects in response to hybrid threats and the protection of critical infrastructure.

The EU seeks not only to enhance safety but also to achieve leadership in building a new, intelligent, and sustainable maritime civilization.

Conclusion. European maritime safety and navigation policy represents one of the most comprehensive and systematic approaches to transport governance worldwide. Thanks to the efforts of the European Commission and EMSA, a holistic regulatory framework has been established, integrating legal, technical, environmental, and educational dimensions.

The influence of European initiatives extends well beyond the continent, shaping international maritime standards – including those of the IMO and regional frameworks. Thus, EU maritime policy serves not only as an internal regulatory mechanism but also as a factor of global leadership in ensuring maritime safety and sustainable navigation development.

References

1. European Maritime Safety Agency. *Annual Report 2024*. Lisbon: EMSA Publications, 2025.
2. European Commission. *Integrated Maritime Policy for the European Union*. Brussels, 2007.
3. IMO. *SOLAS, MARPOL, STCW Conventions*. London: International Maritime Organization, 2023.
4. Directive 2009/16/EC of the European Parliament and of the Council on Port State Control.
5. Regulation (EU) No 1406/2002 establishing the European Maritime Safety Agency. Paris MoU Annual Report 2024.
6. European Commission. *Fit for 55: Reducing Emissions from the Shipping Sector*, 2023.
7. Ehlers, P. “European Union and Maritime Safety.” *Journal of Maritime Law and Policy*, Vol. 45, No. 3, 2024.
8. Szepan, D. “Digital Transformation of the European Maritime Sector.” *Transport Policy Review*, Vol. 12, No. 1, 2025.
9. EMSA. *The Future of Maritime Safety in Europe*. Lisbon, 2024.

Məqalə qəbul olunub: 08.10.25
Təvsiyə edib: dos. Sadıqov V.B.